

Supplementary Material

The abundant phytocannabinoids in rheumatoid arthritis: Therapeutic targets and molecular processes identified using the integrated bioinformatics and network pharmacology

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Supplementary figures.

Figure S1. Molecular docking results (3D representation of the best active ingredients) of key targets (PIK3CA, Akt1, MAPK9, PRKCD, BRAF, IGF1R, NOS3) and specific cannabinoids.

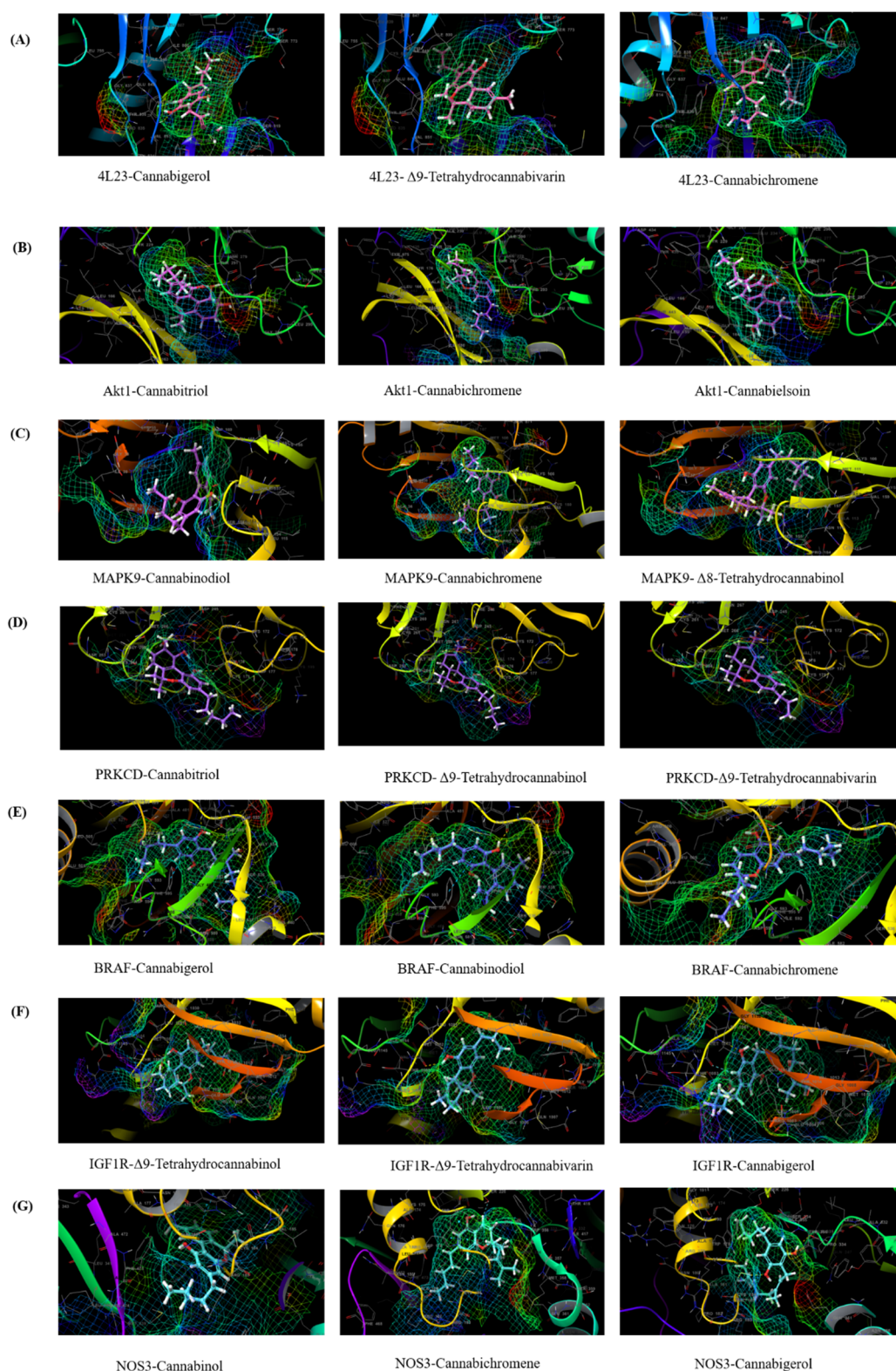


Figure S2. Molecular dynamics results of key target-ligands. RMSF and Protein-Ligands Contact Analysis of PIK3CA-cannabigerol (A1, B1, C1), Akt1-cannabitol (A2,B2,C2), MAPK9-cannadinodiol (A3,B3,C3), PRKCD- cannabitol (A4,B4,C4), BRAF- cannabigerol (A5,B5,C5), IGF1R- Δ9-tetrahydrocannabinol (A6,B6,C6), NOS3- cannabinol (A7,B7,C7) complexes.

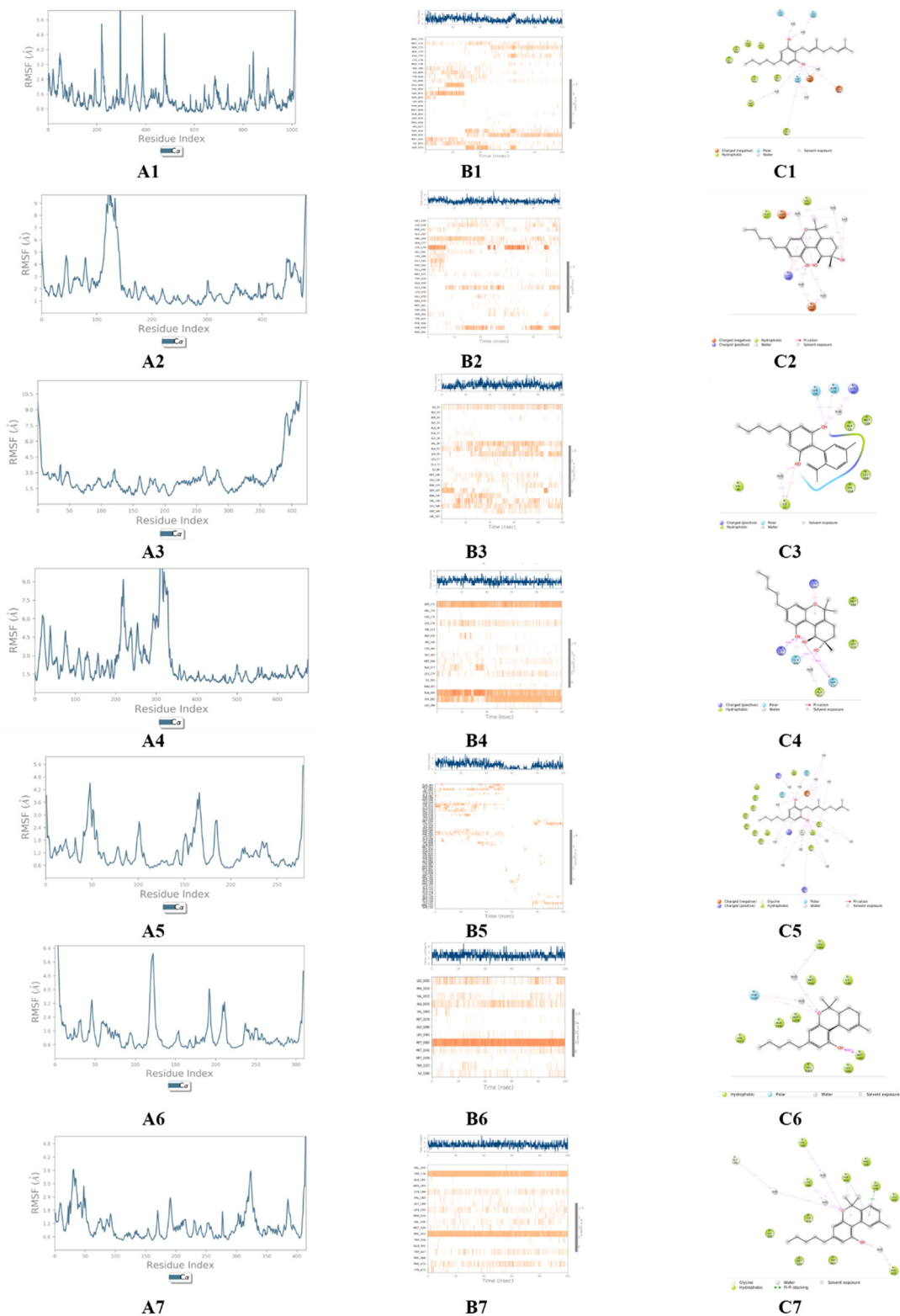


Figure S3. Induced Fit Docking results of key target-ligands. 2D representation of PIK3CA-cannabigerol, Akt1-cannabitriol, MAPK9-cannadinodiol, PRKCD-cannabitriol, BRAF- cannabigerol, IGF1R- Δ9-tetrahydrocannabinol, NOS3- cannabinol complexes.

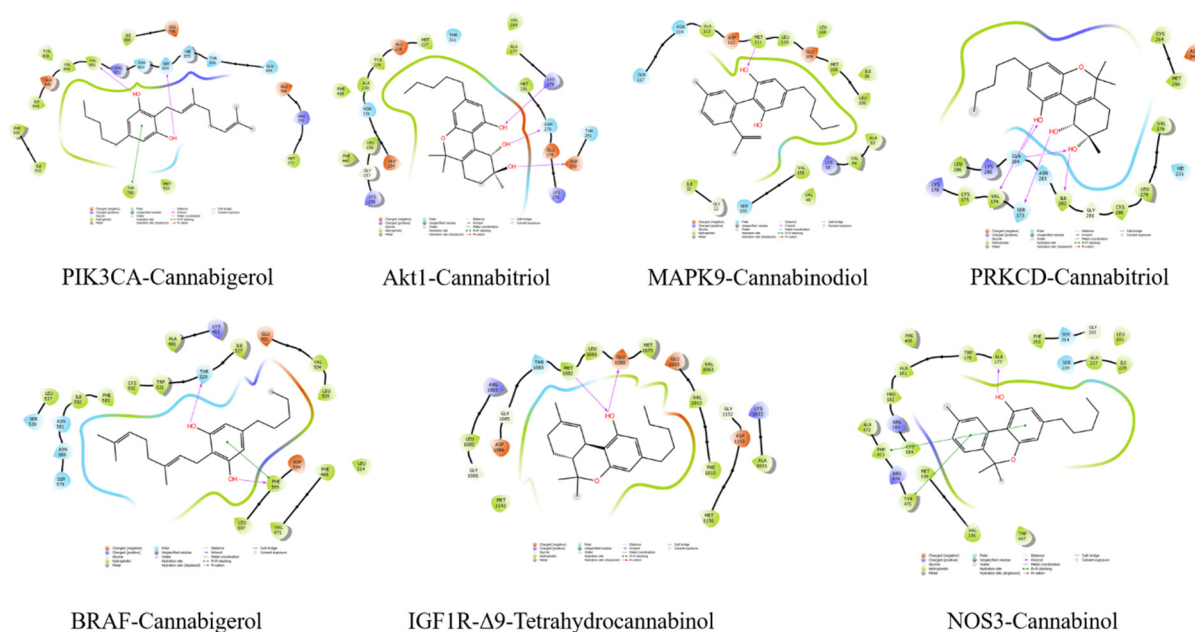
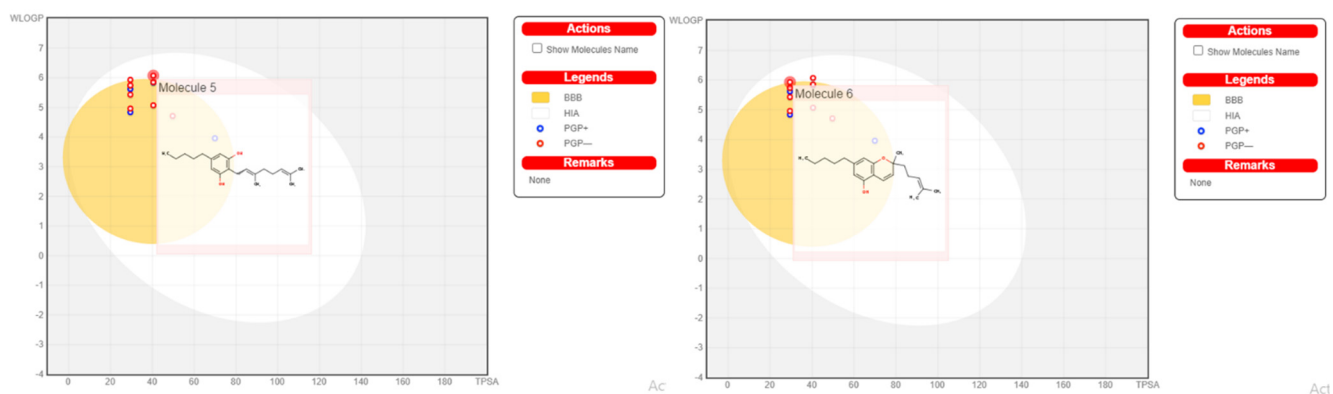


Figure S4. Egg boil diagram of Cannabigerol and Cannabichromene imported from SwissADME.



Supplementary Tables.

Table S1. Results of BindingDB Database

Sr. No.	Target Name	Uploaded compounds	Max	Hits	Ki	IC ₅₀	Kd	EC ₅₀	Download	UniProt ID	UniProt Name	Organism	Gene
1	Cannabinoid receptor 1	11	1	227	395	12	29	380	2D3DTSV	P21554	Cannabinoid receptor 1	Humans (Human)	CNR1 (CNR)
2	Cannabinoid receptor 1/2	4	1	14	14	5	0	0	2D3DTSV	P21554	Cannabinoid receptor 1	Humans	CNR1 (CNR)

												(Hu man)	
2	Cannabi noid receptor 1/2	4	1	1 4	1 4	5	0	0	2D 3 D TS V	P349 72	Canna binoid recept or 2	Hom o sapie ns (Hu man)	CNR 2 (CB2 A, CB2 B)
3	Cannabi noid receptor 2	11	1	1 7 5	3 5 8	1 3	0	27	2D 3 D TS V	P349 72	Canna binoid recept or 2	Hom o sapie ns (Hu man)	CNR 2 (CB2 A, CB2 B)
4	Caspase- 1	2	1	1	0	0	2	0	2D 3 D TS V	P294 66	Caspa se-1	Hom o sapie ns (Hu man)	CAS P1 (IL1 BC, IL1B CE)
5	Cholines terase	2	1	1	0	1	0	0	2D 3 D TS V	NOT FOR HUM ANS			
6	Cytochr ome P450 1A1	4	1	2	3	0	0	0	2D 3 D TS V	P047 98	Cytoc hrome P450 1A1	Hom o sapie ns (Hu man)	CYP 1A1
7	Cytochr ome P450 1A2	2	1	1	1	0	0	0	2D 3 D TS V	P051 77	Cytoc hrome P450 1A2	Hom o sapie ns (Hu man)	CYP 1A2
8	Cytochr ome P450 1B1	2	1	1	1	0	0	0	2D 3 D TS V	Q166 78	Cytoc hrome P450 1B1	Hom o sapie ns (Hu man)	CYP 1B1
9	Cytochr ome P450 2B6	2	1	1	1	0	0	0	2D 3 D TS V	P208 13	Cytoc hrome P450 2B6	Hom o sapie ns (Hu man)	CYP 2B6
1 0	Cytochr ome P450 2C19	2	1	1	1	0	0	0	2D 3 D TS V	P332 61	Cytoc hrome P450 2C19	Hom o sapie ns (Hu man)	CYP 2C19

11	Cytochrome P450 3A4	2	1	1	1	0	0	0	2D 3 D TS V	P08684	Cytochrome P450 3A4	Homosapiens (Human)	CYP3A4 (CYP3A3)
12	Cytochrome P450 3A5	2	1	1	1	0	0	0	2D 3 D TS V	P20815	Cytochrome P450 3A5	Homosapiens (Human)	CYP3A5
13	D(3) dopamine receptor	3	0.95	4	0	0	0	4	2D 3 D TS V	P35462	D(3) dopamine receptor	Homosapiens (Human)	DRD3
14	Estrogen receptor	2	0.85	4	0	4	0	0	2D 3 D TS V	P03372	Estrogen receptor	Homosapiens (Human)	ESR1 (ESR, NR3A1)
15	Estrogen receptor beta	2	0.85	5	0	5	0	0	2D 3 D TS V	Q92731	Estrogen receptor beta	Homosapiens (Human)	ESR2 (ESTRB, NR3A2)
16	Fatty acid-binding protein, liver	5	0.94	3	3	0	0	0	2D 3 D TS V	NOT FOR HUMANS			
17	G-protein coupled receptor 55	2	0.85	2	0	0	0	2	2D 3 D TS V	Q9Y2T6	G-protein coupled receptor 55	Homosapiens (Human)	GPR55
18	Heat sensitive channel TRPV3	2	1	1	0	1	0	1	2D 3 D TS V	NOT FOR HUMANS			
19	Transient receptor potential cation channel subfamily A	10	1	10	0	4	0	11	2D 3 D TS V	NOT FOR HUMANS			

	member 1												
20	Transient receptor potential cation channel subfamily M member 8	5	1	5	0	5	0	0	2D 3D TS V	NOT FOR HUMANS			
21	Transient receptor potential cation channel subfamily V member 4	2	1	1	0	0	0	1	2D 3D TS V	NOT FOR HUMANS			
22	Vascular endothelial growth factor receptor 2	3	0.92	7	7	0	0	0	2D 3D TS V	P35968	Vascular endothelial growth factor receptor 2	Humans (Human)	KDR (FLK1, VEGFR2)

Table S2. Results of the SwissTargetPrediction.

Target	Common name	Uniprot ID	ChEMBL ID	Target Class	Probability*	Known actives (3D/2D)	Compound name
Cannabinoid receptor 1	CNR1	P21554	CHEMBL218	Family A G protein-coupled receptor	0.218248	979 / 261	Cannabichromene
Cannabinoid receptor 2	CNR2	P34972	CHEMBL253	Family A G protein-coupled receptor	0.176594	880 / 221	Cannabichromene
Arachidonate 5-lipoxygenase	ALOX5	P09917	CHEMBL215	Oxidoreductase	0.109946	112 / 27	Cannabichromene
5-lipoxygenase activating protein	ALOX5 AP	P20292	CHEMBL4550	Other cytosolic protein	0.101614	73 / 0	Cannabichromene
11-beta-hydroxysteroid dehydrogenase 1	HSD11B1	P28845	CHEMBL4235	Enzyme	0.101614	240 / 0	Cannabichromene
Vascular endothelial growth factor receptor 2	KDR	P35968	CHEMBL279	Kinase	0.101614	337 / 8	Cannabichromene

Bile acid receptor FXR	NR1H4	Q96RI1	CHEMBL2047	Nuclear receptor	0.101614	40 / 0Â Â Â Â Â	Cannabichrome ne
Cystic fibrosis transmembrane conductance regulator	CFTR	P13569	CHEMBL4051	Other ion channel	0.101614	11 / 0Â Â Â Â Â	Cannabichrome ne
Leucine-rich repeat serine/threonine-protein kinase 2	LRRK2	Q5S007	CHEMBL1075104	Kinase	0.101614	46 / 0Â Â Â Â Â	Cannabichrome ne
NAD-dependent deacetylase sirtuin 2	SIRT2	Q8IXJ6	CHEMBL4462	Eraser	0.101614	34 / 0Â Â Â Â Â	Cannabichrome ne
Corticotropin releasing factor receptor 1	CRHR1	P34998	CHEMBL1800	Family B G protein-coupled receptor	0.101614	104 / 0Â Â Â Â Â	Cannabichrome ne
Calcium sensing receptor	CASR	P41180	CHEMBL1878	Family C G protein-coupled receptor	0.101614	36 / 0Â Â Â Â Â	Cannabichrome ne
Phosphodiesterase 7A	PDE7A	Q13946	CHEMBL3012	Phosphodiesterase	0.101614	28 / 0Â Â Â Â Â	Cannabichrome ne
Pyroglutamylated RFamide peptide receptor	QRFRP	Q96P65	CHEMBL5852	Family A G protein-coupled receptor	0.101614	9 / 0Â Â Â Â Â	Cannabichrome ne
Melatonin receptor 1B	MTNR1B	P49286	CHEMBL1946	Family A G protein-coupled receptor	0.101614	109 / 0Â Â Â Â Â	Cannabichrome ne
Kinesin-like protein 1	KIF11	P52732	CHEMBL4581	Other cytosolic protein	0.101614	42 / 0Â Â Â Â Â	Cannabichrome ne
GABA-A receptor; alpha-3/beta-3/gamma-2	GABRB3 GABRA3 GABRG2	P28472 P34903 P18507	CHEMBL2094120	Ligand-gated ion channel	0.101614	120 / 0Â Â Â Â Â	Cannabichrome ne
GABA-A receptor; alpha-1/beta-3/gamma-2	GABRB3 GABRG2 GABRA1	P28472 P18507 P14867	CHEMBL2094121	Ligand-gated ion channel	0.101614	100 / 0Â Â Â Â Â	Cannabichrome ne
GABA-A receptor; alpha-5/beta-3/gamma-2	GABRB3 GABRG2 GABRA5	P28472 P18507 P31644	CHEMBL2094122	Ligand-gated ion channel	0.101614	92 / 0Â Â Â Â Â	Cannabichrome ne
GABA-A receptor; alpha-2/beta-3/gamma-2	GABRA2 GABRB3 GABRG2	P47869 P28472 P18507	CHEMBL2094130	Ligand-gated ion channel	0.101614	112 / 0Â Â Â Â Â	Cannabichrome ne
N-arachidonyl glycine receptor	GPR18	Q14330	CHEMBL2384898	Family A G protein-	0.101614	9 / 1Â Â Â Â Â	Cannabichrome ne

				coupled receptor			
Glycine receptor subunit alpha-1	GLRA1	P23415	CHEMBL5845	Ligand-gated ion channel	0.101614	1 / 1Â Â Â Â Â	Cannabichrome ne
Cyclooxygenase-1	PTGS1	P23219	CHEMBL221	Oxidoreductase	0.101614	46 / 32Â Â Â Â Â	Cannabichrome ne
P2X purinoceptor 3	P2RX3	P56373	CHEMBL2998	Ligand-gated ion channel	0.101614	38 / 0Â Â Â Â Â	Cannabichrome ne
Glucocorticoid receptor	NR3C1	P04150	CHEMBL2034	Nuclear receptor	0.101614	147 / 0Â Â Â Â Â	Cannabichrome ne
Progesterone receptor	PGR	P06401	CHEMBL208	Nuclear receptor	0.101614	65 / 0Â Â Â Â Â	Cannabichrome ne
Tyrosine-protein kinase SRC	SRC	P12931	CHEMBL267	Kinase	0.101614	133 / 1Â Â Â Â Â	Cannabichrome ne
Phosphodiesterase 5A	PDE5A	O76074	CHEMBL1827	Phosphodiesterase	0.101614	183 / 0Â Â Â Â Â	Cannabichrome ne
Histone deacetylase 2	HDAC2	Q92769	CHEMBL1937	Eraser	0.101614	36 / 0Â Â Â Â Â	Cannabichrome ne
Histone deacetylase 1	HDAC1	Q13547	CHEMBL325	Eraser	0.101614	109 / 0Â Â Â Â Â	Cannabichrome ne
G-protein coupled receptor 55	GPR55	Q9Y2T6	CHEMBL1075322	Family A G protein-coupled receptor	0.101614	15 / 0Â Â Â Â Â	Cannabichrome ne
Adenosine A1 receptor	ADORA1	P30542	CHEMBL226	Family A G protein-coupled receptor	0.101614	367 / 0Â Â Â Â Â	Cannabichrome ne
Adenosine A2a receptor	ADORA2A	P29274	CHEMBL251	Family A G protein-coupled receptor	0.101614	284 / 0Â Â Â Â Â	Cannabichrome ne
Adenosine A3 receptor	ADORA3	P0DMS8	CHEMBL256	Family A G protein-coupled receptor	0.101614	265 / 0Â Â Â Â Â	Cannabichrome ne
Cytochrome b-c1 complex subunit 7	UQCRB	P14927	CHEMBL1671612	Transmembrane 1-electron transfer carriers	0.101614	1 / 0Â Â Â Â Â	Cannabichrome ne
ADAMTS5	ADAMTS5	Q9UNA0	CHEMBL2285	Protease	0.101614	31 / 0Â Â Â Â Â	Cannabichrome ne
Translocator protein (by homology)	TSPO	P30536	CHEMBL5742	Membrane receptor	0.101614	267 / 0Â Â Â Â Â	Cannabichrome ne
Serotonin 2c (5-HT2c) receptor	HTR2C	P28335	CHEMBL225	Family A G protein-coupled receptor	0.101614	68 / 0Â Â Â Â Â	Cannabichrome ne
Estradiol 17-beta-dehydrogenase 2	HSD17B2	P37059	CHEMBL2789	Enzyme	0.101614	21 / 0Â Â Â Â Â	Cannabichrome ne
Interleukin-8 receptor A	CXCR1	P25024	CHEMBL4029	Family A G protein-coupled receptor	0.101614	32 / 0Â Â Â Â Â	Cannabichrome ne
Pantothenate kinase 3	PANK3	Q9H999	CHEMBL3407328	Enzyme	0.101614	7 / 0Â Â Â Â Â	Cannabichrome ne

Neuropeptide Y receptor type 5	NPY5R	Q15761	CHEMBL4561	Family A G protein-coupled receptor	0.101614	212 / 0Â Â Â Â Â	Cannabichrome ne
Purinergic receptor P2Y1	P2RY1	P47900	CHEMBL4315	Family A G protein-coupled receptor	0.101614	23 / 0Â Â Â Â Â	Cannabichrome ne
Cathepsin K	CTSK	P43235	CHEMBL268	Protease	0	324 / 1Â Â Â Â Â	Cannabichrome ne
Kinesin-1 heavy chain/ Tyrosine-protein kinase receptor RET	RET	P07949	CHEMBL2041	Kinase	0	28 / 0Â Â Â Â Â	Cannabichrome ne
Epoxide hydratase	EPHX2	P34913	CHEMBL2409	Protease	0	222 / 0Â Â Â Â Â	Cannabichrome ne
Prenyl protein specific protease	RCE1	Q9Y256	CHEMBL3411	Protease	0	6 / 0Â Â Â Â Â	Cannabichrome ne
Methyl-CpG-binding protein 2	MECP2	P51608	CHEMBL3638346	Reader	0	1 / 0Â Â Â Â Â	Cannabichrome ne
Methyl-CpG-binding domain protein 2	MBD2	Q9UBB5	CHEMBL3707462	Reader	0	2 / 0Â Â Â Â Â	Cannabichrome ne
Receptor protein-tyrosine kinase erbB-2	ERBB2	P04626	CHEMBL1824	Kinase	0	84 / 0Â Â Â Â Â	Cannabichrome ne
Vascular endothelial growth factor receptor 1 (by homology)	FLT1	P17948	CHEMBL1868	Kinase	0	89 / 0Â Â Â Â Â	Cannabichrome ne
Glutamate NMDA receptor; GRIN1/GRIN2B	GRIN1 GRIN2B	Q05586 Q13224	CHEMBL1907603	Ligand-gated ion channel	0	3 / 0Â Â Â Â Â	Cannabichrome ne
Cyclophilin A	PPIA	P62937	CHEMBL1949	Isomerase	0	39 / 0Â Â Â Â Â	Cannabichrome ne
Hexokinase type IV	GCK	P35557	CHEMBL3820	Enzyme	0	96 / 0Â Â Â Â Â	Cannabichrome ne
Phosphodiesterase 10A (by homology)	PDE10A	Q9Y233	CHEMBL4409	Phosphodies terase	0	909 / 0Â Â Â Â Â	Cannabichrome ne
Phosphodiesterase 2A	PDE2A	O00408	CHEMBL2652	Phosphodies terase	0	53 / 0Â Â Â Â Â	Cannabichrome ne
Cholecystokinin B receptor	CCKBR	P32239	CHEMBL298	Family A G protein-coupled receptor	0	386 / 0Â Â Â Â Â	Cannabichrome ne
Carnitine O-palmitoyltransferase 1, liver isoform	CPT1A	P50416	CHEMBL1293194	Enzyme	0	91 / 0Â Â Â Â Â	Cannabichrome ne
GABA-A receptor; GABA-A site (alpha1/beta2 interface)	GABRA1 GABRB2	P14867 P47870	CHEMBL1907597	Ligand-gated ion channel	0	5 / 0Â Â Â Â Â	Cannabichrome ne
Dopamine D3 receptor	DRD3	P35462	CHEMBL234	Family A G protein-coupled receptor	0	90 / 0Â Â Â Â Â	Cannabichrome ne
LDL-associated phospholipase A2	PLA2G7	Q13093	CHEMBL3514	Enzyme	0	32 / 0Â Â Â Â Â	Cannabichrome ne
Acyl-CoA desaturase (by homology)	SCD	O00767	CHEMBL5555	Enzyme	0	32 / 0Â Â Â Â Â	Cannabichrome ne

Histone deacetylase 6	HDAC6	Q9UBN7	CHEMBL1865	Eraser	0	67 / 0	Cannabichrome ne
Muscarinic acetylcholine receptor M1 (by homology)	CHRM1	P11229	CHEMBL216	Family A G protein-coupled receptor	0	55 / 0	Cannabichrome ne
Beta secretase 2	BACE2	Q9Y5Z0	CHEMBL2525	Protease	0	106 / 0	Cannabichrome ne
Histone deacetylase 8	HDAC8	Q9BY41	CHEMBL3192	Eraser	0	22 / 0	Cannabichrome ne
Sphingosine 1-phosphate receptor Edg-3	S1PR3	Q99500	CHEMBL3892	Family A G protein-coupled receptor	0	91 / 0	Cannabichrome ne
Orexin receptor 2	HCRT2	O43614	CHEMBL4792	Family A G protein-coupled receptor	0	561 / 0	Cannabichrome ne
Orexin receptor 1	HCRT1	O43613	CHEMBL5113	Family A G protein-coupled receptor	0	495 / 0	Cannabichrome ne
Fibroblast growth factor receptor 1	FGFR1	P11362	CHEMBL3650	Kinase	0	54 / 1	Cannabichrome ne
Dihydroorotate dehydrogenase	DHODH	Q02127	CHEMBL1966	Oxidoreductase	0	10 / 0	Cannabichrome ne
Isocitrate dehydrogenase [NADP] cytoplasmic	IDH1	O75874	CHEMBL2007625	Enzyme	0	94 / 0	Cannabichrome ne
Metabotropic glutamate receptor 5	GRM5	P41594	CHEMBL3227	Family C G protein-coupled receptor	0	534 / 0	Cannabichrome ne
Serotonin 5a (5-HT5a) receptor	HTR5A	P47898	CHEMBL3426	Family A G protein-coupled receptor	0	8 / 0	Cannabichrome ne
Neurokinin 2 receptor	TACR2	P21452	CHEMBL2327	Family A G protein-coupled receptor	0	24 / 0	Cannabichrome ne
Cyclin-dependent kinase 4	CDK4	P11802	CHEMBL331	Kinase	0	45 / 0	Cannabichrome ne
Heat shock protein HSP 90-alpha	HSP90A A1	P07900	CHEMBL3880	Other cytosolic protein	0	40 / 0	Cannabichrome ne
Neurokinin 3 receptor	TACR3	P29371	CHEMBL4429	Family A G protein-coupled receptor	0	134 / 0	Cannabichrome ne
Tankyrase-2	TNKS2	Q9H2K2	CHEMBL6154	Enzyme	0	26 / 0	Cannabichrome ne
Tyrosine-protein kinase ABL	ABL1	P00519	CHEMBL1862	Kinase	0	125 / 0	Cannabichrome ne
P2X purinoceptor 7	P2RX7	Q99572	CHEMBL4805	Ligand-gated ion channel	0	136 / 0	Cannabichrome ne
Hepatocyte growth factor receptor	MET	P08581	CHEMBL3717	Kinase	0	209 / 5	Cannabichrome ne

FK506-binding protein 1A	FKBP1A	P62942	CHEMBL1902	Isomerase	0	82 / 0	Cannabichrome ne
Phosphodiesterase 4B	PDE4B	Q07343	CHEMBL275	Phosphodies terase	0	82 / 0	Cannabichrome ne
Cyclin-dependent kinase 2	CDK2	P24941	CHEMBL301	Kinase	0	92 / 0	Cannabichrome ne
Cyclin-dependent kinase 1	CDK1	P06493	CHEMBL308	Kinase	0	60 / 0	Cannabichrome ne
Glutaminy-peptide cyclotransferase	QPCT	Q16769	CHEMBL4508	Enzyme	0	32 / 0	Cannabichrome ne
Sodium channel protein type V alpha subunit	SCN5A	Q14524	CHEMBL1980	Voltage-gated ion channel	0	23 / 0	Cannabichrome ne
Anandamide amidohydrolase	FAAH	O00519	CHEMBL2243	Enzyme	0	199 / 0	Cannabichrome ne
Matrix metalloproteinase 3	MMP3	P08254	CHEMBL283	Protease	0	49 / 0	Cannabichrome ne
Matrix metalloproteinase 1	MMP1	P03956	CHEMBL332	Protease	0	57 / 0	Cannabichrome ne
Sodium channel protein type II alpha subunit	SCN2A	Q99250	CHEMBL4187	Voltage-gated ion channel	0	32 / 0	Cannabichrome ne
Glucagon receptor	GCGR	P47871	CHEMBL1985	Family B G protein-coupled receptor	0	43 / 0	Cannabichrome ne
Gamma-secretase	PSEN2 PSENEN NCSTN APH1A PSEN1 APH1B	P49810 Q9NZ42 Q92542 Q96BI3 P49768 Q8WW43	CHEMBL2094135	Protease	0	176 / 0	Cannabichrome ne
6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 3	PFKFB3	Q16875	CHEMBL2331053	Enzyme	0	90 / 0	Cannabichrome ne
MAP kinase p38 alpha	MAPK14	Q16539	CHEMBL260	Kinase	0	447 / 0	Cannabichrome ne
Serotonin 6 (5-HT6) receptor	HTR6	P50406	CHEMBL3371	Family A G protein-coupled receptor	0	118 / 0	Cannabichrome ne
Bombesin receptor subtype-3	BRS3	P32247	CHEMBL4080	Family A G protein-coupled receptor	0	5 / 0	Cannabichrome ne
G-protein coupled bile acid receptor 1	GPBAR1	Q8TDU6	CHEMBL5409	Family A G protein-coupled receptor	0	35 / 0	Cannabichrome ne
Elongation of very long chain fatty acids protein 6	ELOVL6	Q9H5J4	CHEMBL5704	Enzyme	0	17 / 0	Cannabichrome ne
Cannabinoid receptor 1	CNR1	P21554	CHEMBL218	Family A G protein-coupled receptor	0.759876	846 / 386	Cannabicyclol

Cannabinoid receptor 2	CNR2	P34972	CHEMBL253	Family A G protein-coupled receptor	0.759876	755 / 379Â Â Â Â Â	Cannabicyclol
Vascular endothelial growth factor receptor 2	KDR	P35968	CHEMBL279	Kinase	0.134939	183 / 12Â Â Â Â Â	Cannabicyclol
N-arachidonyl glycine receptor	GPR18	Q14330	CHEMBL2384898	Family A G protein-coupled receptor	0.12661	2 / 2Â Â Â Â Â	Cannabicyclol
Glycine receptor subunit alpha-1	GLRA1	P23415	CHEMBL5845	Ligand-gated ion channel	0.12661	1 / 2Â Â Â Â Â	Cannabicyclol
PH domain leucine-rich repeat-containing protein phosphatase 1	PHLPP1	O60346	CHEMBL3414405	Reader	0.109946	0 / 3Â Â Â Â Â	Cannabicyclol
Serine/threonine-protein kinase ILK-1	ILK	Q13418	CHEMBL5247	Kinase	0.109946	0 / 2Â Â Â Â Â	Cannabicyclol
Serine/threonine-protein kinase AKT	AKT1	P31749	CHEMBL4282	Kinase	0.101614	14 / 19Â Â Â Â Â	Cannabicyclol
Arachidonate 5-lipoxygenase	ALOX5	P09917	CHEMBL215	Oxidoreductase	0.101614	51 / 26Â Â Â Â Â	Cannabicyclol
Cystic fibrosis transmembrane conductance regulator	CFTR	P13569	CHEMBL4051	Other ion channel	0.101614	4 / 0Â Â Â Â Â	Cannabicyclol
Estrogen receptor beta	ESR2	Q92731	CHEMBL242	Nuclear receptor	0.101614	19 / 72Â Â Â Â Â	Cannabicyclol
Glucagon receptor	GCGR	P47871	CHEMBL1985	Family B G protein-coupled receptor	0.101614	30 / 0Â Â Â Â Â	Cannabicyclol
Cathepsin D	CTSD	P07339	CHEMBL2581	Protease	0.101614	33 / 0Â Â Â Â Â	Cannabicyclol
G-protein coupled receptor 55	GPR55	Q9Y2T6	CHEMBL1075322	Family A G protein-coupled receptor	0.101614	13 / 1Â Â Â Â Â	Cannabicyclol
Presenilin 1	PSEN1	P49768	CHEMBL2473	Other ion channel	0.101614	0 / 7Â Â Â Â Â	Cannabicyclol
Estrogen receptor alpha	ESR1	P03372	CHEMBL206	Nuclear receptor	0.101614	22 / 76Â Â Â Â Â	Cannabicyclol
NAD-dependent deacetylase sirtuin 2	SIRT2	Q8IXJ6	CHEMBL4462	Eraser	0.101614	23 / 19Â Â Â Â Â	Cannabicyclol
Protein kinase C (PKC)	PRKCZ	Q05513	CHEMBL3438	Kinase	0.101614	2 / 0Â Â Â Â Â	Cannabicyclol
Nitric oxide synthase, inducible (by homology)	NOS2	P35228	CHEMBL4481	Enzyme	0.101614	80 / 0Â Â Â Â Â	Cannabicyclol
Kinesin-like protein 1	KIF11	P52732	CHEMBL4581	Other cytosolic protein	0.101614	35 / 0Â Â Â Â Â	Cannabicyclol
Bile acid receptor FXR	NR1H4	Q96R11	CHEMBL2047	Nuclear receptor	0.101614	30 / 18Â Â Â Â Â	Cannabicyclol
Prostaglandin E synthase	PTGES	O14684	CHEMBL5658	Enzyme	0.101614	24 / 8Â Â Â Â Â	Cannabicyclol

Voltage-gated potassium channel, KQT; KCNQ2(Kv7.2)/KCNQ3(Kv7.3)	KCNQ3 KCNQ2	O43525 O43526	CHEMBL2221348	Voltage-gated ion channel	0.101614	8 / 0Â Â Â Â Â	Cannabicyclol
Quinone reductase 2	NQO2	P16083	CHEMBL3959	Enzyme	0.101614	9 / 0Â Â Â Â Â	Cannabicyclol
Corticotropin releasing factor receptor 1	CRHR1	P34998	CHEMBL1800	Family B G protein-coupled receptor	0.101614	107 / 0Â Â Â Â Â	Cannabicyclol
Voltage-gated potassium channel subunit Kv1.5	KCNA5	P22460	CHEMBL4306	Voltage-gated ion channel	0.101614	109 / 0Â Â Â Â Â	Cannabicyclol
Beta secretase 2	BACE2	Q9Y5Z0	CHEMBL2525	Protease	0.101614	50 / 0Â Â Â Â Â	Cannabicyclol
Thromboxane A2 receptor	TBXA2R	P21731	CHEMBL2069	Family A G protein-coupled receptor	0.101614	6 / 0Â Â Â Â Â	Cannabicyclol
Prenyl protein specific protease	RCE1	Q9Y256	CHEMBL3411	Protease	0.101614	6 / 0Â Â Â Â Â	Cannabicyclol
Peregrin	BRPF1	P55201	CHEMBL3132741	Reader	0.101614	28 / 0Â Â Â Â Â	Cannabicyclol
Hormone sensitive lipase	LIPE	Q05469	CHEMBL3590	Enzyme	0.101614	51 / 0Â Â Â Â Â	Cannabicyclol
Beta-secretase 1	BACE1	P56817	CHEMBL4822	Protease	0.101614	202 / 12Â Â Â Â Â	Cannabicyclol
Thymidylate synthase	TYMS	P04818	CHEMBL1952	Transferase	0.101614	19 / 0Â Â Â Â Â	Cannabicyclol
Poly [ADP-ribose] polymerase-1	PARP1	P09874	CHEMBL3105	Enzyme	0.101614	24 / 0Â Â Â Â Â	Cannabicyclol
LDL-associated phospholipase A2	PLA2G7	Q13093	CHEMBL3514	Enzyme	0.101614	17 / 0Â Â Â Â Â	Cannabicyclol
Protoporphyrinogen oxidase	PPOX	P50336	CHEMBL1926488	Oxidoreductase	0.101614	2 / 0Â Â Â Â Â	Cannabicyclol
ADAMTS5	ADAMTS5	Q9UNA0	CHEMBL2285	Protease	0.101614	19 / 0Â Â Â Â Â	Cannabicyclol
Melanocortin receptor 4	MC4R	P32245	CHEMBL259	Family A G protein-coupled receptor	0.101614	13 / 0Â Â Â Â Â	Cannabicyclol
Arachidonate 15-lipoxygenase	ALOX15	P16050	CHEMBL2903	Enzyme	0.101614	19 / 12Â Â Â Â Â	Cannabicyclol
Isocitrate dehydrogenase [NADP] cytoplasmic	IDH1	O75874	CHEMBL2007625	Enzyme	0.101614	179 / 0Â Â Â Â Â	Cannabicyclol
Neurokinin 2 receptor	TACR2	P21452	CHEMBL2327	Family A G protein-coupled receptor	0.101614	10 / 0Â Â Â Â Â	Cannabicyclol
Neurokinin 3 receptor	TACR3	P29371	CHEMBL4429	Family A G protein-coupled receptor	0.101614	110 / 0Â Â Â Â Â	Cannabicyclol
Protein-tyrosine phosphatase 1B	PTPN1	P18031	CHEMBL335	Phosphatase	0.101614	7 / 6Â Â Â Â Â	Cannabicyclol
Methyl-CpG-binding protein 2	MECP2	P51608	CHEMBL3638346	Reader	0	1 / 0Â Â Â Â Â	Cannabicyclol

Methyl-CpG-binding domain protein 2	MBD2	Q9UBB5	CHEMBL3707462	Reader	0	$\frac{2}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Serine/threonine-protein kinase PAK 1	PAK1	Q13153	CHEMBL4600	Kinase	0	$\frac{2}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Vanilloid receptor	TRPV1	Q8NER1	CHEMBL4794	Voltage-gated ion channel	0	$\frac{145}{2 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Leucine-rich repeat serine/threonine-protein kinase 2	LRRK2	Q5S007	CHEMBL1075104	Kinase	0	$\frac{24}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Histone deacetylase 2	HDAC2	Q92769	CHEMBL1937	Eraser	0	$\frac{10}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Metabotropic glutamate receptor 2	GRM2	Q14416	CHEMBL5137	Family C G protein-coupled receptor	0	$\frac{28}{63 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Adenosine A2a receptor	ADORA2A	P29274	CHEMBL251	Family A G protein-coupled receptor	0	$\frac{113}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Sodium channel protein type II alpha subunit	SCN2A	Q99250	CHEMBL4187	Voltage-gated ion channel	0	$\frac{29}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Translocator protein (by homology)	TSPO	P30536	CHEMBL5742	Membrane receptor	0	$\frac{350}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Cathepsin K	CTSK	P43235	CHEMBL268	Protease	0	$\frac{168}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Serotonin 2a (5-HT2a) receptor (by homology)	HTR2A	P28223	CHEMBL224	Family A G protein-coupled receptor	0	$\frac{40}{101 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Bombesin receptor subtype-3	BRS3	P32247	CHEMBL4080	Family A G protein-coupled receptor	0	$\frac{1}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
p53-binding protein Mdm-2	MDM2	Q00987	CHEMBL5023	Other nuclear protein	0	$\frac{72}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Egl nine homolog 1	EGLN1	Q9GZT9	CHEMBL5697	Oxidoreductase	0	$\frac{5}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
GABA-A receptor; GABA-A site (alpha1/beta2 interface)	GABRA1 GABRB2	P14867 P47870	CHEMBL1907597	Ligand-gated ion channel	0	$\frac{4}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Phosphodiesterase 2A	PDE2A	O00408	CHEMBL2652	Phosphodiesterase	0	$\frac{52}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Phosphodiesterase 10A	PDE10A	Q9Y233	CHEMBL4409	Phosphodiesterase	0	$\frac{364}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Anandamide amidohydrolase	FAAH	O00519	CHEMBL2243	Enzyme	0	$\frac{80}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Cyclin-dependent kinase 5/CDK5 activator 1	CDK5R1 CDK5	Q15078 Q00535	CHEMBL1907600	Kinase	0	$\frac{74}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol
Cyclin-dependent kinase 1/cyclin B	CCNB3 CDK1 CCNB1 CCNB2	Q8WWL7 P06493 P14635 O95067	CHEMBL2094127	Other cytosolic protein	0	$\frac{40}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabicyclol

Tyrosine-protein kinase JAK3	JAK3	P52333	CHEMBL2148	Kinase	0	183 / 0	Cannabicyclol
Tyrosine-protein kinase JAK1	JAK1	P23458	CHEMBL2835	Kinase	0	65 / 0	Cannabicyclol
Tyrosine-protein kinase JAK2	JAK2	O60674	CHEMBL2971	Kinase	0	147 / 0	Cannabicyclol
JAK3/JAK1	JAK3 JAK1	P52333 P23458	CHEMBL3038491	Kinase	0	16 / 0	Cannabicyclol
Peroxisome proliferator-activated receptor alpha	PPARA	Q07869	CHEMBL239	Nuclear receptor	0	0 / 62	Cannabicyclol
G-protein coupled bile acid receptor 1	GPBAR1	Q8TDU6	CHEMBL5409	Family A G protein-coupled receptor	0	30 / 0	Cannabicyclol
Cytochrome b-c1 complex subunit 7	UQCRB	P14927	CHEMBL1671612	Transmembrane 1-electron transfer carriers	0	1 / 0	Cannabicyclol
Phosphodiesterase 7A	PDE7A	Q13946	CHEMBL3012	Phosphodiesterase	0	13 / 0	Cannabicyclol
Leukotriene A4 hydrolase	LTA4H	P09960	CHEMBL4618	Protease	0	10 / 0	Cannabicyclol
L-lactate dehydrogenase A chain	LDHA	P00338	CHEMBL4835	Enzyme	0	7 / 0	Cannabicyclol
Serine/threonine-protein kinase Aurora-B	AURKB	Q96GD4	CHEMBL2185	Kinase	0	21 / 0	Cannabicyclol
Focal adhesion kinase 1	PTK2	Q05397	CHEMBL2695	Kinase	0	21 / 0	Cannabicyclol
Serine/threonine-protein kinase PLK1	PLK1	P53350	CHEMBL3024	Kinase	0	15 / 0	Cannabicyclol
Histone deacetylase 4	HDAC4	P56524	CHEMBL3524	Eraser	0	6 / 0	Cannabicyclol
Histone deacetylase 10	HDAC10	Q969S8	CHEMBL5103	Eraser	0	4 / 0	Cannabicyclol
GABA-A receptor; alpha-3/beta-3/gamma-2	GABRB3 GABRA3 GABRG2	P28472 P34903 P18507	CHEMBL2094120	Ligand-gated ion channel	0	71 / 0	Cannabicyclol
GABA-A receptor; alpha-1/beta-3/gamma-2	GABRB3 GABRG2 GABRA1	P28472 P18507 P14867	CHEMBL2094121	Ligand-gated ion channel	0	57 / 0	Cannabicyclol
GABA-A receptor; alpha-5/beta-3/gamma-2	GABRB3 GABRG2 GABRA5	P28472 P18507 P31644	CHEMBL2094122	Ligand-gated ion channel	0	57 / 0	Cannabicyclol
GABA-A receptor; alpha-2/beta-3/gamma-2	GABRA2 GABRB3	P47869 P28472 P18507	CHEMBL2094130	Ligand-gated ion channel	0	64 / 0	Cannabicyclol

	3 GABRG 2						
Cholecystokinin B receptor	CCKBR	P32239	CHEMBL298	Family A G protein- coupled receptor	0	244 / 0Â Â Â Â Â	Cannabicyclol
Melatonin receptor 1B	MTNR1 B	P49286	CHEMBL1946	Family A G protein- coupled receptor	0	86 / 23Â Â Â Â Â	Cannabicyclol
Glutamate NMDA receptor; GRIN1/GRIN2B	GRIN1 GRIN2B	Q05586 Q13224	CHEMBL1907603	Ligand- gated ion channel	0	2 / 0Â Â Â Â Â	Cannabicyclol
Muscarinic acetylcholine receptor M3	CHRM3	P20309	CHEMBL245	Family A G protein- coupled receptor	0	69 / 0Â Â Â Â Â	Cannabicyclol
P2X purinoceptor 3	P2RX3	P56373	CHEMBL2998	Ligand- gated ion channel	0	47 / 0Â Â Â Â Â	Cannabicyclol
Methionine aminopeptidase 2	METAP 2	P50579	CHEMBL3922	Protease	0	4 / 0Â Â Â Â Â	Cannabicyclol
Orexin receptor 1	HCRTR1	O43613	CHEMBL5113	Family A G protein- coupled receptor	0	246 / 0Â Â Â Â Â	Cannabicyclol
Oxytocin receptor (by homology)	OXTR	P30559	CHEMBL2049	Family A G protein- coupled receptor	0	51 / 0Â Â Â Â Â	Cannabicyclol
Alpha-1,6-mannosyl- glycoprotein 2-beta- N- acetylglucosaminyltr ansferase	MGAT2	Q10469	CHEMBL2321630	Enzyme	0	22 / 0Â Â Â Â Â	Cannabicyclol
Histone deacetylase 6	HDAC6	Q9UBN 7	CHEMBL1865	Eraser	0	25 / 3Â Â Â Â Â	Cannabicyclol
Histone deacetylase 8	HDAC8	Q9BY4 1	CHEMBL3192	Eraser	0	11 / 3Â Â Â Â Â	Cannabicyclol
Dihydroorotate dehydrogenase	DHODH	Q02127	CHEMBL1966	Oxidoreduct ase	0	6 / 0Â Â Â Â Â	Cannabicyclol
Thrombin and coagulation factor X	F10	P00742	CHEMBL244	Protease	0	98 / 0Â Â Â Â Â	Cannabicyclol
Pyroglutamylated RFamide peptide receptor	QRFPR	Q96P65	CHEMBL5852	Family A G protein- coupled receptor	0	8 / 0Â Â Â Â Â	Cannabicyclol
Carnitine O- palmitoyltransferase 1, liver isoform	CPT1A	P50416	CHEMBL1293194	Enzyme	0	41 / 0Â Â Â Â Â	Cannabicyclol
Lysosomal Pro-X carboxypeptidase	PRCP	P42785	CHEMBL2335	Protease	0	11 / 0Â Â Â Â Â	Cannabicyclol
Carboxypeptidase B	CPB1	P15086	CHEMBL2552	Protease	0	3 / 0Â Â Â Â Â	Cannabicyclol
Cannabinoid receptor 1	CNR1	P21554	CHEMBL218	Family A G protein-	0.893165	900 / 210Â Â Â Â Â	Cannabidiol

				coupled receptor			
Cannabinoid receptor 2	CNR2	P34972	CHEMBL253	Family A G protein-coupled receptor	0.893165	792 / 174 Å Å Å Å Å	Cannabidiol
G-protein coupled receptor 55	GPR55	Q9Y2T6	CHEMBL1075322	Family A G protein-coupled receptor	0.818184	14 / 2 Å Å Å Å Å	Cannabidiol
Arachidonate 5-lipoxygenase	ALOX5	P09917	CHEMBL215	Oxidoreductase	0.101614	63 / 19 Å Å Å Å Å	Cannabidiol
Cystic fibrosis transmembrane conductance regulator	CFTR	P13569	CHEMBL4051	Other ion channel	0.101614	13 / 0 Å Å Å Å Å	Cannabidiol
Receptor protein-tyrosine kinase erbB-2	ERBB2	P04626	CHEMBL1824	Kinase	0.101614	48 / 0 Å Å Å Å Å	Cannabidiol
NAD-dependent deacetylase sirtuin 2	SIRT2	Q8IXJ6	CHEMBL4462	Eraser	0.101614	27 / 0 Å Å Å Å Å	Cannabidiol
N-arachidonyl glycine receptor	GPR18	Q14330	CHEMBL2384898	Family A G protein-coupled receptor	0.101614	2 / 2 Å Å Å Å Å	Cannabidiol
Glycine receptor subunit alpha-1	GLRA1	P23415	CHEMBL5845	Ligand-gated ion channel	0.101614	1 / 1 Å Å Å Å Å	Cannabidiol
DNA polymerase beta (by homology)	POLB	P06746	CHEMBL2392	Enzyme	0.101614	0 / 3 Å Å Å Å Å	Cannabidiol
Calcium sensing receptor	CASR	P41180	CHEMBL1878	Family C G protein-coupled receptor	0.101614	38 / 0 Å Å Å Å Å	Cannabidiol
Arachidonate 15-lipoxygenase	ALOX15	P16050	CHEMBL2903	Enzyme	0.101614	26 / 11 Å Å Å Å Å	Cannabidiol
Cathepsin D	CTSD	P07339	CHEMBL2581	Protease	0.101614	34 / 0 Å Å Å Å Å	Cannabidiol
Beta-secretase 1	BACE1	P56817	CHEMBL4822	Protease	0.101614	209 / 0 Å Å Å Å Å	Cannabidiol
Vascular endothelial growth factor receptor 2	KDR	P35968	CHEMBL279	Kinase	0.101614	259 / 12 Å Å Å Å Å	Cannabidiol
Neurokinin 3 receptor	TACR3	P29371	CHEMBL4429	Family A G protein-coupled receptor	0.101614	116 / 0 Å Å Å Å Å	Cannabidiol
Cyclooxygenase-2	PTGS2	P35354	CHEMBL230	Oxidoreductase	0.101614	132 / 3 Å Å Å Å Å	Cannabidiol
Poly [ADP-ribose] polymerase-1	PARP1	P09874	CHEMBL3105	Enzyme	0.101614	23 / 0 Å Å Å Å Å	Cannabidiol
Prenyl protein specific protease	RCE1	Q9Y256	CHEMBL3411	Protease	0.101614	6 / 0 Å Å Å Å Å	Cannabidiol
Bile acid receptor FXR	NR1H4	Q96R11	CHEMBL2047	Nuclear receptor	0.101614	30 / 0 Å Å Å Å Å	Cannabidiol
Histone deacetylase 6	HDAC6	Q9UBN7	CHEMBL1865	Eraser	0.101614	23 / 0 Å Å Å Å Å	Cannabidiol
Histone deacetylase 8	HDAC8	Q9BY41	CHEMBL3192	Eraser	0.101614	10 / 0 Å Å Å Å Å	Cannabidiol

Corticotropin releasing factor receptor 1	CRHR1	P34998	CHEMBL1800	Family B G protein-coupled receptor	0.101614	130 / 0Â Â Â Â Â	Cannabidiol
Phosphodiesterase 4B	PDE4B	Q07343	CHEMBL275	Phosphodiesterase	0.101614	31 / 0Â Â Â Â Â	Cannabidiol
ADAMTS5	ADAMTS5	Q9UNAO	CHEMBL2285	Protease	0.101614	33 / 0Â Â Â Â Â	Cannabidiol
Epoxide hydratase	EPHX2	P34913	CHEMBL2409	Protease	0.101614	129 / 0Â Â Â Â Â	Cannabidiol
11-beta-hydroxysteroid dehydrogenase 1	HSD11B1	P28845	CHEMBL4235	Enzyme	0.101614	275 / 0Â Â Â Â Â	Cannabidiol
Translocator protein (by homology)	TSPO	P30536	CHEMBL5742	Membrane receptor	0.101614	352 / 0Â Â Â Â Â	Cannabidiol
Serotonin 2b (5-HT2b) receptor	HTR2B	P41595	CHEMBL1833	Family A G protein-coupled receptor	0.101614	40 / 0Â Â Â Â Â	Cannabidiol
Cholesteryl ester transfer protein	CETP	P11597	CHEMBL3572	Other ion channel	0.101614	7 / 2Â Â Â Â Â	Cannabidiol
Quinone reductase 2	NQO2	P16083	CHEMBL3959	Enzyme	0.101614	8 / 0Â Â Â Â Â	Cannabidiol
Prostanoid EP1 receptor	PTGER1	P34995	CHEMBL1811	Family A G protein-coupled receptor	0.101614	46 / 0Â Â Â Â Â	Cannabidiol
Voltage-gated potassium channel subunit Kv1.5	KCNA5	P22460	CHEMBL4306	Voltage-gated ion channel	0.101614	116 / 0Â Â Â Â Â	Cannabidiol
L-lactate dehydrogenase B chain	LDHB	P07195	CHEMBL4940	Enzyme	0.101614	2 / 0Â Â Â Â Â	Cannabidiol
Thymidylate synthase	TYMS	P04818	CHEMBL1952	Transferase	0.101614	23 / 0Â Â Â Â Â	Cannabidiol
Glucagon receptor	GCGR	P47871	CHEMBL1985	Family B G protein-coupled receptor	0.101614	34 / 0Â Â Â Â Â	Cannabidiol
p53-binding protein Mdm-2	MDM2	Q00987	CHEMBL5023	Other nuclear protein	0.101614	69 / 0Â Â Â Â Â	Cannabidiol
Steryl-sulfatase	STS	P08842	CHEMBL3559	Enzyme	0.101614	6 / 0Â Â Â Â Â	Cannabidiol
L-lactate dehydrogenase A chain	LDHA	P00338	CHEMBL4835	Enzyme	0.101614	7 / 0Â Â Â Â Â	Cannabidiol
Metabotropic glutamate receptor 2	GRM2	Q14416	CHEMBL5137	Family C G protein-coupled receptor	0.101614	34 / 0Â Â Â Â Â	Cannabidiol
Serine/threonine-protein kinase PAK 1	PAK1	Q13153	CHEMBL4600	Kinase	0.101614	2 / 0Â Â Â Â Â	Cannabidiol
Cholecystokinin B receptor (by homology)	CCKBR	P32239	CHEMBL298	Family A G protein-coupled receptor	0.101614	278 / 0Â Â Â Â Â	Cannabidiol
Melatonin receptor 1B	MTNR1B	P49286	CHEMBL1946	Family A G protein-	0.101614	86 / 0Â Â Â Â Â	Cannabidiol

				coupled receptor			
Melanocortin receptor 4	MC4R	P32245	CHEMBL259	Family A G protein-coupled receptor	0.101614	21 / 0Â Â Â Â Â	Cannabidiol
Serine/threonine-protein kinase Aurora-C	AURKC	Q9UQB9	CHEMBL3935	Kinase	0.101614	9 / 0Â Â Â Â Â	Cannabidiol
Serine/threonine-protein kinase/endoribonuclease IRE1	ERN1	O75460	CHEMBL1163101	Enzyme	0.101614	3 / 0Â Â Â Â Â	Cannabidiol
Beta secretase 2	BACE2	Q9Y5Z0	CHEMBL2525	Protease	0.101614	46 / 0Â Â Â Â Â	Cannabidiol
Pyruvate kinase isozymes M1/M2	PKM	P14618	CHEMBL1075189	Enzyme	0.101614	7 / 0Â Â Â Â Â	Cannabidiol
Aldose reductase (by homology)	AKR1B1	P15121	CHEMBL1900	Enzyme	0.101614	7 / 0Â Â Â Â Â	Cannabidiol
Interleukin-8 receptor B	CXCR2	P25025	CHEMBL2434	Family A G protein-coupled receptor	0.101614	47 / 0Â Â Â Â Â	Cannabidiol
ATP-binding cassette sub-family G member 2	ABCG2	Q9UNQ0	CHEMBL5393	Primary active transporter	0.101614	14 / 0Â Â Â Â Â	Cannabidiol
Cholecystokinin A receptor	CCKAR	P32238	CHEMBL1901	Family A G protein-coupled receptor	0	35 / 0Â Â Â Â Â	Cannabidiol
Estradiol 17-beta-dehydrogenase 2	HSD17B2	P37059	CHEMBL2789	Enzyme	0	20 / 0Â Â Â Â Â	Cannabidiol
Neuropeptide Y receptor type 5	NPY5R	Q15761	CHEMBL4561	Family A G protein-coupled receptor	0	139 / 0Â Â Â Â Â	Cannabidiol
Sodium channel protein type V alpha subunit	SCN5A	Q14524	CHEMBL1980	Voltage-gated ion channel	0	21 / 0Â Â Â Â Â	Cannabidiol
Carbonic anhydrase II	CA2	P00918	CHEMBL205	Lyase	0	98 / 0Â Â Â Â Â	Cannabidiol
Acyl coenzyme A:cholesterol acyltransferase	CES1	P23141	CHEMBL2265	Enzyme	0	24 / 0Â Â Â Â Â	Cannabidiol
6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 3	PFKFB3	Q16875	CHEMBL2331053	Enzyme	0	65 / 0Â Â Â Â Â	Cannabidiol
Carboxylesterase 2	CES2	O00748	CHEMBL3180	Enzyme	0	5 / 0Â Â Â Â Â	Cannabidiol
Carbonic anhydrase XII	CA12	O43570	CHEMBL3242	Lyase	0	54 / 0Â Â Â Â Â	Cannabidiol
Carbonic anhydrase IX	CA9	Q16790	CHEMBL3594	Lyase	0	72 / 0Â Â Â Â Â	Cannabidiol
Sodium channel protein type II alpha subunit	SCN2A	Q99250	CHEMBL4187	Voltage-gated ion channel	0	28 / 0Â Â Â Â Â	Cannabidiol
Cyclin-dependent kinase 5/CDK5 activator 1	CDK5R1 CDK5	Q15078 Q00535	CHEMBL1907600	Kinase	0	100 / 0Â Â Â Â Â	Cannabidiol

Serine/threonine-protein kinase PLK1	PLK1	P53350	CHEMBL3024	Kinase	0	15 / 0Â Â Â Â Â	Cannabidiol
Integrin alpha2/beta1	ITGB1 ITGA2	P05556 P17301	CHEMBL3137268	Unclassified protein	0	1 / 0Â Â Â Â Â	Cannabidiol
Serine/threonine-protein kinase Aurora-A	AURKA	O14965	CHEMBL4722	Kinase	0	31 / 0Â Â Â Â Â	Cannabidiol
Monoamine oxidase B	MAOB	P27338	CHEMBL2039	Oxidoreductase	0	158 / 0Â Â Â Â Â	Cannabidiol
Bromodomain-containing protein 1	BRD1	O95696	CHEMBL2176774	Reader	0	7 / 0Â Â Â Â Â	Cannabidiol
P2X purinoceptor 3	P2RX3	P56373	CHEMBL2998	Ligand-gated ion channel	0	42 / 0Â Â Â Â Â	Cannabidiol
Transcription intermediary factor 1-alpha	TRIM24	O15164	CHEMBL3108638	Reader	0	10 / 0Â Â Â Â Â	Cannabidiol
Peregrin	BRPF1	P55201	CHEMBL3132741	Reader	0	25 / 0Â Â Â Â Â	Cannabidiol
Nitric-oxide synthase, brain	NOS1	P29475	CHEMBL3568	Enzyme	0	37 / 0Â Â Â Â Â	Cannabidiol
Calcium-activated potassium channel subunit alpha-1	KCNMA1	Q12791	CHEMBL4304	Voltage-gated ion channel	0	13 / 0Â Â Â Â Â	Cannabidiol
Nitric-oxide synthase, endothelial	NOS3	P29474	CHEMBL4803	Enzyme	0	16 / 0Â Â Â Â Â	Cannabidiol
Pyroglutamylated RFamide peptide receptor	QRFR	Q96P65	CHEMBL5852	Family A G protein-coupled receptor	0	10 / 0Â Â Â Â Â	Cannabidiol
Carnitine O-palmitoyltransferase 1, liver isoform	CPT1A	P50416	CHEMBL1293194	Enzyme	0	38 / 0Â Â Â Â Â	Cannabidiol
Tyrosine-protein kinase JAK3	JAK3	P52333	CHEMBL2148	Kinase	0	180 / 0Â Â Â Â Â	Cannabidiol
Tyrosine-protein kinase JAK2	JAK2	O60674	CHEMBL2971	Kinase	0	160 / 0Â Â Â Â Â	Cannabidiol
Bombesin receptor subtype-3	BRS3	P32247	CHEMBL4080	Family A G protein-coupled receptor	0	2 / 0Â Â Â Â Â	Cannabidiol
Metabotropic glutamate receptor 5	GRM5	P41594	CHEMBL3227	Family C G protein-coupled receptor	0	279 / 0Â Â Â Â Â	Cannabidiol
Signal transducer and activator of transcription 3	STAT3	P40763	CHEMBL4026	Transcription factor	0	23 / 0Â Â Â Â Â	Cannabidiol
Dopamine D1 receptor	DRD1	P21728	CHEMBL2056	Family A G protein-coupled receptor	0	24 / 0Â Â Â Â Â	Cannabidiol
Adenosine A1 receptor	ADORA1	P30542	CHEMBL226	Family A G protein-coupled receptor	0	268 / 0Â Â Â Â Â	Cannabidiol
Adenosine A2a receptor	ADORA2A	P29274	CHEMBL251	Family A G protein-	0	162 / 0Â Â Â Â Â	Cannabidiol

				coupled receptor			
Protein kinase C delta	PRKCD	Q05655	CHEMBL2996	Kinase	0	$\frac{24}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Tyrosine-protein kinase Lyn	LYN	P07948	CHEMBL3905	Kinase	0	$\frac{5}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Protein kinase C theta	PRKCQ	Q04759	CHEMBL3920	Kinase	0	$\frac{39}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Peroxisome proliferator-activated receptor alpha	PPARA	Q07869	CHEMBL239	Nuclear receptor	0	$\frac{0}{13 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Interleukin-8 receptor A	CXCR1	P25024	CHEMBL4029	Family A G protein-coupled receptor	0	$\frac{12}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Anandamide amidohydrolase	FAAH	O00519	CHEMBL2243	Enzyme	0	$\frac{96}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Kinesin-like protein 1	KIF11	P52732	CHEMBL4581	Other cytosolic protein	0	$\frac{34}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Phosphodiesterase 5A	PDE5A	O76074	CHEMBL1827	Phosphodiesterase	0	$\frac{129}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Melatonin receptor 1A	MTNR1A	P48039	CHEMBL1945	Family A G protein-coupled receptor	0	$\frac{115}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Protein farnesyltransferase	FNTA FNTB	P49354 P49356	CHEMBL2094108	Enzyme	0	$\frac{169}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
G-protein coupled bile acid receptor 1	GPBAR1	Q8TDU6	CHEMBL5409	Family A G protein-coupled receptor	0	$\frac{24}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Isocitrate dehydrogenase [NADP] cytoplasmic	IDH1	O75874	CHEMBL2007625	Enzyme	0	$\frac{213}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Tyrosine-protein kinase SYK	SYK	P43405	CHEMBL2599	Kinase	0	$\frac{37}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Tyrosine-protein kinase JAK1	JAK1	P23458	CHEMBL2835	Kinase	0	$\frac{72}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
JAK3/JAK1	JAK3 JAK1	P52333 P23458	CHEMBL3038491	Kinase	0	$\frac{15}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Hormone sensitive lipase	LIPE	Q05469	CHEMBL3590	Enzyme	0	$\frac{55}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidiol
Cannabinoid receptor 1	CNR1	P21554	CHEMBL218	Family A G protein-coupled receptor	0.897728	$\frac{564}{210 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidivarin
Cannabinoid receptor 2	CNR2	P34972	CHEMBL253	Family A G protein-coupled receptor	0.897728	$\frac{439}{174 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidivarin
G-protein coupled receptor 55	GPR55	Q9Y2T6	CHEMBL1075322	Family A G protein-coupled receptor	0.641391	$\frac{9}{2 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidivarin
Arachidonate 5-lipoxygenase	ALOX5	P09917	CHEMBL215	Oxidoreductase	0.097875	$\frac{42}{19 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabidivarin

Cystic fibrosis transmembrane conductance regulator	CFTR	P13569	CHEMBL4051	Other ion channel	0.097875	9 / 0	Cannabidivarin
Melanocortin receptor 4	MC4R	P32245	CHEMBL259	Family A G protein-coupled receptor	0.097875	16 / 0	Cannabidivarin
Poly [ADP-ribose] polymerase-1	PARP1	P09874	CHEMBL3105	Enzyme	0.097875	18 / 0	Cannabidivarin
Receptor protein-tyrosine kinase erbB-2	ERBB2	P04626	CHEMBL1824	Kinase	0.097875	44 / 0	Cannabidivarin
DNA polymerase beta (by homology)	POLB	P06746	CHEMBL2392	Enzyme	0.097875	0 / 3	Cannabidivarin
Arachidonate 15-lipoxygenase	ALOX15	P16050	CHEMBL2903	Enzyme	0.097875	19 / 11	Cannabidivarin
Calcium sensing receptor	CASR	P41180	CHEMBL1878	Family C G protein-coupled receptor	0.097875	33 / 0	Cannabidivarin
Histone deacetylase 6	HDAC6	Q9UBN7	CHEMBL1865	Eraser	0.097875	20 / 0	Cannabidivarin
Histone deacetylase 8	HDAC8	Q9BY41	CHEMBL3192	Eraser	0.097875	12 / 0	Cannabidivarin
NAD-dependent deacetylase sirtuin 2	SIRT2	Q8IXJ6	CHEMBL4462	Eraser	0.097875	21 / 0	Cannabidivarin
Serotonin 2b (5-HT2b) receptor	HTR2B	P41595	CHEMBL1833	Family A G protein-coupled receptor	0.097875	38 / 0	Cannabidivarin
Glucagon receptor	GCGR	P47871	CHEMBL1985	Family B G protein-coupled receptor	0.097875	26 / 0	Cannabidivarin
Prenyl protein specific protease	RCE1	Q9Y256	CHEMBL3411	Protease	0.097875	6 / 0	Cannabidivarin
Vascular endothelial growth factor receptor 2	KDR	P35968	CHEMBL279	Kinase	0.097875	214 / 12	Cannabidivarin
N-arachidonyl glycine receptor	GPR18	Q14330	CHEMBL2384898	Family A G protein-coupled receptor	0.097875	2 / 2	Cannabidivarin
Glycine receptor subunit alpha-1	GLRA1	P23415	CHEMBL5845	Ligand-gated ion channel	0.097875	1 / 1	Cannabidivarin
Phosphodiesterase 4B	PDE4B	Q07343	CHEMBL275	Phosphodiesterase	0.097875	21 / 0	Cannabidivarin
Cyclooxygenase-2	PTGS2	P35354	CHEMBL230	Oxidoreductase	0.097875	120 / 3	Cannabidivarin
Epoxide hydratase	EPHX2	P34913	CHEMBL2409	Protease	0.097875	64 / 0	Cannabidivarin
L-lactate dehydrogenase A chain	LDHA	P00338	CHEMBL4835	Enzyme	0.097875	7 / 0	Cannabidivarin
Cathepsin D	CTSD	P07339	CHEMBL2581	Protease	0.097875	22 / 0	Cannabidivarin

Beta-secretase 1	BACE1	P56817	CHEMBL4822	Protease	0.097875	160 / 0Â Â Â Â Â	Cannabidivarin
Cholesteryl ester transfer protein	CETP	P11597	CHEMBL3572	Other ion channel	0.097875	5 / 2Â Â Â Â Â	Cannabidivarin
Tyrosine-protein kinase JAK2	JAK2	O60674	CHEMBL2971	Kinase	0.097875	169 / 0Â Â Â Â Â	Cannabidivarin
Monoglyceride lipase	MGLL	Q99685	CHEMBL4191	Enzyme	0.097875	8 / 0Â Â Â Â Â	Cannabidivarin
Quinone reductase 2	NQO2	P16083	CHEMBL3959	Enzyme	0.097875	8 / 0Â Â Â Â Â	Cannabidivarin
Thymidylate synthase	TYMS	P04818	CHEMBL1952	Transferase	0.097875	25 / 0Â Â Â Â Â	Cannabidivarin
Interleukin-8 receptor B	CXCR2	P25025	CHEMBL2434	Family A G protein-coupled receptor	0.097875	38 / 0Â Â Â Â Â	Cannabidivarin
Serine/threonine-protein kinase PAK 1	PAK1	Q13153	CHEMBL4600	Kinase	0.097875	1 / 0Â Â Â Â Â	Cannabidivarin
Cyclin-dependent kinase 5/CDK5 activator 1	CDK5R1 CDK5	Q15078 Q00535	CHEMBL1907600	Kinase	0.097875	99 / 0Â Â Â Â Â	Cannabidivarin
Serine/threonine-protein kinase Aurora-C	AURKC	Q9UQB 9	CHEMBL3935	Kinase	0.097875	11 / 0Â Â Â Â Â	Cannabidivarin
Serine/threonine-protein kinase Aurora-A	AURKA	O14965	CHEMBL4722	Kinase	0.097875	26 / 0Â Â Â Â Â	Cannabidivarin
p53-binding protein Mdm-2	MDM2	Q00987	CHEMBL5023	Other nuclear protein	0.097875	42 / 0Â Â Â Â Â	Cannabidivarin
Translocator protein (by homology)	TSPO	P30536	CHEMBL5742	Membrane receptor	0.097875	279 / 0Â Â Â Â Â	Cannabidivarin
11-beta-hydroxysteroid dehydrogenase 1	HSD11B 1	P28845	CHEMBL4235	Enzyme	0.097875	208 / 0Â Â Â Â Â	Cannabidivarin
Serine/threonine-protein kinase/endoribonuclease IRE1	ERN1	O75460	CHEMBL1163101	Enzyme	0.097875	3 / 0Â Â Â Â Â	Cannabidivarin
Estradiol 17-beta-dehydrogenase 3	HSD17B 3	P37058	CHEMBL4234	Enzyme	0.097875	4 / 0Â Â Â Â Â	Cannabidivarin
Calcium-activated potassium channel subunit alpha-1	KCNMA 1	Q12791	CHEMBL4304	Voltage-gated ion channel	0.097875	12 / 0Â Â Â Â Â	Cannabidivarin
Anandamide amidohydrolase	FAAH	O00519	CHEMBL2243	Enzyme	0.097875	32 / 0Â Â Â Â Â	Cannabidivarin
Steryl-sulfatase	STS	P08842	CHEMBL3559	Enzyme	0.097875	9 / 0Â Â Â Â Â	Cannabidivarin
Estradiol 17-beta-dehydrogenase 2	HSD17B 2	P37059	CHEMBL2789	Enzyme	0.097875	12 / 0Â Â Â Â Â	Cannabidivarin
Cholecystokinin B receptor (by homology)	CCKBR	P32239	CHEMBL298	Family A G protein-coupled receptor	0.097875	183 / 0Â Â Â Â Â	Cannabidivarin
Protein kinase C delta	PRKCD	Q05655	CHEMBL2996	Kinase	0.097875	18 / 0Â Â Â Â Â	Cannabidivarin
Tyrosine-protein kinase Lyn	LYN	P07948	CHEMBL3905	Kinase	0.097875	4 / 0Â Â Â Â Â	Cannabidivarin

Protein kinase C theta	PRKCQ	Q04759	CHEMBL3920	Kinase	0.097875	33 / 0	Cannabidivarin
Macrophage migration inhibitory factor	MIF	P14174	CHEMBL2085	Enzyme	0.097875	3 / 0	Cannabidivarin
ADAMTS5	ADAMTS5	Q9UNA0	CHEMBL2285	Protease	0.097875	20 / 0	Cannabidivarin
Nitric-oxide synthase, brain	NOS1	P29475	CHEMBL3568	Enzyme	0.097875	51 / 0	Cannabidivarin
Nitric-oxide synthase, endothelial	NOS3	P29474	CHEMBL4803	Enzyme	0.097875	20 / 0	Cannabidivarin
Metabotropic glutamate receptor 2	GRM2	Q14416	CHEMBL5137	Family C G protein-coupled receptor	0.097875	21 / 0	Cannabidivarin
Bromodomain-containing protein 1	BRD1	O95696	CHEMBL2176774	Reader	0	6 / 0	Cannabidivarin
Transcription intermediary factor 1-alpha	TRIM24	O15164	CHEMBL3108638	Reader	0	9 / 0	Cannabidivarin
Peregrin	BRPF1	P55201	CHEMBL3132741	Reader	0	21 / 0	Cannabidivarin
LDL-associated phospholipase A2	PLA2G7	Q13093	CHEMBL3514	Enzyme	0	16 / 0	Cannabidivarin
Mitogen-activated protein kinase kinase kinase 8	MAP3K8	P41279	CHEMBL4899	Kinase	0	37 / 0	Cannabidivarin
Adenosine A1 receptor	ADORA1	P30542	CHEMBL226	Family A G protein-coupled receptor	0	202 / 0	Cannabidivarin
Adenosine A2a receptor	ADORA2A	P29274	CHEMBL251	Family A G protein-coupled receptor	0	110 / 0	Cannabidivarin
Prostanoid EP1 receptor	PTGER1	P34995	CHEMBL1811	Family A G protein-coupled receptor	0	22 / 0	Cannabidivarin
Melatonin receptor 1B	MTNR1B	P49286	CHEMBL1946	Family A G protein-coupled receptor	0	49 / 0	Cannabidivarin
MAP kinase p38 alpha	MAPK14	Q16539	CHEMBL260	Kinase	0	279 / 0	Cannabidivarin
Monoamine oxidase B	MAOB	P27338	CHEMBL2039	Oxidoreductase	0	128 / 0	Cannabidivarin
Egl nine homolog 1	EGLN1	Q9GZT9	CHEMBL5697	Oxidoreductase	0	9 / 0	Cannabidivarin
Glycogen synthase kinase-3 beta	GSK3B	P49841	CHEMBL262	Kinase	0	47 / 0	Cannabidivarin
Sodium channel protein type II alpha subunit	SCN2A	Q99250	CHEMBL4187	Voltage-gated ion channel	0	22 / 0	Cannabidivarin
Voltage-gated potassium channel subunit Kv1.5	KCNA5	P22460	CHEMBL4306	Voltage-gated ion channel	0	93 / 0	Cannabidivarin

Isocitrate dehydrogenase [NADP] cytoplasmic	IDH1	O75874	CHEMBL2007625	Enzyme	0	191 / 0	Cannabidivarin
Cyclin-dependent kinase 1/cyclin B	CCNB3 CDK1 CCNB1 CCNB2	Q8WWL7 P06493 P14635 O95067	CHEMBL2094127	Other cytosolic protein	0	42 / 0	Cannabidivarin
Cathepsin K	CTSK	P43235	CHEMBL268	Protease	0	107 / 2	Cannabidivarin
Peroxisome proliferator-activated receptor alpha	PPARA	Q07869	CHEMBL239	Nuclear receptor	0	0 / 13	Cannabidivarin
Dopamine D1 receptor	DRD1	P21728	CHEMBL2056	Family A G protein-coupled receptor	0	19 / 0	Cannabidivarin
Protein farnesyltransferase	FNTA FNTB	P49354 P49356	CHEMBL2094108	Enzyme	0	128 / 0	Cannabidivarin
Tyrosine-protein kinase JAK3	JAK3	P52333	CHEMBL2148	Kinase	0	184 / 0	Cannabidivarin
Bromodomain-containing protein 4	BRD4	O60885	CHEMBL1163125	Reader	0	38 / 0	Cannabidivarin
Gonadotropin-releasing hormone receptor	GNRHR	P30968	CHEMBL1855	Family A G protein-coupled receptor	0	6 / 0	Cannabidivarin
Kinesin-1 heavy chain/ Tyrosine-protein kinase receptor RET	RET	P07949	CHEMBL2041	Kinase	0	12 / 0	Cannabidivarin
Adenosine A2b receptor	ADORA2B	P29275	CHEMBL255	Family A G protein-coupled receptor	0	27 / 0	Cannabidivarin
Serine/threonine-protein kinase RIPK2	RIPK2	O43353	CHEMBL5014	Kinase	0	5 / 0	Cannabidivarin
Dual-specificity tyrosine-phosphorylation regulated kinase 1A (by homology)	DYRK1A	Q13627	CHEMBL2292	Kinase	0	44 / 0	Cannabidivarin
Beta secretase 2	BACE2	Q9Y5Z0	CHEMBL2525	Protease	0	38 / 0	Cannabidivarin
Sodium channel protein type V alpha subunit	SCN5A	Q14524	CHEMBL1980	Voltage-gated ion channel	0	17 / 0	Cannabidivarin
Serine/threonine-protein kinase 33	STK33	Q9BYT3	CHEMBL6005	Kinase	0	17 / 0	Cannabidivarin
Corticotropin releasing factor receptor 1	CRHR1	P34998	CHEMBL1800	Family B G protein-coupled receptor	0	67 / 0	Cannabidivarin
Cholecystokinin A receptor	CCKAR	P32238	CHEMBL1901	Family A G protein-coupled receptor	0	16 / 0	Cannabidivarin
Pyruvate kinase isozymes M1/M2	PKM	P14618	CHEMBL1075189	Enzyme	0	6 / 0	Cannabidivarin

Melatonin receptor 1A	MTNR1A	P48039	CHEMBL1945	Family A G protein-coupled receptor	0	69 / 0Â Â Â Â Â	Cannabidivarin
Tyrosine-protein kinase JAK1	JAK1	P23458	CHEMBL2835	Kinase	0	66 / 0Â Â Â Â Â	Cannabidivarin
JAK3/JAK1	JAK3 JAK1	P52333 P23458	CHEMBL3038491	Kinase	0	13 / 0Â Â Â Â Â	Cannabidivarin
L-lactate dehydrogenase B chain	LDHB	P07195	CHEMBL4940	Enzyme	0	2 / 0Â Â Â Â Â	Cannabidivarin
Myosin light chain kinase, smooth muscle	MYLK	Q15746	CHEMBL2428	Kinase	0	3 / 0Â Â Â Â Â	Cannabidivarin
Cyclin-dependent kinase 2	CDK2	P24941	CHEMBL301	Kinase	0	45 / 0Â Â Â Â Â	Cannabidivarin
Cyclin-dependent kinase 4	CDK4	P11802	CHEMBL331	Kinase	0	20 / 0Â Â Â Â Â	Cannabidivarin
Nischarin	NISCH	Q9Y211	CHEMBL3923	Other cytosolic protein	0	38 / 0Â Â Â Â Â	Cannabidivarin
Glutaminyl-peptide cyclotransferase	QPCT	Q16769	CHEMBL4508	Enzyme	0	26 / 0Â Â Â Â Â	Cannabidivarin
Matrix metalloproteinase 9	MMP9	P14780	CHEMBL321	Protease	0	19 / 0Â Â Â Â Â	Cannabidivarin
Matrix metalloproteinase 2	MMP2	P08253	CHEMBL333	Protease	0	23 / 0Â Â Â Â Â	Cannabidivarin
GABA receptor alpha-1 subunit (by homology)	GABRA1	P14867	CHEMBL1962	Ligand-gated ion channel	0	8 / 0Â Â Â Â Â	Cannabidivarin
Cannabinoid receptor 1	CNR1	P21554	CHEMBL218	Family A G protein-coupled receptor	0.241979	432 / 344Â Â Â Â Â	Cannabielsoin
Cannabinoid receptor 2	CNR2	P34972	CHEMBL253	Family A G protein-coupled receptor	0.241979	425 / 329Â Â Â Â Â	Cannabielsoin
Vascular endothelial growth factor receptor 2	KDR	P35968	CHEMBL279	Kinase	0.112748	414 / 10Â Â Â Â Â	Cannabielsoin
6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 3	PFKFB3	Q16875	CHEMBL2331053	Enzyme	0.104672	138 / 0Â Â Â Â Â	Cannabielsoin
Glucagon receptor	GCGR	P47871	CHEMBL1985	Family B G protein-coupled receptor	0.104672	13 / 0Â Â Â Â Â	Cannabielsoin
Gamma-secretase	PSEN2 PSENEN NCSTN APH1A PSEN1 APH1B	P49810 Q9NZ42 Q92542 Q96BI3 P49768 Q8WW43	CHEMBL2094135	Protease	0.104672	208 / 0Â Â Â Â Â	Cannabielsoin
Lysosomal Pro-X carboxypeptidase	PRCP	P42785	CHEMBL2335	Protease	0.104672	28 / 0Â Â Â Â Â	Cannabielsoin

Mixed lineage kinase 7	MAP3K20	Q9NYL2	CHEMBL3886	Kinase	0.104672	$\frac{6}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
TGF-beta receptor type II	TGFBR2	P37173	CHEMBL4267	Kinase	0.104672	$\frac{4}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
TGF-beta receptor type I	TGFBR1	P36897	CHEMBL4439	Kinase	0.104672	$\frac{21}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Serine/threonine-protein kinase Aurora-B	AURKB	Q96GD4	CHEMBL2185	Kinase	0.104672	$\frac{137}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Cyclin-dependent kinase 1	CDK1	P06493	CHEMBL308	Kinase	0.104672	$\frac{179}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Serine/threonine-protein kinase Aurora-A	AURKA	O14965	CHEMBL4722	Kinase	0.104672	$\frac{200}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Phosphodiesterase 2A	PDE2A	O00408	CHEMBL2652	Phosphodiesterase	0.104672	$\frac{109}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Cyclin-dependent kinase 2	CDK2	P24941	CHEMBL301	Kinase	0.104672	$\frac{175}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Phosphodiesterase 10A	PDE10A	Q9Y233	CHEMBL4409	Phosphodiesterase	0.104672	$\frac{605}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Protein kinase C alpha	PRKCA	P17252	CHEMBL299	Kinase	0.104672	$\frac{107}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Interleukin-6 receptor subunit beta	IL6ST	P40189	CHEMBL3124734	Membrane receptor	0.104672	$\frac{6}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Tyrosine-protein kinase SYK	SYK	P43405	CHEMBL2599	Kinase	0.104672	$\frac{212}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Adenosine A2a receptor	ADORA2A	P29274	CHEMBL251	Family A G protein-coupled receptor	0.104672	$\frac{186}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Period circadian protein homolog 2	PER2	O15055	CHEMBL3751648	Unclassified protein	0.104672	$\frac{40}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Toll-like receptor 4	TLR4	O00206	CHEMBL5255	Toll-like and Il-1 receptors	0.104672	$\frac{4}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
DNA topoisomerase I (by homology)	TOP1	P11387	CHEMBL1781	Isomerase	0.104672	$\frac{12}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
C-C chemokine receptor type 1	CCR1	P32246	CHEMBL2413	Family A G protein-coupled receptor	0.104672	$\frac{247}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
PI3-kinase p110-alpha subunit	PIK3CA	P42336	CHEMBL4005	Enzyme	0.104672	$\frac{552}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Serine-protein kinase ATR	ATR	Q13535	CHEMBL5024	Kinase	0.104672	$\frac{29}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
11-beta-hydroxysteroid dehydrogenase 1	HSD11B1	P28845	CHEMBL4235	Enzyme	0.104672	$\frac{314}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Leukocyte elastase	ELANE	P08246	CHEMBL248	Protease	0.104672	$\frac{36}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Mitogen-activated protein kinase kinase kinase 5	MAP3K5	Q99683	CHEMBL5285	Kinase	0.104672	$\frac{16}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Thrombin and coagulation factor X	F10	P00742	CHEMBL244	Protease	0.104672	$\frac{226}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Tyrosine-protein kinase receptor FLT3	FLT3	P36888	CHEMBL1974	Kinase	0.104672	$\frac{106}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin
Tyrosine-protein kinase YES	YES1	P07947	CHEMBL2073	Kinase	0.104672	$\frac{16}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabielsoin

Potassium channel subfamily K member 3	KCNK3	O14649	CHEMBL2321613	Voltage-gated ion channel	0.104672	25 / 0Â Â Â Â Â	Cannabielsoin
Phosphodiesterase 3	PDE3A	Q14432	CHEMBL241	Phosphodiesterase	0.104672	20 / 0Â Â Â Â Â	Cannabielsoin
Tyrosine-protein kinase LCK	LCK	P06239	CHEMBL258	Kinase	0.104672	75 / 0Â Â Â Â Â	Cannabielsoin
Phosphodiesterase 7A	PDE7A	Q13946	CHEMBL3012	Phosphodiesterase	0.104672	36 / 0Â Â Â Â Â	Cannabielsoin
Tyrosine-protein kinase HCK	HCK	P08631	CHEMBL3234	Kinase	0.104672	27 / 0Â Â Â Â Â	Cannabielsoin
Tyrosine-protein kinase Lyn	LYN	P07948	CHEMBL3905	Kinase	0.104672	19 / 0Â Â Â Â Â	Cannabielsoin
Tyrosine-protein kinase FGR	FGR	P09769	CHEMBL4454	Kinase	0.104672	9 / 0Â Â Â Â Â	Cannabielsoin
Ephrin type-A receptor 3	EPHA3	P29320	CHEMBL4954	Kinase	0.104672	6 / 0Â Â Â Â Â	Cannabielsoin
Discoidin domain-containing receptor 2	DDR2	Q16832	CHEMBL5122	Kinase	0.104672	7 / 0Â Â Â Â Â	Cannabielsoin
Tyrosine-protein kinase BTK	BTK	Q06187	CHEMBL5251	Kinase	0.104672	42 / 0Â Â Â Â Â	Cannabielsoin
Epithelial discoidin domain-containing receptor 1	DDR1	Q08345	CHEMBL5319	Kinase	0.104672	10 / 0Â Â Â Â Â	Cannabielsoin
N-arachidonyl glycine receptor	GPR18	Q14330	CHEMBL2384898	Family A G protein-coupled receptor	0.104672	0 / 2Â Â Â Â Â	Cannabielsoin
Vasopressin V1a receptor	AVPR1A	P37288	CHEMBL1889	Family A G protein-coupled receptor	0.104672	49 / 0Â Â Â Â Â	Cannabielsoin
Lymphocyte differentiation antigen CD38	CD38	P28907	CHEMBL4660	Enzyme	0.104672	16 / 0Â Â Â Â Â	Cannabielsoin
Tyrosine-protein kinase FYN	FYN	P06241	CHEMBL1841	Kinase	0.104672	19 / 0Â Â Â Â Â	Cannabielsoin
Cholecystokinin A receptor	CCKAR	P32238	CHEMBL1901	Family A G protein-coupled receptor	0.104672	21 / 0Â Â Â Â Â	Cannabielsoin
P2X purinoceptor 7	P2RX7	Q99572	CHEMBL4805	Ligand-gated ion channel	0.104672	37 / 0Â Â Â Â Â	Cannabielsoin
Epoxide hydratase	EPHX2	P34913	CHEMBL2409	Protease	0.104672	102 / 0Â Â Â Â Â	Cannabielsoin
Protein kinase C delta	PRKCD	Q05655	CHEMBL2996	Kinase	0.104672	90 / 0Â Â Â Â Â	Cannabielsoin
C-C chemokine receptor type 8	CCR8	P51685	CHEMBL4596	Family A G protein-coupled receptor	0.104672	5 / 0Â Â Â Â Â	Cannabielsoin
DNA-dependent protein kinase	PRKDC	P78527	CHEMBL3142	Kinase	0.104672	142 / 0Â Â Â Â Â	Cannabielsoin
PI3-kinase p110-beta subunit	PIK3CB	P42338	CHEMBL3145	Enzyme	0.104672	265 / 0Â Â Â Â Â	Cannabielsoin
Cathepsin D	CTSD	P07339	CHEMBL2581	Protease	0.104672	267 / 0Â Â Â Â Â	Cannabielsoin

Delta opioid receptor	OPRD1	P41143	CHEMBL236	Family A G protein-coupled receptor	0.104672	474 / 227 Å Å Å Å Å	Cannabielsoin
Orexin receptor 1	HCRTR1	O43613	CHEMBL5113	Family A G protein-coupled receptor	0.104672	40 / 0 Å Å Å Å Å	Cannabielsoin
Leucine-rich repeat serine/threonine-protein kinase 2	LRRK2	Q5S007	CHEMBL1075104	Kinase	0.104672	140 / 0 Å Å Å Å Å	Cannabielsoin
Corticotropin releasing factor receptor 1	CRHR1	P34998	CHEMBL1800	Family B G protein-coupled receptor	0.104672	82 / 0 Å Å Å Å Å	Cannabielsoin
Protein kinase C theta	PRKCQ	Q04759	CHEMBL3920	Kinase	0.104672	51 / 0 Å Å Å Å Å	Cannabielsoin
Transient receptor potential cation channel subfamily A member 1	TRPA1	O75762	CHEMBL6007	Voltage-gated ion channel	0.104672	14 / 0 Å Å Å Å Å	Cannabielsoin
Tyrosine-protein kinase ABL	ABL1	P00519	CHEMBL1862	Kinase	0.104672	85 / 0 Å Å Å Å Å	Cannabielsoin
Platelet-derived growth factor receptor	PDGFR A PDGFR B	P16234 P09619	CHEMBL2095189	Kinase	0.104672	9 / 0 Å Å Å Å Å	Cannabielsoin
Tyrosine-protein kinase JAK3	JAK3	P52333	CHEMBL2148	Kinase	0.104672	199 / 0 Å Å Å Å Å	Cannabielsoin
Tyrosine-protein kinase JAK2	JAK2	O60674	CHEMBL2971	Kinase	0.104672	253 / 0 Å Å Å Å Å	Cannabielsoin
P2X purinoceptor 3	P2RX3	P56373	CHEMBL2998	Ligand-gated ion channel	0.104672	355 / 0 Å Å Å Å Å	Cannabielsoin
Phosphodiesterase 1B	PDE1B	Q01064	CHEMBL4425	Phosphodiesterase	0.104672	3 / 0 Å Å Å Å Å	Cannabielsoin
Proto-oncogene tyrosine-protein kinase ROS	ROS1	P08922	CHEMBL5568	Kinase	0.104672	18 / 0 Å Å Å Å Å	Cannabielsoin
Oxytocin receptor	OXTR	P30559	CHEMBL2049	Family A G protein-coupled receptor	0.104672	76 / 0 Å Å Å Å Å	Cannabielsoin
Cytochrome P450 2C9	CYP2C9	P11712	CHEMBL3397	Cytochrome P450	0.104672	7 / 0 Å Å Å Å Å	Cannabielsoin
Cytochrome P450 3A4	CYP3A4	P08684	CHEMBL340	Cytochrome P450	0.104672	5 / 0 Å Å Å Å Å	Cannabielsoin
Polyadenylate-binding protein 1	PABPC1	P11940	CHEMBL1293286	Unclassified protein	0.104672	14 / 0 Å Å Å Å Å	Cannabielsoin
Insulin-like growth factor I receptor	IGF1R	P08069	CHEMBL1957	Kinase	0.104672	159 / 0 Å Å Å Å Å	Cannabielsoin
Insulin receptor	INSR	P06213	CHEMBL1981	Kinase	0.104672	29 / 0 Å Å Å Å Å	Cannabielsoin
Histone deacetylase 3/Nuclear receptor corepressor 2 (HDAC3/NCoR2)	NCOR2 HDAC3	Q9Y618 O15379	CHEMBL2111363	Eraser	0.104672	14 / 0 Å Å Å Å Å	Cannabielsoin
Tyrosine-protein kinase ITK/TSK	ITK	Q08881	CHEMBL2959	Kinase	0.104672	69 / 0 Å Å Å Å Å	Cannabielsoin

CDK8/Cyclin C	CCNC CDK8	P24863 P49336	CHEMBL3038474	Kinase	0.104672	11 / 0Â Â Â Â Â	Cannabielsoin
Von Hippel-Lindau disease tumor suppressor/Elongin B/Elongin C	VHL	P40337	CHEMBL3108660	Unclassified protein	0.104672	6 / 0Â Â Â Â Â	Cannabielsoin
Serine/threonine- protein kinase B-raf	BRAF	P15056	CHEMBL5145	Kinase	0.104672	130 / 0Â Â Â Â Â	Cannabielsoin
Cell division protein kinase 8	CDK8	P49336	CHEMBL5719	Kinase	0.104672	24 / 0Â Â Â Â Â	Cannabielsoin
Isocitrate dehydrogenase [NADP] cytoplasmic	IDH1	O75874	CHEMBL2007625	Enzyme	0.104672	22 / 0Â Â Â Â Â	Cannabielsoin
Metabotropic glutamate receptor 5	GRM5	P41594	CHEMBL3227	Family C G protein- coupled receptor	0.104672	85 / 0Â Â Â Â Â	Cannabielsoin
Cystic fibrosis transmembrane conductance regulator	CFTR	P13569	CHEMBL4051	Other ion channel	0.104672	22 / 0Â Â Â Â Â	Cannabielsoin
Serine/threonine- protein kinase PIM1	PIM1	P11309	CHEMBL2147	Kinase	0.104672	146 / 0Â Â Â Â Â	Cannabielsoin
Liver glycogen phosphorylase	PYGL	P06737	CHEMBL2568	Enzyme	0.104672	86 / 0Â Â Â Â Â	Cannabielsoin
AMP deaminase 3	AMPD3	Q01432	CHEMBL2912	Enzyme	0.104672	9 / 0Â Â Â Â Â	Cannabielsoin
Heat shock protein HSP 90-beta	HSP90A B1	P08238	CHEMBL4303	Other cytosolic protein	0.104672	55 / 0Â Â Â Â Â	Cannabielsoin
Voltage-gated potassium channel subunit Kv1.5	KCNA5	P22460	CHEMBL4306	Voltage- gated ion channel	0.104672	78 / 0Â Â Â Â Â	Cannabielsoin
Kallikrein 5	KLK5	Q9Y33 7	CHEMBL4447	Protease	0.104672	3 / 0Â Â Â Â Â	Cannabielsoin
Serine/threonine- protein kinase PIM2	PIM2	Q9P1W 9	CHEMBL4523	Kinase	0.104672	108 / 0Â Â Â Â Â	Cannabielsoin
Kinesin-like protein 1	KIF11	P52732	CHEMBL4581	Other cytosolic protein	0.104672	33 / 0Â Â Â Â Â	Cannabielsoin
p53-binding protein Mdm-2	MDM2	Q00987	CHEMBL5023	Other nuclear protein	0.104672	269 / 0Â Â Â Â Â	Cannabielsoin
Smoothered homolog	SMO	Q99835	CHEMBL5971	Frizzled family G protein- coupled receptor	0.104672	30 / 0Â Â Â Â Â	Cannabielsoin
Tyrosine-protein kinase JAK1	JAK1	P23458	CHEMBL2835	Kinase	0.104672	165 / 0Â Â Â Â Â	Cannabielsoin
Sphingosine kinase 2	SPHK2	Q9NRA 0	CHEMBL3023	Enzyme	0.104672	14 / 0Â Â Â Â Â	Cannabielsoin
Tyrosine-protein kinase TYK2	TYK2	P29597	CHEMBL3553	Kinase	0.104672	69 / 0Â Â Â Â Â	Cannabielsoin
Interleukin-8 receptor A	CXCR1	P25024	CHEMBL4029	Family A G protein- coupled receptor	0.104672	82 / 0Â Â Â Â Â	Cannabielsoin

Sphingosine kinase 1	SPHK1	Q9NYA1	CHEMBL4394	Enzyme	0.104672	15 / 0Â Â Â Â Â	Cannabielsoin
Acetyl-CoA carboxylase 2	ACACB	O00763	CHEMBL4829	Ligase	0.104672	83 / 0Â Â Â Â Â	Cannabielsoin
Cyclin-dependent kinase 2/cyclin E1	CCNE1 CDK2	P24864 P24941	CHEMBL1907605	Kinase	0.104672	79 / 0Â Â Â Â Â	Cannabielsoin
Cannabinoid receptor 1	CNR1	P21554	CHEMBL218	Family A G protein-coupled receptor	0.743196	807 / 157Â Â Â Â Â	Cannabigerol
Cannabinoid receptor 2	CNR2	P34972	CHEMBL253	Family A G protein-coupled receptor	0.651481	693 / 136Â Â Â Â Â	Cannabigerol
G-protein coupled receptor 55	GPR55	Q9Y2T6	CHEMBL1075322	Family A G protein-coupled receptor	0.12661	10 / 2Â Â Â Â Â	Cannabigerol
Arachidonate 5-lipoxygenase	ALOX5	P09917	CHEMBL215	Oxidoreductase	0.109946	83 / 22Â Â Â Â Â	Cannabigerol
DNA polymerase beta (by homology)	POLB	P06746	CHEMBL2392	Enzyme	0.101614	0 / 3Â Â Â Â Â	Cannabigerol
Arachidonate 15-lipoxygenase	ALOX15	P16050	CHEMBL2903	Enzyme	0.101614	15 / 16Â Â Â Â Â	Cannabigerol
Peroxisome proliferator-activated receptor gamma	PPARG	P37231	CHEMBL235	Nuclear receptor	0.101614	19 / 17Â Â Â Â Â	Cannabigerol
Peroxisome proliferator-activated receptor alpha	PPARA	Q07869	CHEMBL239	Nuclear receptor	0.101614	1 / 14Â Â Â Â Â	Cannabigerol
Cyclooxygenase-2	PTGS2	P35354	CHEMBL230	Oxidoreductase	0.101614	137 / 6Â Â Â Â Â	Cannabigerol
ADAMTS5	ADAMTS5	Q9UNAO	CHEMBL2285	Protease	0.101614	48 / 0Â Â Â Â Â	Cannabigerol
Poly [ADP-ribose] polymerase-1	PARP1	P09874	CHEMBL3105	Enzyme	0.101614	55 / 0Â Â Â Â Â	Cannabigerol
Cyclin-dependent kinase 4	CDK4	P11802	CHEMBL331	Kinase	0.101614	30 / 0Â Â Â Â Â	Cannabigerol
11-beta-hydroxysteroid dehydrogenase 1	HSD11B1	P28845	CHEMBL4235	Enzyme	0.101614	202 / 0Â Â Â Â Â	Cannabigerol
Prostanoid EP4 receptor	PTGER4	P35408	CHEMBL1836	Family A G protein-coupled receptor	0.101614	7 / 0Â Â Â Â Â	Cannabigerol
Acyl coenzyme A:cholesterol acyltransferase	CES1	P23141	CHEMBL2265	Enzyme	0.101614	23 / 0Â Â Â Â Â	Cannabigerol
Carboxylesterase 2	CES2	O00748	CHEMBL3180	Enzyme	0.101614	3 / 0Â Â Â Â Â	Cannabigerol
NAD-dependent deacetylase sirtuin 2	SIRT2	Q8IXJ6	CHEMBL4462	Eraser	0.101614	37 / 0Â Â Â Â Â	Cannabigerol
Adenosine A1 receptor	ADORA1	P30542	CHEMBL226	Family A G protein-coupled receptor	0.101614	196 / 0Â Â Â Â Â	Cannabigerol
Beta-secretase 1	BACE1	P56817	CHEMBL4822	Protease	0.101614	374 / 0Â Â Â Â Â	Cannabigerol

Corticotropin releasing factor receptor 1	CRHR1	P34998	CHEMBL1800	Family B G protein-coupled receptor	0.101614	111 / 0Â Â Â Â Â	Cannabigerol
Phosphodiesterase 10A (by homology)	PDE10A	Q9Y233	CHEMBL4409	Phosphodiesterase	0.101614	588 / 0Â Â Â Â Â	Cannabigerol
p53-binding protein Mdm-2	MDM2	Q00987	CHEMBL5023	Other nuclear protein	0.101614	162 / 0Â Â Â Â Â	Cannabigerol
Calpain 2	CAPN2	P17655	CHEMBL2382	Protease	0.101614	42 / 0Â Â Â Â Â	Cannabigerol
LDL-associated phospholipase A2	PLA2G7	Q13093	CHEMBL3514	Enzyme	0.101614	39 / 0Â Â Â Â Â	Cannabigerol
Receptor protein-tyrosine kinase erbB-2	ERBB2	P04626	CHEMBL1824	Kinase	0.101614	65 / 0Â Â Â Â Â	Cannabigerol
Epidermal growth factor receptor erbB1	EGFR	P00533	CHEMBL203	Kinase	0.101614	263 / 0Â Â Â Â Â	Cannabigerol
Anandamide amidohydrolase	FAAH	O00519	CHEMBL2243	Enzyme	0.101614	178 / 0Â Â Â Â Â	Cannabigerol
Cystic fibrosis transmembrane conductance regulator	CFTR	P13569	CHEMBL4051	Other ion channel	0.101614	18 / 0Â Â Â Â Â	Cannabigerol
Neurokinin 1 receptor	TACR1	P25103	CHEMBL249	Family A G protein-coupled receptor	0.101614	121 / 0Â Â Â Â Â	Cannabigerol
Histone deacetylase 1	HDAC1	Q13547	CHEMBL325	Eraser	0.101614	104 / 0Â Â Â Â Â	Cannabigerol
G-protein coupled bile acid receptor 1	GPBAR1	Q8TDU6	CHEMBL5409	Family A G protein-coupled receptor	0.101614	32 / 0Â Â Â Â Â	Cannabigerol
Thymidylate synthase	TYMS	P04818	CHEMBL1952	Transferase	0.101614	28 / 0Â Â Â Â Â	Cannabigerol
Adenosine A2a receptor	ADORA2A	P29274	CHEMBL251	Family A G protein-coupled receptor	0.101614	149 / 0Â Â Â Â Â	Cannabigerol
Phosphodiesterase 7A	PDE7A	Q13946	CHEMBL3012	Phosphodiesterase	0.101614	16 / 0Â Â Â Â Â	Cannabigerol
Interleukin-8 receptor A	CXCR1	P25024	CHEMBL4029	Family A G protein-coupled receptor	0.101614	14 / 0Â Â Â Â Â	Cannabigerol
Carbonic anhydrase XII	CA12	O43570	CHEMBL3242	Lyase	0.101614	82 / 0Â Â Â Â Â	Cannabigerol
Calcium sensing receptor	CASR	P41180	CHEMBL1878	Family C G protein-coupled receptor	0.101614	33 / 0Â Â Â Â Â	Cannabigerol
Sphingosine 1-phosphate receptor Edg-3	S1PR3	Q99500	CHEMBL3892	Family A G protein-coupled receptor	0.101614	85 / 0Â Â Â Â Â	Cannabigerol
Glutamate NMDA receptor; GRIN1/GRIN2B	GRIN1 GRIN2B	Q05586 Q13224	CHEMBL1907603	Ligand-gated ion channel	0.101614	9 / 0Â Â Â Â Â	Cannabigerol

Protein farnesyltransferase	FNTA FNTB	P49354 P49356	CHEMBL2094108	Enzyme	0.101614	224 / 0Â Â Â Â Â	Cannabigerol
Estradiol 17-beta-dehydrogenase 2	HSD17B 2	P37059	CHEMBL2789	Enzyme	0.101614	21 / 0Â Â Â Â Â	Cannabigerol
Cholesteryl ester transfer protein	CETP	P11597	CHEMBL3572	Other ion channel	0.101614	13 / 3Â Â Â Â Â	Cannabigerol
Translocator protein (by homology)	TSPO	P30536	CHEMBL5742	Membrane receptor	0.101614	241 / 0Â Â Â Â Â	Cannabigerol
Melatonin receptor 1A	MTNR1 A	P48039	CHEMBL1945	Family A G protein-coupled receptor	0.101614	75 / 0Â Â Â Â Â	Cannabigerol
Melatonin receptor 1B	MTNR1 B	P49286	CHEMBL1946	Family A G protein-coupled receptor	0.101614	67 / 0Â Â Â Â Â	Cannabigerol
Cathepsin K	CTSK	P43235	CHEMBL268	Protease	0.101614	261 / 2Â Â Â Â Â	Cannabigerol
P-glycoprotein 1	ABCB1	P08183	CHEMBL4302	Primary active transporter	0.101614	19 / 0Â Â Â Â Â	Cannabigerol
NADPH oxidase 4	NOX4	Q9NPH 5	CHEMBL1250375	Enzyme	0.101614	3 / 0Â Â Â Â Â	Cannabigerol
Vasopressin V2 receptor (by homology)	AVPR2	P30518	CHEMBL1790	Family A G protein-coupled receptor	0.101614	62 / 0Â Â Â Â Â	Cannabigerol
Oxytocin receptor (by homology)	OXTR	P30559	CHEMBL2049	Family A G protein-coupled receptor	0.101614	97 / 0Â Â Â Â Â	Cannabigerol
Calpain 1	CAPN1	P07384	CHEMBL3891	Protease	0.101614	83 / 0Â Â Â Â Â	Cannabigerol
Pantothenate kinase 3	PANK3	Q9H99 9	CHEMBL3407328	Enzyme	0.101614	2 / 0Â Â Â Â Â	Cannabigerol
Pyroglutamylated RFamide peptide receptor	QRFPR	Q96P65	CHEMBL5852	Family A G protein-coupled receptor	0.101614	7 / 0Â Â Â Â Â	Cannabigerol
Monoamine oxidase A	MAOA	P21397	CHEMBL1951	Oxidoreductase	0.101614	79 / 0Â Â Â Â Â	Cannabigerol
GABA-A receptor; alpha-3/beta-3/gamma-2	GABRB 3 GABRA 3 GABRG 2	P28472 P34903 P18507	CHEMBL2094120	Ligand-gated ion channel	0.101614	48 / 0Â Â Â Â Â	Cannabigerol
GABA-A receptor; alpha-1/beta-3/gamma-2	GABRB 3 GABRG 2 GABRA 1	P28472 P18507 P14867	CHEMBL2094121	Ligand-gated ion channel	0.101614	40 / 0Â Â Â Â Â	Cannabigerol
GABA-A receptor; alpha-5/beta-3/gamma-2	GABRB 3 GABRG 2 GABRA 5	P28472 P18507 P31644	CHEMBL2094122	Ligand-gated ion channel	0.101614	48 / 0Â Â Â Â Â	Cannabigerol

GABA-A receptor; alpha-2/beta-3/gamma-2	GABRA2 GABRB3 GABRG2	P47869 P28472 P18507	CHEMBL2094130	Ligand-gated ion channel	0.101614	51 / 0Â Â Â Â Â	Cannabigerol
Neurokinin 3 receptor	TACR3	P29371	CHEMBL4429	Family A G protein-coupled receptor	0.101614	112 / 0Â Â Â Â Â	Cannabigerol
L-lactate dehydrogenase A chain	LDHA	P00338	CHEMBL4835	Enzyme	0.101614	5 / 0Â Â Â Â Â	Cannabigerol
Calpain 1	CAPN1 CAPNS1	P07384 P04632	CHEMBL2111357	Protease	0.101614	26 / 0Â Â Â Â Â	Cannabigerol
Cholecystokinin B receptor	CCKBR	P32239	CHEMBL298	Family A G protein-coupled receptor	0.101614	400 / 0Â Â Â Â Â	Cannabigerol
Serotonin 5a (5-HT5a) receptor	HTR5A	P47898	CHEMBL3426	Family A G protein-coupled receptor	0.101614	7 / 0Â Â Â Â Â	Cannabigerol
Voltage-gated potassium channel subunit Kv1.5	KCNA5	P22460	CHEMBL4306	Voltage-gated ion channel	0.101614	105 / 0Â Â Â Â Â	Cannabigerol
P2X purinoceptor 7	P2RX7	Q99572	CHEMBL4805	Ligand-gated ion channel	0.101614	66 / 0Â Â Â Â Â	Cannabigerol
Alkaline phosphatase, tissue-nonspecific isozyme	ALPL	P05186	CHEMBL5979	Enzyme	0	10 / 0Â Â Â Â Â	Cannabigerol
Vascular endothelial growth factor receptor 2	KDR	P35968	CHEMBL279	Kinase	0	348 / 13Â Â Â Â Â	Cannabigerol
Sodium channel protein type IX alpha subunit	SCN9A	Q15858	CHEMBL4296	Voltage-gated ion channel	0	75 / 0Â Â Â Â Â	Cannabigerol
Thrombin and coagulation factor X	F10	P00742	CHEMBL244	Protease	0	231 / 0Â Â Â Â Â	Cannabigerol
Serine/threonine-protein kinase PLK1	PLK1	P53350	CHEMBL3024	Kinase	0	19 / 0Â Â Â Â Â	Cannabigerol
Kinesin-1 heavy chain/ Tyrosine-protein kinase receptor RET	RET	P07949	CHEMBL2041	Kinase	0	27 / 0Â Â Â Â Â	Cannabigerol
Dopamine D4 receptor	DRD4	P21917	CHEMBL219	Family A G protein-coupled receptor	0	72 / 0Â Â Â Â Â	Cannabigerol
Beta secretase 2	BACE2	Q9Y5Z0	CHEMBL2525	Protease	0	97 / 0Â Â Â Â Â	Cannabigerol
GABA receptor alpha-1 subunit	GABRA1	P14867	CHEMBL1962	Ligand-gated ion channel	0	24 / 0Â Â Â Â Â	Cannabigerol
GABA receptor alpha-2 subunit	GABRA2	P47869	CHEMBL4956	Ligand-gated ion channel	0	32 / 0Â Â Â Â Â	Cannabigerol

Tyrosine-protein kinase JAK3	JAK3	P52333	CHEMBL2148	Kinase	0	207 / 0	Cannabigerol
Adenosine A2b receptor	ADORA2B	P29275	CHEMBL255	Family A G protein-coupled receptor	0	26 / 0	Cannabigerol
Prenyl protein specific protease	RCE1	Q9Y256	CHEMBL3411	Protease	0	6 / 0	Cannabigerol
Cytochrome b-c1 complex subunit 7	UQCRB	P14927	CHEMBL1671612	Transmembrane 1-electron transfer carriers	0	1 / 0	Cannabigerol
Integrin alpha-4/beta-7	ITGB7ITGA4	P26010P13612	CHEMBL2095184	Membrane receptor	0	6 / 0	Cannabigerol
3-phosphoinositide dependent protein kinase-1	PDPK1	O15530	CHEMBL2534	Kinase	0	36 / 0	Cannabigerol
Renin	REN	P00797	CHEMBL286	Protease	0	15 / 0	Cannabigerol
Leukotriene A4 hydrolase	LTA4H	P09960	CHEMBL4618	Protease	0	10 / 0	Cannabigerol
Prostanoid EP1 receptor	PTGER1	P34995	CHEMBL1811	Family A G protein-coupled receptor	0	49 / 0	Cannabigerol
Sodium channel protein type V alpha subunit	SCN5A	Q14524	CHEMBL1980	Voltage-gated ion channel	0	21 / 0	Cannabigerol
c-Jun N-terminal kinase 1	MAPK8	P45983	CHEMBL2276	Kinase	0	123 / 0	Cannabigerol
c-Jun N-terminal kinase 3	MAPK10	P53779	CHEMBL2637	Kinase	0	89 / 0	Cannabigerol
PI3-kinase p110-alpha subunit	PIK3CA	P42336	CHEMBL4005	Enzyme	0	127 / 0	Cannabigerol
c-Jun N-terminal kinase 2	MAPK9	P45984	CHEMBL4179	Kinase	0	58 / 0	Cannabigerol
Sodium channel protein type II alpha subunit	SCN2A	Q99250	CHEMBL4187	Voltage-gated ion channel	0	30 / 0	Cannabigerol
Isocitrate dehydrogenase [NADP] cytoplasmic	IDH1	O75874	CHEMBL2007625	Enzyme	0	112 / 0	Cannabigerol
Alpha-1d adrenergic receptor	ADRA1D	P25100	CHEMBL223	Family A G protein-coupled receptor	0	34 / 0	Cannabigerol
Alpha-1a adrenergic receptor	ADRA1A	P35348	CHEMBL229	Family A G protein-coupled receptor	0	45 / 0	Cannabigerol
Interleukin-8 receptor B	CXCR2	P25025	CHEMBL2434	Family A G protein-coupled receptor	0	52 / 0	Cannabigerol
Carboxypeptidase B	CPB1	P15086	CHEMBL2552	Protease	0	2 / 0	Cannabigerol
Tyrosine-protein kinase JAK1	JAK1	P23458	CHEMBL2835	Kinase	0	71 / 0	Cannabigerol

Tyrosine-protein kinase JAK2	JAK2	O60674	CHEMBL2971	Kinase	0	160 / 0Â Â Â Â Â	Cannabigerol
Cyclin-dependent kinase 2	CDK2	P24941	CHEMBL301	Kinase	0	84 / 0Â Â Â Â Â	Cannabigerol
Cyclin-dependent kinase 1	CDK1	P06493	CHEMBL308	Kinase	0	65 / 0Â Â Â Â Â	Cannabigerol
Heat shock protein HSP 90-beta	HSP90A B1	P08238	CHEMBL4303	Other cytosolic protein	0	64 / 0Â Â Â Â Â	Cannabigerol
Cannabinoid receptor 1	CNR1	P21554	CHEMBL218	Family A G protein-coupled receptor	0.226582	759 / 73Â Â Â Â Â	Cannabinodiol
Cannabinoid receptor 2	CNR2	P34972	CHEMBL253	Family A G protein-coupled receptor	0.209877	632 / 73Â Â Â Â Â	Cannabinodiol
Epidermal growth factor receptor erbB1	EGFR	P00533	CHEMBL203	Kinase	0.101614	230 / 0Â Â Â Â Â	Cannabinodiol
Receptor protein-tyrosine kinase erbB-2	ERBB2	P04626	CHEMBL1824	Kinase	0.101614	44 / 0Â Â Â Â Â	Cannabinodiol
Glycine receptor subunit alpha-1	GLRA1	P23415	CHEMBL5845	Ligand-gated ion channel	0.101614	1 / 0Â Â Â Â Â	Cannabinodiol
Cystic fibrosis transmembrane conductance regulator	CFTR	P13569	CHEMBL4051	Other ion channel	0.101614	11 / 0Â Â Â Â Â	Cannabinodiol
Serotonin 2b (5-HT2b) receptor	HTR2B	P41595	CHEMBL1833	Family A G protein-coupled receptor	0.101614	31 / 0Â Â Â Â Â	Cannabinodiol
Serotonin 2a (5-HT2a) receptor (by homology)	HTR2A	P28223	CHEMBL224	Family A G protein-coupled receptor	0.101614	31 / 0Â Â Â Â Â	Cannabinodiol
Serotonin 2c (5-HT2c) receptor	HTR2C	P28335	CHEMBL225	Family A G protein-coupled receptor	0.101614	41 / 0Â Â Â Â Â	Cannabinodiol
NAD-dependent deacetylase sirtuin 2	SIRT2	Q8IXJ6	CHEMBL4462	Eraser	0.101614	26 / 0Â Â Â Â Â	Cannabinodiol
5-lipoxygenase activating protein	ALOX5 AP	P20292	CHEMBL4550	Other cytosolic protein	0.101614	57 / 0Â Â Â Â Â	Cannabinodiol
Calcium sensing receptor	CASR	P41180	CHEMBL1878	Family C G protein-coupled receptor	0.101614	37 / 0Â Â Â Â Â	Cannabinodiol
Prenyl protein specific protease	RCE1	Q9Y256	CHEMBL3411	Protease	0.101614	6 / 0Â Â Â Â Â	Cannabinodiol
Melanocortin receptor 4	MC4R	P32245	CHEMBL259	Family A G protein-coupled receptor	0.101614	16 / 0Â Â Â Â Â	Cannabinodiol
Glucagon receptor	GCGR	P47871	CHEMBL1985	Family B G protein-	0.101614	28 / 0Â Â Â Â Â	Cannabinodiol

				coupled receptor			
Interleukin-8 receptor B	CXCR2	P25025	CHEMBL2434	Family A G protein-coupled receptor	0.101614	41 / 0Â Â Â Â Â	Cannabinodiol
Neurokinin 2 receptor	TACR2	P21452	CHEMBL2327	Family A G protein-coupled receptor	0.101614	8 / 0Â Â Â Â Â	Cannabinodiol
Epoxide hydratase	EPHX2	P34913	CHEMBL2409	Protease	0.101614	86 / 0Â Â Â Â Â	Cannabinodiol
Cathepsin D	CTSD	P07339	CHEMBL2581	Protease	0.101614	18 / 0Â Â Â Â Â	Cannabinodiol
Poly [ADP-ribose] polymerase-1	PARP1	P09874	CHEMBL3105	Enzyme	0.101614	13 / 0Â Â Â Â Â	Cannabinodiol
Neurokinin 3 receptor	TACR3	P29371	CHEMBL4429	Family A G protein-coupled receptor	0.101614	102 / 0Â Â Â Â Â	Cannabinodiol
Beta-secretase 1	BACE1	P56817	CHEMBL4822	Protease	0.101614	161 / 0Â Â Â Â Â	Cannabinodiol
Translocator protein (by homology)	TSPO	P30536	CHEMBL5742	Membrane receptor	0.101614	318 / 0Â Â Â Â Â	Cannabinodiol
Phosphodiesterase 4B	PDE4B	Q07343	CHEMBL275	Phosphodiesterase	0.101614	25 / 0Â Â Â Â Â	Cannabinodiol
Mu opioid receptor	OPRM1	P35372	CHEMBL233	Family A G protein-coupled receptor	0.101614	15 / 0Â Â Â Â Â	Cannabinodiol
Estradiol 17-beta-dehydrogenase 3	HSD17B3	P37058	CHEMBL4234	Enzyme	0.101614	3 / 0Â Â Â Â Â	Cannabinodiol
11-beta-hydroxysteroid dehydrogenase 1	HSD11B1	P28845	CHEMBL4235	Enzyme	0.101614	222 / 0Â Â Â Â Â	Cannabinodiol
ADAMTS5	ADAMTS5	Q9UNA0	CHEMBL2285	Protease	0.101614	29 / 0Â Â Â Â Â	Cannabinodiol
Thymidylate synthase	TYMS	P04818	CHEMBL1952	Transferase	0.101614	22 / 0Â Â Â Â Â	Cannabinodiol
Metabotropic glutamate receptor 5	GRM5	P41594	CHEMBL3227	Family C G protein-coupled receptor	0.101614	238 / 0Â Â Â Â Â	Cannabinodiol
Monoglyceride lipase	MGLL	Q99685	CHEMBL4191	Enzyme	0.101614	13 / 0Â Â Â Â Â	Cannabinodiol
Quinone reductase 2	NQO2	P16083	CHEMBL3959	Enzyme	0.101614	7 / 0Â Â Â Â Â	Cannabinodiol
p53-binding protein Mdm-2	MDM2	Q00987	CHEMBL5023	Other nuclear protein	0.101614	48 / 0Â Â Â Â Â	Cannabinodiol
Monoamine oxidase B	MAOB	P27338	CHEMBL2039	Oxidoreductase	0.101614	142 / 0Â Â Â Â Â	Cannabinodiol
Nitric-oxide synthase, brain	NOS1	P29475	CHEMBL3568	Enzyme	0.101614	32 / 0Â Â Â Â Â	Cannabinodiol
Nitric-oxide synthase, endothelial	NOS3	P29474	CHEMBL4803	Enzyme	0.101614	14 / 0Â Â Â Â Â	Cannabinodiol
Tyrosine-protein kinase JAK2	JAK2	O60674	CHEMBL2971	Kinase	0.101614	158 / 0Â Â Â Â Â	Cannabinodiol

Cholecystokinin B receptor (by homology)	CCKBR	P32239	CHEMBL298	Family A G protein-coupled receptor	0.101614	221 / 0Â Â Â Â Â	Cannabinodiol
Serine/threonine-protein kinase PAK 1	PAK1	Q13153	CHEMBL4600	Kinase	0.101614	1 / 0Â Â Â Â Â	Cannabinodiol
Prostanoid EP1 receptor	PTGER1	P34995	CHEMBL1811	Family A G protein-coupled receptor	0.101614	39 / 0Â Â Â Â Â	Cannabinodiol
Pyruvate kinase isozymes M1/M2	PKM	P14618	CHEMBL1075189	Enzyme	0.101614	7 / 0Â Â Â Â Â	Cannabinodiol
Cyclin-dependent kinase 5/CDK5 activator 1	CDK5R1 CDK5	Q15078 Q00535	CHEMBL1907600	Kinase	0.101614	90 / 0Â Â Â Â Â	Cannabinodiol
Serine/threonine-protein kinase Aurora-B	AURKB	Q96GD 4	CHEMBL2185	Kinase	0.101614	25 / 0Â Â Â Â Â	Cannabinodiol
Serine/threonine-protein kinase Aurora-C	AURKC	Q9UQB 9	CHEMBL3935	Kinase	0.101614	11 / 0Â Â Â Â Â	Cannabinodiol
Serine/threonine-protein kinase Aurora-A	AURKA	O14965	CHEMBL4722	Kinase	0.101614	31 / 0Â Â Â Â Â	Cannabinodiol
Corticotropin releasing factor receptor 1	CRHR1	P34998	CHEMBL1800	Family B G protein-coupled receptor	0	153 / 0Â Â Â Â Â	Cannabinodiol
Anandamide amidohydrolase	FAAH	O00519	CHEMBL2243	Enzyme	0	57 / 0Â Â Â Â Â	Cannabinodiol
MAP kinase p38 alpha	MAPK1 4	Q16539	CHEMBL260	Kinase	0	344 / 0Â Â Â Â Â	Cannabinodiol
Mineralocorticoid receptor	NR3C2	P08235	CHEMBL1994	Nuclear receptor	0	67 / 0Â Â Â Â Â	Cannabinodiol
Voltage-gated potassium channel subunit Kv1.5	KCNA5	P22460	CHEMBL4306	Voltage-gated ion channel	0	99 / 0Â Â Â Â Â	Cannabinodiol
ATP-binding cassette sub-family G member 2	ABCG2	Q9UNQ 0	CHEMBL5393	Primary active transporter	0	11 / 0Â Â Â Â Â	Cannabinodiol
Serine/threonine-protein kinase/endoribonucle ase IRE1	ERN1	O75460	CHEMBL1163101	Enzyme	0	3 / 0Â Â Â Â Â	Cannabinodiol
LDL-associated phospholipase A2	PLA2G7	Q13093	CHEMBL3514	Enzyme	0	15 / 0Â Â Â Â Â	Cannabinodiol
Sodium channel protein type II alpha subunit	SCN2A	Q99250	CHEMBL4187	Voltage-gated ion channel	0	24 / 0Â Â Â Â Â	Cannabinodiol
Muscarinic acetylcholine receptor M1 (by homology)	CHRM1	P11229	CHEMBL216	Family A G protein-coupled receptor	0	37 / 0Â Â Â Â Â	Cannabinodiol
Acetylcholinesterase	ACHE	P22303	CHEMBL220	Hydrolase	0	84 / 0Â Â Â Â Â	Cannabinodiol
Bombesin receptor subtype-3	BRS3	P32247	CHEMBL4080	Family A G protein-coupled receptor	0	1 / 0Â Â Â Â Â	Cannabinodiol

Alpha-2a adrenergic receptor	ADRA2A	P08913	CHEMBL1867	Family A G protein-coupled receptor	0	63 / 0	Cannabinodiol
Adrenergic receptor alpha-2	ADRA2C	P18825	CHEMBL1916	Family A G protein-coupled receptor	0	59 / 0	Cannabinodiol
Alpha-2b adrenergic receptor	ADRA2B	P18089	CHEMBL1942	Family A G protein-coupled receptor	0	57 / 0	Cannabinodiol
Macrophage migration inhibitory factor	MIF	P14174	CHEMBL2085	Enzyme	0	5 / 0	Cannabinodiol
Cyclin-dependent kinase 1/cyclin B	CCNB3 CDK1 CCNB1 CCNB2	Q8WWL7 P06493 P14635 O95067	CHEMBL2094127	Other cytosolic protein	0	43 / 0	Cannabinodiol
Bromodomain-containing protein 1	BRD1	O95696	CHEMBL2176774	Reader	0	6 / 0	Cannabinodiol
Beta secretase 2	BACE2	Q9Y5Z0	CHEMBL2525	Protease	0	33 / 0	Cannabinodiol
Transcription intermediary factor 1-alpha	TRIM24	O15164	CHEMBL3108638	Reader	0	9 / 0	Cannabinodiol
Peregrin	BRPF1	P55201	CHEMBL3132741	Reader	0	20 / 0	Cannabinodiol
Nischarin	NISCH	Q9Y2I1	CHEMBL3923	Other cytosolic protein	0	41 / 0	Cannabinodiol
Metabotropic glutamate receptor 2	GRM2	Q14416	CHEMBL5137	Family C G protein-coupled receptor	0	38 / 0	Cannabinodiol
Cholecystokinin A receptor	CCKAR	P32238	CHEMBL1901	Family A G protein-coupled receptor	0	19 / 0	Cannabinodiol
Tyrosine-protein kinase JAK3	JAK3	P52333	CHEMBL2148	Kinase	0	169 / 0	Cannabinodiol
Calcium-activated potassium channel subunit alpha-1	KCNMA1	Q12791	CHEMBL4304	Voltage-gated ion channel	0	13 / 0	Cannabinodiol
Alpha-1d adrenergic receptor	ADRA1D	P25100	CHEMBL223	Family A G protein-coupled receptor	0	17 / 0	Cannabinodiol
Alpha-1a adrenergic receptor	ADRA1A	P35348	CHEMBL229	Family A G protein-coupled receptor	0	41 / 0	Cannabinodiol
Alpha-1b adrenergic receptor	ADRA1B	P35368	CHEMBL232	Family A G protein-coupled receptor	0	19 / 0	Cannabinodiol
Glycogen synthase kinase-3 beta	GSK3B	P49841	CHEMBL262	Kinase	0	52 / 0	Cannabinodiol

Serotonin 6 (5-HT6) receptor	HTR6	P50406	CHEMBL3371	Family A G protein-coupled receptor	0	59 / 0Â Â Â Â Â	Cannabinodiol
6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 3	PFKFB3	Q16875	CHEMBL2331053	Enzyme	0	50 / 0Â Â Â Â Â	Cannabinodiol
Mitogen-activated protein kinase kinase kinase 8	MAP3K8	P41279	CHEMBL4899	Kinase	0	43 / 0Â Â Â Â Â	Cannabinodiol
Serine/threonine-protein kinase B-raf	BRAF	P15056	CHEMBL5145	Kinase	0	74 / 0Â Â Â Â Â	Cannabinodiol
Serine/threonine-protein kinase TNNI3K	TNNI3K	Q59H18	CHEMBL5260	Kinase	0	35 / 0Â Â Â Â Â	Cannabinodiol
GABA-A receptor; alpha-3/beta-3/gamma-2	GABRB3 GABRA3 GABRG2	P28472 P34903 P18507	CHEMBL2094120	Ligand-gated ion channel	0	62 / 0Â Â Â Â Â	Cannabinodiol
GABA-A receptor; alpha-1/beta-3/gamma-2	GABRB3 GABRG2 GABRA1	P28472 P18507 P14867	CHEMBL2094121	Ligand-gated ion channel	0	53 / 0Â Â Â Â Â	Cannabinodiol
GABA-A receptor; alpha-5/beta-3/gamma-2	GABRB3 GABRG2 GABRA5	P28472 P18507 P31644	CHEMBL2094122	Ligand-gated ion channel	0	58 / 0Â Â Â Â Â	Cannabinodiol
GABA-A receptor; alpha-2/beta-3/gamma-2	GABRA2 GABRB3 GABRG2	P47869 P28472 P18507	CHEMBL2094130	Ligand-gated ion channel	0	59 / 0Â Â Â Â Â	Cannabinodiol
Prostaglandin E synthase	PTGES	O14684	CHEMBL5658	Enzyme	0	31 / 0Â Â Â Â Â	Cannabinodiol
Melatonin receptor 1B	MTNR1B	P49286	CHEMBL1946	Family A G protein-coupled receptor	0	49 / 0Â Â Â Â Â	Cannabinodiol
Adenosine A1 receptor (by homology)	ADORA1	P30542	CHEMBL226	Family A G protein-coupled receptor	0	247 / 0Â Â Â Â Â	Cannabinodiol
Protein kinase C delta	PRKCD	Q05655	CHEMBL2996	Kinase	0	19 / 0Â Â Â Â Â	Cannabinodiol
Tyrosine-protein kinase Lyn	LYN	P07948	CHEMBL3905	Kinase	0	6 / 0Â Â Â Â Â	Cannabinodiol
Protein kinase C theta	PRKCQ	Q04759	CHEMBL3920	Kinase	0	35 / 0Â Â Â Â Â	Cannabinodiol
Dual specificity protein phosphatase 3	DUSP3	P51452	CHEMBL2635	Phosphatase	0	4 / 0Â Â Â Â Â	Cannabinodiol

Monoamine oxidase A	MAOA	P21397	CHEMBL1951	Oxidoreductase	0	92 / 0	Cannabinodiol
Adenosine A2a receptor	ADORA2A	P29274	CHEMBL251	Family A G protein-coupled receptor	0	138 / 0	Cannabinodiol
Adenosine A3 receptor	ADORA3	P0DMS8	CHEMBL256	Family A G protein-coupled receptor	0	177 / 0	Cannabinodiol
Carbonic anhydrase I	CA1	P00915	CHEMBL261	Lyase	0	87 / 0	Cannabinodiol
Carbonic anhydrase IX	CA9	Q16790	CHEMBL3594	Lyase	0	86 / 0	Cannabinodiol
Androgen Receptor	AR	P10275	CHEMBL1871	Nuclear receptor	0	73 / 0	Cannabinodiol
Sodium channel protein type V alpha subunit	SCN5A	Q14524	CHEMBL1980	Voltage-gated ion channel	0	19 / 0	Cannabinodiol
Carbonic anhydrase II	CA2	P00918	CHEMBL205	Lyase	0	110 / 0	Cannabinodiol
Carbonic anhydrase XII	CA12	O43570	CHEMBL3242	Lyase	0	67 / 0	Cannabinodiol
Cannabinoid receptor 1	CNR1	P21554	CHEMBL218	Family A G protein-coupled receptor	0.986222	822 / 96	Cannabinol
Cannabinoid receptor 2	CNR2	P34972	CHEMBL253	Family A G protein-coupled receptor	0.986222	736 / 99	Cannabinol
Estrogen receptor beta	ESR2	Q92731	CHEMBL242	Nuclear receptor	0.101614	12 / 35	Cannabinol
Estrogen receptor alpha	ESR1	P03372	CHEMBL206	Nuclear receptor	0.101614	18 / 38	Cannabinol
N-arachidonyl glycine receptor	GPR18	Q14330	CHEMBL2384898	Family A G protein-coupled receptor	0.101614	2 / 0	Cannabinol
Vascular endothelial growth factor receptor 2	KDR	P35968	CHEMBL279	Kinase	0.101614	229 / 0	Cannabinol
G-protein coupled receptor 55	GPR55	Q9Y2T6	CHEMBL1075322	Family A G protein-coupled receptor	0.101614	10 / 0	Cannabinol
Cystic fibrosis transmembrane conductance regulator	CFTR	P13569	CHEMBL4051	Other ion channel	0.101614	12 / 0	Cannabinol
5-lipoxygenase activating protein	ALOX5AP	P20292	CHEMBL4550	Other cytosolic protein	0.101614	56 / 0	Cannabinol
Receptor protein-tyrosine kinase erbB-2	ERBB2	P04626	CHEMBL1824	Kinase	0.101614	48 / 0	Cannabinol
Epidermal growth factor receptor erbB1	EGFR	P00533	CHEMBL203	Kinase	0.101614	228 / 0	Cannabinol

Calcium sensing receptor	CASR	P41180	CHEMBL1878	Family C G protein-coupled receptor	0.101614	35 / 0Â Â Â Â Â	Cannabinol
Corticotropin releasing factor receptor 1	CRHR1	P34998	CHEMBL1800	Family B G protein-coupled receptor	0.101614	147 / 0Â Â Â Â Â	Cannabinol
11-beta-hydroxysteroid dehydrogenase 1	HSD11B1	P28845	CHEMBL4235	Enzyme	0.101614	213 / 0Â Â Â Â Â	Cannabinol
Phosphodiesterase 4B	PDE4B	Q07343	CHEMBL275	Phosphodiesterase	0.101614	36 / 0Â Â Â Â Â	Cannabinol
NAD-dependent deacetylase sirtuin 2	SIRT2	Q8IXJ6	CHEMBL4462	Eraser	0.101614	33 / 0Â Â Â Â Â	Cannabinol
ADAMTS5	ADAMTS5	Q9UNA0	CHEMBL2285	Protease	0.101614	36 / 0Â Â Â Â Â	Cannabinol
Cathepsin D	CTSD	P07339	CHEMBL2581	Protease	0.101614	41 / 0Â Â Â Â Â	Cannabinol
Prenyl protein specific protease	RCE1	Q9Y256	CHEMBL3411	Protease	0.101614	6 / 0Â Â Â Â Â	Cannabinol
Epoxide hydratase	EPHX2	P34913	CHEMBL2409	Protease	0.101614	93 / 0Â Â Â Â Â	Cannabinol
Adenosine A2a receptor	ADORA2A	P29274	CHEMBL251	Family A G protein-coupled receptor	0.101614	184 / 0Â Â Â Â Â	Cannabinol
Adenosine A2b receptor	ADORA2B	P29275	CHEMBL255	Family A G protein-coupled receptor	0.101614	40 / 0Â Â Â Â Â	Cannabinol
Protoporphyrinogen oxidase	PPOX	P50336	CHEMBL1926488	Oxidoreductase	0.101614	1 / 0Â Â Â Â Â	Cannabinol
Translocator protein (by homology)	TSPO	P30536	CHEMBL5742	Membrane receptor	0.101614	344 / 0Â Â Â Â Â	Cannabinol
Protein kinase C (PKC)	PRKCZ	Q05513	CHEMBL3438	Kinase	0.101614	2 / 0Â Â Â Â Â	Cannabinol
Nitric oxide synthase, inducible (by homology)	NOS2	P35228	CHEMBL4481	Enzyme	0.101614	83 / 0Â Â Â Â Â	Cannabinol
Muscarinic acetylcholine receptor M1 (by homology)	CHRM1	P11229	CHEMBL216	Family A G protein-coupled receptor	0.101614	35 / 0Â Â Â Â Â	Cannabinol
Isocitrate dehydrogenase [NADP] cytoplasmic	IDH1	O75874	CHEMBL2007625	Enzyme	0.101614	170 / 0Â Â Â Â Â	Cannabinol
Bile acid receptor FXR	NR1H4	Q96RI1	CHEMBL2047	Nuclear receptor	0.101614	30 / 0Â Â Â Â Â	Cannabinol
Thymidylate synthase	TYMS	P04818	CHEMBL1952	Transferase	0.101614	25 / 0Â Â Â Â Â	Cannabinol
Melanocortin receptor 4	MC4R	P32245	CHEMBL259	Family A G protein-coupled receptor	0.101614	10 / 0Â Â Â Â Â	Cannabinol
Acetylcholinesterase	ACHE	P22303	CHEMBL220	Hydrolase	0.101614	85 / 0Â Â Â Â Â	Cannabinol
Neurokinin 2 receptor	TACR2	P21452	CHEMBL2327	Family A G protein-	0.101614	12 / 0Â Â Â Â Â	Cannabinol

				coupled receptor			
Beta secretase 2	BACE2	Q9Y5Z0	CHEMBL2525	Protease	0.101614	64 / 0Â Â Â Â Â	Cannabinol
Phosphodiesterase 7A	PDE7A	Q13946	CHEMBL3012	Phosphodies- terase	0.101614	15 / 0Â Â Â Â Â	Cannabinol
Quinone reductase 2	NQO2	P16083	CHEMBL3959	Enzyme	0.101614	9 / 0Â Â Â Â Â	Cannabinol
Neurokinin 3 receptor	TACR3	P29371	CHEMBL4429	Family A G protein- coupled receptor	0.101614	116 / 0Â Â Â Â Â	Cannabinol
Kinesin-like protein 1	KIF11	P52732	CHEMBL4581	Other cytosolic protein	0.101614	36 / 0Â Â Â Â Â	Cannabinol
Cholecystokinin A receptor	CCKAR	P32238	CHEMBL1901	Family A G protein- coupled receptor	0.101614	28 / 0Â Â Â Â Â	Cannabinol
Interleukin-8 receptor B	CXCR2	P25025	CHEMBL2434	Family A G protein- coupled receptor	0.101614	46 / 0Â Â Â Â Â	Cannabinol
LDL-associated phospholipase A2	PLA2G7	Q13093	CHEMBL3514	Enzyme	0.101614	20 / 0Â Â Â Â Â	Cannabinol
G-protein coupled bile acid receptor 1	GPBAR1	Q8TDU6	CHEMBL5409	Family A G protein- coupled receptor	0.101614	33 / 0Â Â Â Â Â	Cannabinol
Dopamine D1 receptor	DRD1	P21728	CHEMBL2056	Family A G protein- coupled receptor	0.101614	22 / 0Â Â Â Â Â	Cannabinol
6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 3	PFKFB3	Q16875	CHEMBL2331053	Enzyme	0.101614	52 / 0Â Â Â Â Â	Cannabinol
Poly [ADP-ribose] polymerase-1	PARP1	P09874	CHEMBL3105	Enzyme	0.101614	22 / 0Â Â Â Â Â	Cannabinol
Glucocorticoid receptor	NR3C1	P04150	CHEMBL2034	Nuclear receptor	0.101614	126 / 53Â Â Â Â Â	Cannabinol
Methyl-CpG-binding protein 2	MECP2	P51608	CHEMBL3638346	Reader	0.101614	1 / 0Â Â Â Â Â	Cannabinol
Methyl-CpG-binding domain protein 2	MBD2	Q9UBB5	CHEMBL3707462	Reader	0.101614	2 / 0Â Â Â Â Â	Cannabinol
Serine/threonine-protein kinase PAK 1	PAK1	Q13153	CHEMBL4600	Kinase	0.101614	2 / 0Â Â Â Â Â	Cannabinol
Histone deacetylase 6	HDAC6	Q9UBN7	CHEMBL1865	Eraser	0.101614	26 / 0Â Â Â Â Â	Cannabinol
Histone deacetylase 2	HDAC2	Q92769	CHEMBL1937	Eraser	0.101614	10 / 0Â Â Â Â Â	Cannabinol
Estradiol 17-beta-dehydrogenase 2	HSD17B2	P37059	CHEMBL2789	Enzyme	0.101614	20 / 0Â Â Â Â Â	Cannabinol
Histone deacetylase 8	HDAC8	Q9BY41	CHEMBL3192	Eraser	0.101614	11 / 0Â Â Â Â Â	Cannabinol
MAP kinase p38 alpha	MAPK14	Q16539	CHEMBL260	Kinase	0.101614	374 / 0Â Â Â Â Â	Cannabinol
Prostanoid EP1 receptor	PTGER1	P34995	CHEMBL1811	Family A G protein-	0	43 / 16Â Â Â Â Â	Cannabinol

				coupled receptor			
Cytochrome b-c1 complex subunit 7	UQCRB	P14927	CHEMBL1671612	Transmembrane 1-electron transfer carriers	0	1 / 0	Cannabinol
Serotonin 2c (5-HT2c) receptor	HTR2C	P28335	CHEMBL225	Family A G protein-coupled receptor	0	41 / 0	Cannabinol
Voltage-gated potassium channel subunit Kv1.5	KCNA5	P22460	CHEMBL4306	Voltage-gated ion channel	0	111 / 0	Cannabinol
Leukotriene A4 hydrolase	LTA4H	P09960	CHEMBL4618	Protease	0	9 / 0	Cannabinol
Peregrin	BRPF1	P55201	CHEMBL3132741	Reader	0	27 / 0	Cannabinol
p53-binding protein Mdm-2	MDM2	Q00987	CHEMBL5023	Other nuclear protein	0	81 / 0	Cannabinol
Bombesin receptor subtype-3	BRS3	P32247	CHEMBL4080	Family A G protein-coupled receptor	0	1 / 0	Cannabinol
Mu opioid receptor	OPRM1	P35372	CHEMBL233	Family A G protein-coupled receptor	0	18 / 0	Cannabinol
Tyrosine-protein kinase LCK	LCK	P06239	CHEMBL258	Kinase	0	62 / 0	Cannabinol
Adenosine A1 receptor (by homology)	ADORA1	P30542	CHEMBL226	Family A G protein-coupled receptor	0	287 / 0	Cannabinol
Estradiol 17-beta-dehydrogenase 1	HSD17B1	P14061	CHEMBL3181	Enzyme	0	10 / 0	Cannabinol
Sodium channel protein type II alpha subunit	SCN2A	Q99250	CHEMBL4187	Voltage-gated ion channel	0	25 / 0	Cannabinol
Vanilloid receptor	TRPV1	Q8NER1	CHEMBL4794	Voltage-gated ion channel	0	116 / 0	Cannabinol
Egl nine homolog 1	EGLN1	Q9GZT9	CHEMBL5697	Oxidoreductase	0	7 / 0	Cannabinol
Tyrosine-protein kinase JAK3	JAK3	P52333	CHEMBL2148	Kinase	0	209 / 0	Cannabinol
Phosphodiesterase 2A	PDE2A	O00408	CHEMBL2652	Phosphodiesterase	0	56 / 0	Cannabinol
Tyrosine-protein kinase JAK2	JAK2	O60674	CHEMBL2971	Kinase	0	170 / 0	Cannabinol
Calcium-activated potassium channel subunit alpha-1	KCNMA1	Q12791	CHEMBL4304	Voltage-gated ion channel	0	13 / 0	Cannabinol
Phosphodiesterase 10A	PDE10A	Q9Y233	CHEMBL4409	Phosphodiesterase	0	466 / 0	Cannabinol
Muscarinic acetylcholine receptor M4	CHRM4	P08173	CHEMBL1821	Family A G protein-	0	11 / 0	Cannabinol

				coupled receptor			
Muscarinic acetylcholine receptor M5	CHRM5	P08912	CHEMBL2035	Family A G protein-coupled receptor	0	9 / 0	Cannabinol
Muscarinic acetylcholine receptor M2	CHRM2	P08172	CHEMBL211	Family A G protein-coupled receptor	0	9 / 0	Cannabinol
Muscarinic acetylcholine receptor M3	CHRM3	P20309	CHEMBL245	Family A G protein-coupled receptor	0	61 / 0	Cannabinol
Neuropeptide Y receptor type 5	NPY5R	Q15761	CHEMBL4561	Family A G protein-coupled receptor	0	144 / 0	Cannabinol
ATP-binding cassette sub-family G member 2	ABCG2	Q9UNQ0	CHEMBL5393	Primary active transporter	0	17 / 0	Cannabinol
Glutamate NMDA receptor; GRIN1/GRIN2B	GRIN1 GRIN2B	Q05586 Q13224	CHEMBL1907603	Ligand-gated ion channel	0	2 / 0	Cannabinol
Adenosine A3 receptor	ADORA3	P0DMS8	CHEMBL256	Family A G protein-coupled receptor	0	220 / 0	Cannabinol
Cholecystokinin B receptor	CCKBR	P32239	CHEMBL298	Family A G protein-coupled receptor	0	266 / 0	Cannabinol
Hormone sensitive lipase	LIPE	Q05469	CHEMBL3590	Enzyme	0	46 / 0	Cannabinol
Cyclin-dependent kinase 5/CDK5 activator 1	CDK5R1 CDK5	Q15078 Q00535	CHEMBL1907600	Kinase	0	85 / 0	Cannabinol
Cyclin-dependent kinase 1/cyclin B	CCNB3 CDK1 CCNB1 CCNB2	Q8WWL7 P06493 P14635 O95067	CHEMBL2094127	Other cytosolic protein	0	45 / 0	Cannabinol
GABA-A receptor; GABA-A site (alpha1/beta2 interface)	GABRA1 GABRB2	P14867 P47870	CHEMBL1907597	Ligand-gated ion channel	0	5 / 0	Cannabinol
Interleukin-8 receptor A	CXCR1	P25024	CHEMBL4029	Family A G protein-coupled receptor	0	11 / 0	Cannabinol
Leucine-rich repeat serine/threonine-protein kinase 2	LRRK2	Q5S007	CHEMBL1075104	Kinase	0	26 / 0	Cannabinol
Sodium channel protein type V alpha subunit	SCN5A	Q14524	CHEMBL1980	Voltage-gated ion channel	0	19 / 0	Cannabinol
GABA-A receptor; alpha-3/beta-3/gamma-2	GABRB3 GABRA	P28472 P34903 P18507	CHEMBL2094120	Ligand-gated ion channel	0	85 / 0	Cannabinol

	3 GABRG 2						
GABA-A receptor; alpha-1/beta- 3/gamma-2	GABRB 3 GABRG 2 GABRA 1	P28472 P18507 P14867	CHEMBL2094121	Ligand- gated ion channel	0	73 / 0Â Â Â Â Â	Cannabinol
GABA-A receptor; alpha-5/beta- 3/gamma-2	GABRB 3 GABRG 2 GABRA 5	P28472 P18507 P31644	CHEMBL2094122	Ligand- gated ion channel	0	75 / 0Â Â Â Â Â	Cannabinol
GABA-A receptor; alpha-2/beta- 3/gamma-2	GABRA 2 GABRB 3 GABRG 2	P47869 P28472 P18507	CHEMBL2094130	Ligand- gated ion channel	0	79 / 0Â Â Â Â Â	Cannabinol
Matrix metalloproteinase 9	MMP9	P14780	CHEMBL321	Protease	0	25 / 0Â Â Â Â Â	Cannabinol
Cathepsin (V and K)	CTSV	O60911	CHEMBL3272	Protease	0	17 / 0Â Â Â Â Â	Cannabinol
Matrix metalloproteinase 2	MMP2	P08253	CHEMBL333	Protease	0	37 / 0Â Â Â Â Â	Cannabinol
FK506-binding protein 1A	FKBP1A	P62942	CHEMBL1902	Isomerase	0	70 / 0Â Â Â Â Â	Cannabinol
Serine/threonine- protein kinase Aurora-B	AURKB	Q96GD 4	CHEMBL2185	Kinase	0	23 / 0Â Â Â Â Â	Cannabinol
Myosin light chain kinase, smooth muscle	MYLK	Q15746	CHEMBL2428	Kinase	0	9 / 0Â Â Â Â Â	Cannabinol
Cannabinoid receptor 1	CNR1	P21554	CHEMBL218	Family A G protein- coupled receptor	0.431919	484 / 253Â Â Â Â Â	Cannabitroil
Cannabinoid receptor 2	CNR2	P34972	CHEMBL253	Family A G protein- coupled receptor	0.431919	424 / 224Â Â Â Â Â	Cannabitroil
Sulfonylurea receptor 2	ABCC9	O60706	CHEMBL1971	Primary active transporter	0.09724	39 / 0Â Â Â Â Â	Cannabitroil
Anandamide amidohydrolase	FAAH	O00519	CHEMBL2243	Enzyme	0.09724	71 / 0Â Â Â Â Â	Cannabitroil
MAP kinase p38 alpha	MAPK1 4	Q16539	CHEMBL260	Kinase	0.09724	454 / 0Â Â Â Â Â	Cannabitroil
Tyrosine-protein kinase ABL	ABL1	P00519	CHEMBL1862	Kinase	0.09724	149 / 0Â Â Â Â Â	Cannabitroil
Tyrosine-protein kinase FYN	FYN	P06241	CHEMBL1841	Kinase	0.09724	21 / 0Â Â Â Â Â	Cannabitroil
Tyrosine-protein kinase YES	YES1	P07947	CHEMBL2073	Kinase	0.09724	19 / 0Â Â Â Â Â	Cannabitroil
Serine/threonine- protein kinase Aurora-B	AURKB	Q96GD 4	CHEMBL2185	Kinase	0.09724	222 / 0Â Â Â Â Â	Cannabitroil

Serine/threonine-protein kinase Aurora-A	AURKA	O14965	CHEMBL4722	Kinase	0.09724	342 / 0Â Â Â Â Â	Cannabitrail
Cyclin-dependent kinase 4/cyclin D1	CCND1 CDK4	P24385 P11802	CHEMBL1907601	Kinase	0.09724	84 / 0Â Â Â Â Â	Cannabitrail
Cyclin-dependent kinase 2/cyclin E	CCNE2 CDK2 CCNE1	O96020 P24941 P24864	CHEMBL2094126	Other cytosolic protein	0.09724	109 / 0Â Â Â Â Â	Cannabitrail
Phosphodiesterase 4B	PDE4B	Q07343	CHEMBL275	Phosphodies terase	0.09724	107 / 0Â Â Â Â Â	Cannabitrail
Cyclin-dependent kinase 2	CDK2	P24941	CHEMBL301	Kinase	0.09724	237 / 0Â Â Â Â Â	Cannabitrail
Metabotropic glutamate receptor 5 (by homology)	GRM5	P41594	CHEMBL3227	Family C G protein- coupled receptor	0.09724	172 / 0Â Â Â Â Â	Cannabitrail
PI3-kinase p110-alpha subunit	PIK3CA	P42336	CHEMBL4005	Enzyme	0.09724	1296 / 0Â Â Â Â Â	Cannabitrail
LDL-associated phospholipase A2	PLA2G7	Q13093	CHEMBL3514	Enzyme	0.09724	27 / 0Â Â Â Â Â	Cannabitrail
Adenosine deaminase	ADA	P00813	CHEMBL1910	Hydrolase	0.09724	34 / 0Â Â Â Â Â	Cannabitrail
Protein kinase C gamma	PRKCG	P05129	CHEMBL2938	Kinase	0.09724	43 / 0Â Â Â Â Â	Cannabitrail
Protein kinase C delta	PRKCD	Q05655	CHEMBL2996	Kinase	0.09724	121 / 0Â Â Â Â Â	Cannabitrail
Protein kinase C alpha	PRKCA	P17252	CHEMBL299	Kinase	0.09724	229 / 0Â Â Â Â Â	Cannabitrail
Protein kinase C beta	PRKCB	P05771	CHEMBL3045	Kinase	0.09724	63 / 0Â Â Â Â Â	Cannabitrail
Protein kinase C (PKC)	PRKCZ	Q05513	CHEMBL3438	Kinase	0.09724	4 / 0Â Â Â Â Â	Cannabitrail
Protein kinase C eta	PRKCH	P24723	CHEMBL3616	Kinase	0.09724	31 / 0Â Â Â Â Â	Cannabitrail
Voltage-gated calcium channel alpha2/delta subunit 1	CACNA 2D1	P54289	CHEMBL1919	Calcium channel auxiliary subunit alpha2delta family	0.09724	8 / 0Â Â Â Â Â	Cannabitrail
Voltage-gated calcium channel alpha2/delta subunit 2	CACNA 2D2	Q9NY4 7	CHEMBL3896	Calcium channel auxiliary subunit alpha2delta family	0.09724	5 / 0Â Â Â Â Â	Cannabitrail
Glycogen synthase kinase-3 beta	GSK3B	P49841	CHEMBL262	Kinase	0.09724	193 / 0Â Â Â Â Â	Cannabitrail
Glycogen synthase kinase-3 alpha	GSK3A	P49840	CHEMBL2850	Kinase	0.09724	29 / 0Â Â Â Â Â	Cannabitrail
Adenosine A2a receptor	ADORA 2A	P29274	CHEMBL251	Family A G protein- coupled receptor	0.09724	621 / 0Â Â Â Â Â	Cannabitrail
Adenosine A2b receptor	ADORA 2B	P29275	CHEMBL255	Family A G protein- coupled receptor	0.09724	122 / 0Â Â Â Â Â	Cannabitrail

Tyrosine-protein kinase SYK	SYK	P43405	CHEMBL2599	Kinase	0.09724	499 / 0Â Â Â Â Â	Cannabitrail
Tyrosine-protein kinase JAK3	JAK3	P52333	CHEMBL2148	Kinase	0.09724	300 / 0Â Â Â Â Â	Cannabitrail
Phosphodiesterase 10A	PDE10A	Q9Y233	CHEMBL4409	Phosphodiesterase	0.09724	1032 / 0Â Â Â Â Â	Cannabitrail
Tyrosine-protein kinase receptor FLT3	FLT3	P36888	CHEMBL1974	Kinase	0.09724	161 / 0Â Â Â Â Â	Cannabitrail
Tyrosine-protein kinase LCK	LCK	P06239	CHEMBL258	Kinase	0.09724	97 / 0Â Â Â Â Â	Cannabitrail
Tyrosine-protein kinase HCK	HCK	P08631	CHEMBL3234	Kinase	0.09724	33 / 0Â Â Â Â Â	Cannabitrail
Tyrosine-protein kinase Lyn	LYN	P07948	CHEMBL3905	Kinase	0.09724	23 / 0Â Â Â Â Â	Cannabitrail
Tyrosine-protein kinase FGR	FGR	P09769	CHEMBL4454	Kinase	0.09724	11 / 0Â Â Â Â Â	Cannabitrail
Ephrin type-A receptor 3	EPHA3	P29320	CHEMBL4954	Kinase	0.09724	9 / 0Â Â Â Â Â	Cannabitrail
Discoidin domain-containing receptor 2	DDR2	Q16832	CHEMBL5122	Kinase	0.09724	8 / 0Â Â Â Â Â	Cannabitrail
Tyrosine-protein kinase BTK	BTK	Q06187	CHEMBL5251	Kinase	0.09724	67 / 0Â Â Â Â Â	Cannabitrail
Epithelial discoidin domain-containing receptor 1	DDR1	Q08345	CHEMBL5319	Kinase	0.09724	12 / 0Â Â Â Â Â	Cannabitrail
Cyclin-dependent kinase 5/CDK5 activator 1	CDK5R1 CDK5	Q15078 Q00535	CHEMBL1907600	Kinase	0.09724	133 / 0Â Â Â Â Â	Cannabitrail
Casein kinase I gamma 2	CSNK1G2	P78368	CHEMBL2543	Kinase	0.09724	5 / 0Â Â Â Â Â	Cannabitrail
Casein kinase I alpha	CSNK1A1	P48729	CHEMBL2793	Kinase	0.09724	15 / 0Â Â Â Â Â	Cannabitrail
Matrix metalloproteinase 13	MMP13	P45452	CHEMBL280	Protease	0.09724	386 / 0Â Â Â Â Â	Cannabitrail
Casein kinase I delta	CSNK1D	P48730	CHEMBL2828	Kinase	0.09724	15 / 0Â Â Â Â Â	Cannabitrail
Heat shock protein HSP 90-beta	HSP90AB1	P08238	CHEMBL4303	Other cytosolic protein	0.09724	62 / 0Â Â Â Â Â	Cannabitrail
Leucine-rich repeat serine/threonine-protein kinase 2	LRRK2	Q5S007	CHEMBL1075104	Kinase	0.09724	188 / 0Â Â Â Â Â	Cannabitrail
G protein-coupled receptor kinase 7	GRK7	Q8WTQ7	CHEMBL1075133	Kinase	0.09724	5 / 0Â Â Â Â Â	Cannabitrail
Serine/threonine-protein kinase 38	STK38	Q15208	CHEMBL1075155	Kinase	0.09724	3 / 0Â Â Â Â Â	Cannabitrail
Homeodomain-interacting protein kinase 4	HIPK4	Q8NE63	CHEMBL1075167	Kinase	0.09724	8 / 0Â Â Â Â Â	Cannabitrail
Serine/threonine-protein kinase TAO2	TAOK2	Q9UL54	CHEMBL1075195	Kinase	0.09724	3 / 0Â Â Â Â Â	Cannabitrail
Serine/threonine-protein kinase/endoribonuclease IRE1	ERN1	O75460	CHEMBL1163101	Enzyme	0.09724	14 / 0Â Â Â Â Â	Cannabitrail
Serine/threonine-protein kinase OSR1	OXSRI	O95747	CHEMBL1163104	Kinase	0.09724	4 / 0Â Â Â Â Â	Cannabitrail
Serine/threonine-protein kinase MAK	MAK	P20794	CHEMBL1163106	Kinase	0.09724	2 / 0Â Â Â Â Â	Cannabitrail

STE20/SPS1-related proline-alanine-rich protein kinase	STK39	Q9UEW8	CHEMBL1163108	Kinase	0.09724	$\frac{3}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Cyclin-dependent kinase-like 5	CDKL5	O76039	CHEMBL1163112	Kinase	0.09724	$\frac{3}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Cyclin-dependent kinase-like 3	CDKL3	Q8IVW4	CHEMBL1163117	Kinase	0.09724	$\frac{2}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
U4/U6 small nuclear ribonucleoprotein Prp4	PRPF4	O43172	CHEMBL1163119	Other nuclear protein	0.09724	$\frac{1}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Phosphatidylinositol-4-phosphate 3-kinase C2 domain-containing subunit gamma	PIK3C2G	O75747	CHEMBL1163120	Enzyme	0.09724	$\frac{8}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Mitogen-activated protein kinase kinase kinase 6	MAP3K6	O95382	CHEMBL1163123	Kinase	0.09724	$\frac{2}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Mitogen-activated protein kinase kinase kinase 13	MAP3K13	O43283	CHEMBL1163124	Kinase	0.09724	$\frac{3}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Serine/threonine-protein kinase ICK	ICK	Q9UPZ9	CHEMBL1163126	Kinase	0.09724	$\frac{5}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Mitogen-activated protein kinase kinase kinase 15	MAP3K15	Q6ZN16	CHEMBL1163127	Kinase	0.09724	$\frac{3}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Microtubule-associated serine/threonine-protein kinase 1	MAST1	Q9Y2H9	CHEMBL1163128	Kinase	0.09724	$\frac{3}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Serine/threonine-protein kinase SBK1	SBK1	Q52WX2	CHEMBL1163129	Kinase	0.09724	$\frac{4}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Hormonally up-regulated neu tumor-associated kinase	HUNK	P57058	CHEMBL1795165	Enzyme	0.09724	$\frac{4}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Cyclin-dependent kinase 13	CDK13	Q14004	CHEMBL1795192	Enzyme	0.09724	$\frac{4}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Macrophage colony stimulating factor receptor	CSF1R	P07333	CHEMBL1844	Kinase	0.09724	$\frac{113}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Vascular endothelial growth factor receptor 1	FLT1	P17948	CHEMBL1868	Kinase	0.09724	$\frac{53}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Peripheral plasma membrane protein CASK	CASK	O14936	CHEMBL1908381	Enzyme	0.09724	$\frac{2}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Serine/threonine-protein kinase PRP4 homolog	PRPF4B	Q13523	CHEMBL1908382	Enzyme	0.09724	$\frac{4}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Dual serine/threonine and tyrosine protein kinase	DSTYK	Q6XUX3	CHEMBL1908386	Enzyme	0.09724	$\frac{3}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Mitogen-activated protein kinase kinase kinase 12	MAP3K12	Q12852	CHEMBL1908389	Enzyme	0.09724	$\frac{95}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail
Platelet-derived growth factor receptor beta	PDGFRB	P09619	CHEMBL1913	Kinase	0.09724	$\frac{56}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitrail

Vascular endothelial growth factor receptor 3	FLT4	P35916	CHEMBL1955	Kinase	0.09724	39 / 0Â Â Â Â Â	Cannabitrail
Insulin-like growth factor I receptor	IGF1R	P08069	CHEMBL1957	Kinase	0.09724	226 / 0Â Â Â Â Â	Cannabitrail
Insulin receptor	INSR	P06213	CHEMBL1981	Kinase	0.09724	41 / 0Â Â Â Â Â	Cannabitrail
Platelet-derived growth factor receptor alpha	PDGFR A	P16234	CHEMBL2007	Kinase	0.09724	17 / 0Â Â Â Â Â	Cannabitrail
Epidermal growth factor receptor erbB1	EGFR	P00533	CHEMBL203	Kinase	0.09724	531 / 0Â Â Â Â Â	Cannabitrail
Kinesin-1 heavy chain/ Tyrosine-protein kinase receptor RET	RET	P07949	CHEMBL2041	Kinase	0.09724	40 / 0Â Â Â Â Â	Cannabitrail
Ephrin type-A receptor 2	EPHA2	P29317	CHEMBL2068	Kinase	0.09724	21 / 0Â Â Â Â Â	Cannabitrail
Cyclin-dependent kinase 1/cyclin B	CCNB3 CDK1 CCNB1 CCNB2	Q8WW L7 P06493 P14635 O95067	CHEMBL2094127	Other cytosolic protein	0.09724	47 / 0Â Â Â Â Â	Cannabitrail
Dual specificity mitogen-activated protein kinase kinase 3	MAP2K 3	P46734	CHEMBL2109	Kinase	0.09724	3 / 0Â Â Â Â Â	Cannabitrail
AMP-activated protein kinase, alpha-2 subunit	PRKAA 2	P54646	CHEMBL2116	Kinase	0.09724	3 / 0Â Â Â Â Â	Cannabitrail
Serine/threonine-protein kinase PIM1	PIM1	P11309	CHEMBL2147	Kinase	0.09724	217 / 0Â Â Â Â Â	Cannabitrail
Dual specificity mitogen-activated protein kinase kinase 6	MAP2K 6	P52564	CHEMBL2171	Kinase	0.09724	4 / 0Â Â Â Â Â	Cannabitrail
MAP kinase-activated protein kinase 2	MAPKA PK2	P49137	CHEMBL2208	Kinase	0.09724	52 / 0Â Â Â Â Â	Cannabitrail
Tyrosine-protein kinase BLK	BLK	P51451	CHEMBL2250	Kinase	0.09724	11 / 0Â Â Â Â Â	Cannabitrail
c-Jun N-terminal kinase 1	MAPK8	P45983	CHEMBL2276	Kinase	0.09724	156 / 0Â Â Â Â Â	Cannabitrail
Dual-specificity tyrosine-phosphorylation regulated kinase 1A	DYRK1 A	Q13627	CHEMBL2292	Kinase	0.09724	93 / 0Â Â Â Â Â	Cannabitrail
Ribosomal protein S6 kinase alpha 3	RPS6KA 3	P51812	CHEMBL2345	Kinase	0.09724	17 / 0Â Â Â Â Â	Cannabitrail
Phosphorylase kinase gamma subunit 2	PHKG2	P15735	CHEMBL2349	Kinase	0.09724	4 / 0Â Â Â Â Â	Cannabitrail
Myosin light chain kinase, smooth muscle	MYLK	Q15746	CHEMBL2428	Kinase	0.09724	14 / 0Â Â Â Â Â	Cannabitrail
Serine/threonine-protein kinase AKT2	AKT2	P31751	CHEMBL2431	Kinase	0.09724	11 / 0Â Â Â Â Â	Cannabitrail
Death-associated protein kinase 3	DAPK3	O43293	CHEMBL2468	Kinase	0.09724	8 / 0Â Â Â Â Â	Cannabitrail

CaM kinase I alpha	CAMK1	Q14012	CHEMBL2493	Kinase	0.09724	$\frac{6}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitroil
CaM kinase IV	CAMK4	Q16566	CHEMBL2494	Kinase	0.09724	$\frac{3}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitroil
Serine/threonine-protein kinase Chk2	CHEK2	O96017	CHEMBL2527	Kinase	0.09724	$\frac{16}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabitroil
Cannabinoid receptor 1	CNR1	P21554	CHEMBL218	Family A G protein-coupled receptor	0.65802	$\frac{588}{50 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Cannabinoid receptor 2	CNR2	P34972	CHEMBL253	Family A G protein-coupled receptor	0.592071	$\frac{493}{55 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Estrogen receptor beta	ESR2	Q92731	CHEMBL242	Nuclear receptor	0.1061	$\frac{12}{20 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Estrogen receptor alpha	ESR1	P03372	CHEMBL206	Nuclear receptor	0.1061	$\frac{14}{22 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Vascular endothelial growth factor receptor 2	KDR	P35968	CHEMBL279	Kinase	0.097875	$\frac{203}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
N-arachidonyl glycine receptor	GPR18	Q14330	CHEMBL2384898	Family A G protein-coupled receptor	0.097875	$\frac{2}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Glycine receptor subunit alpha-1	GLRA1	P23415	CHEMBL5845	Ligand-gated ion channel	0.097875	$\frac{1}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Glucagon receptor	GCGR	P47871	CHEMBL1985	Family B G protein-coupled receptor	0.097875	$\frac{22}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Phosphodiesterase 4B	PDE4B	Q07343	CHEMBL275	Phosphodiesterase	0.097875	$\frac{32}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Receptor protein-tyrosine kinase erbB-2	ERBB2	P04626	CHEMBL1824	Kinase	0.097875	$\frac{49}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Epidermal growth factor receptor erbB1	EGFR	P00533	CHEMBL203	Kinase	0.097875	$\frac{269}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Cystic fibrosis transmembrane conductance regulator	CFTR	P13569	CHEMBL4051	Other ion channel	0.097875	$\frac{2}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
11-beta-hydroxysteroid dehydrogenase 1	HSD11B1	P28845	CHEMBL4235	Enzyme	0.097875	$\frac{199}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Interleukin-8 receptor B	CXCR2	P25025	CHEMBL2434	Family A G protein-coupled receptor	0.097875	$\frac{39}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Serine/threonine-protein kinase PAK 1	PAK1	Q13153	CHEMBL4600	Kinase	0.097875	$\frac{1}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Histone deacetylase 6	HDAC6	Q9UBN7	CHEMBL1865	Eraser	0.097875	$\frac{21}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Histone deacetylase 8	HDAC8	Q9BY41	CHEMBL3192	Eraser	0.097875	$\frac{10}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Estradiol 17-beta-dehydrogenase 3	HSD17B3	P37058	CHEMBL4234	Enzyme	0.097875	$\frac{6}{0 \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin

Epoxide hydratase	EPHX2	P34913	CHEMBL2409	Protease	0.097875	$\frac{64}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Melanocortin receptor 4	MC4R	P32245	CHEMBL259	Family A G protein-coupled receptor	0.097875	$\frac{9}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
G-protein coupled receptor 55	GPR55	Q9Y2T6	CHEMBL1075322	Family A G protein-coupled receptor	0.097875	$\frac{10}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Cathepsin D	CTSD	P07339	CHEMBL2581	Protease	0.097875	$\frac{25}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Poly [ADP-ribose] polymerase-1	PARP1	P09874	CHEMBL3105	Enzyme	0.097875	$\frac{16}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Calcium-activated potassium channel subunit alpha-1	KCNMA1	Q12791	CHEMBL4304	Voltage-gated ion channel	0.097875	$\frac{11}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
NAD-dependent deacetylase sirtuin 2	SIRT2	Q8IXJ6	CHEMBL4462	Eraser	0.097875	$\frac{19}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Prostanoid EP1 receptor	PTGER1	P34995	CHEMBL1811	Family A G protein-coupled receptor	0.097875	$\frac{22}{16 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Cyclin-dependent kinase 5/CDK5 activator 1	CDK5R1 CDK5	Q15078 Q00535	CHEMBL1907600	Kinase	0.097875	$\frac{73}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Cyclin-dependent kinase 1/cyclin B	CCNB3 CDK1 CCNB1 CCNB2	Q8WWL7 P06493 P14635 O95067	CHEMBL2094127	Other cytosolic protein	0.097875	$\frac{42}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Prenyl protein specific protease	RCE1	Q9Y256	CHEMBL3411	Protease	0.097875	$\frac{6}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Sodium channel protein type II alpha subunit	SCN2A	Q99250	CHEMBL4187	Voltage-gated ion channel	0.097875	$\frac{24}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Glucocorticoid receptor	NR3C1	P04150	CHEMBL2034	Nuclear receptor	0.097875	$\frac{100}{54 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Serine/threonine-protein kinase Aurora-B	AURKB	Q96GD4	CHEMBL2185	Kinase	0.097875	$\frac{21}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Serine/threonine-protein kinase Aurora-C	AURKC	Q9UQB9	CHEMBL3935	Kinase	0.097875	$\frac{11}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Serine/threonine-protein kinase Aurora-A	AURKA	O14965	CHEMBL4722	Kinase	0.097875	$\frac{26}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Translocator protein (by homology)	TSPO	P30536	CHEMBL5742	Membrane receptor	0.097875	$\frac{308}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
ATP-binding cassette sub-family G member 2	ABCG2	Q9UNQ0	CHEMBL5393	Primary active transporter	0.097875	$\frac{15}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
LDL-associated phospholipase A2	PLA2G7	Q13093	CHEMBL3514	Enzyme	0.097875	$\frac{14}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Protein kinase C (PKC)	PRKCZ	Q05513	CHEMBL3438	Kinase	0.097875	$\frac{2}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin
Nitric oxide synthase, inducible (by homology)	NOS2	P35228	CHEMBL4481	Enzyme	0.097875	$\frac{78}{0 \hat{A} \hat{A} \hat{A} \hat{A} \hat{A}}$	Cannabivarin

Corticotropin releasing factor receptor 1	CRHR1	P34998	CHEMBL1800	Family B G protein-coupled receptor	0.097875	68 / 0Â Â Â Â Â	Cannabivarin
Thymidylate synthase	TYMS	P04818	CHEMBL1952	Transferase	0.097875	24 / 0Â Â Â Â Â	Cannabivarin
Quinone reductase 2	NQO2	P16083	CHEMBL3959	Enzyme	0.097875	8 / 0Â Â Â Â Â	Cannabivarin
5-lipoxygenase activating protein	ALOX5 AP	P20292	CHEMBL4550	Other cytosolic protein	0.097875	37 / 0Â Â Â Â Â	Cannabivarin
Gonadotropin-releasing hormone receptor	GNRHR	P30968	CHEMBL1855	Family A G protein-coupled receptor	0.097875	7 / 0Â Â Â Â Â	Cannabivarin
Estradiol 17-beta-dehydrogenase 2	HSD17B 2	P37059	CHEMBL2789	Enzyme	0.097875	19 / 0Â Â Â Â Â	Cannabivarin
Bombesin receptor subtype-3	BRS3	P32247	CHEMBL4080	Family A G protein-coupled receptor	0.097875	1 / 0Â Â Â Â Â	Cannabivarin
Anandamide amidohydrolase	FAAH	O00519	CHEMBL2243	Enzyme	0	38 / 0Â Â Â Â Â	Cannabivarin
Serotonin 2c (5-HT2c) receptor	HTR2C	P28335	CHEMBL225	Family A G protein-coupled receptor	0	38 / 0Â Â Â Â Â	Cannabivarin
Protoporphyrinogen oxidase	PPOX	P50336	CHEMBL1926488	Oxidoreductase	0	1 / 0Â Â Â Â Â	Cannabivarin
Voltage-gated potassium channel subunit Kv1.5	KCNA5	P22460	CHEMBL4306	Voltage-gated ion channel	0	84 / 0Â Â Â Â Â	Cannabivarin
Acetylcholinesterase	ACHE	P22303	CHEMBL220	Hydrolase	0	66 / 0Â Â Â Â Â	Cannabivarin
Adenosine A1 receptor (by homology)	ADORA 1	P30542	CHEMBL226	Family A G protein-coupled receptor	0	232 / 0Â Â Â Â Â	Cannabivarin
Beta secretase 2	BACE2	Q9Y5Z0	CHEMBL2525	Protease	0	43 / 0Â Â Â Â Â	Cannabivarin
Tyrosine-protein kinase JAK3	JAK3	P52333	CHEMBL2148	Kinase	0	196 / 0Â Â Â Â Â	Cannabivarin
Tyrosine-protein kinase JAK2	JAK2	O60674	CHEMBL2971	Kinase	0	172 / 0Â Â Â Â Â	Cannabivarin
Tyrosine-protein kinase receptor FLT3	FLT3	P36888	CHEMBL1974	Kinase	0	35 / 0Â Â Â Â Â	Cannabivarin
Histone deacetylase 2	HDAC2	Q92769	CHEMBL1937	Eraser	0	11 / 0Â Â Â Â Â	Cannabivarin
Kinesin-like protein 1	KIF11	P52732	CHEMBL4581	Other cytosolic protein	0	33 / 0Â Â Â Â Â	Cannabivarin
G-protein coupled bile acid receptor 1	GPBAR1	Q8TDU6	CHEMBL5409	Family A G protein-coupled receptor	0	20 / 0Â Â Â Â Â	Cannabivarin
Adenosine A3 receptor	ADORA 3	P0DMS8	CHEMBL256	Family A G protein-coupled receptor	0	156 / 0Â Â Â Â Â	Cannabivarin

Isocitrate dehydrogenase [NADP] cytoplasmic	IDH1	O75874	CHEMBL2007625	Enzyme	0	159 / 0	Cannabivarin
Muscarinic acetylcholine receptor M1 (by homology)	CHRM1	P11229	CHEMBL216	Family A G protein-coupled receptor	0	28 / 0	Cannabivarin
Lysosomal Pro-X carboxypeptidase	PRCP	P42785	CHEMBL2335	Protease	0	10 / 0	Cannabivarin
Peregrin	BRPF1	P55201	CHEMBL3132741	Reader	0	24 / 0	Cannabivarin
Matrix metalloproteinase 9	MMP9	P14780	CHEMBL321	Protease	0	14 / 0	Cannabivarin
Cathepsin (V and K)	CTSV	O60911	CHEMBL3272	Protease	0	11 / 0	Cannabivarin
Matrix metalloproteinase 2	MMP2	P08253	CHEMBL333	Protease	0	19 / 0	Cannabivarin
Amine oxidase, copper containing	AOC3	Q16853	CHEMBL3437	Enzyme	0	4 / 0	Cannabivarin
Egl nine homolog 1	EGLN1	Q9GZT9	CHEMBL5697	Oxidoreductase	0	7 / 0	Cannabivarin
Serine/threonine-protein kinase 33	STK33	Q9BYT3	CHEMBL6005	Kinase	0	14 / 0	Cannabivarin
Cytochrome b-c1 complex subunit 7	UQCRB	P14927	CHEMBL1671612	Transmembrane 1-electron transfer carriers	0	1 / 0	Cannabivarin
Adenosine A2a receptor	ADORA2A	P29274	CHEMBL251	Family A G protein-coupled receptor	0	132 / 0	Cannabivarin
Matrix metalloproteinase 13	MMP13	P45452	CHEMBL280	Protease	0	7 / 0	Cannabivarin
Estradiol 17-beta-dehydrogenase 1	HSD17B1	P14061	CHEMBL3181	Enzyme	0	10 / 0	Cannabivarin
Hormone sensitive lipase	LIPE	Q05469	CHEMBL3590	Enzyme	0	51 / 0	Cannabivarin
Quinone reductase 1	NQO1	P15559	CHEMBL3623	Enzyme	0	4 / 0	Cannabivarin
Methyl-CpG-binding protein 2	MECP2	P51608	CHEMBL3638346	Reader	0	1 / 0	Cannabivarin
Methyl-CpG-binding domain protein 2	MBD2	Q9UBB5	CHEMBL3707462	Reader	0	2 / 0	Cannabivarin
Vanilloid receptor	TRPV1	Q8NER1	CHEMBL4794	Voltage-gated ion channel	0	72 / 0	Cannabivarin
Steryl-sulfatase	STS	P08842	CHEMBL3559	Enzyme	0	7 / 0	Cannabivarin
Dual specificity phosphatase Cdc25B	CDC25B	P30305	CHEMBL4804	Phosphatase	0	14 / 0	Cannabivarin
Dual-specificity tyrosine-phosphorylation regulated kinase 1A (by homology)	DYRK1A	Q13627	CHEMBL2292	Kinase	0	39 / 0	Cannabivarin
Serine/threonine-protein kinase PIM1	PIM1	P11309	CHEMBL2147	Kinase	0	75 / 0	Cannabivarin

Serine/threonine-protein kinase mTOR	MTOR	P42345	CHEMBL2842	Kinase	0	28 / 0 Å Å Å Å Å	Cannabivarin
PI3-kinase p110-alpha subunit	PIK3CA	P42336	CHEMBL4005	Enzyme	0	59 / 0 Å Å Å Å Å	Cannabivarin
Serine/threonine-protein kinase PIM2	PIM2	Q9P1W9	CHEMBL4523	Kinase	0	63 / 0 Å Å Å Å Å	Cannabivarin
Bcl2-antagonist of cell death (BAD)	BAD	Q92934	CHEMBL3817	Other cytosolic protein	0	10 / 0 Å Å Å Å Å	Cannabivarin
Serine/threonine-protein kinase PIM3	PIM3	Q86V86	CHEMBL5407	Kinase	0	10 / 0 Å Å Å Å Å	Cannabivarin
ADAMTS5	ADAMTS5	Q9UNA0	CHEMBL2285	Protease	0	16 / 0 Å Å Å Å Å	Cannabivarin
Glycogen synthase kinase-3 beta	GSK3B	P49841	CHEMBL262	Kinase	0	50 / 0 Å Å Å Å Å	Cannabivarin
Phosphodiesterase 2A	PDE2A	O00408	CHEMBL2652	Phosphodiesterase	0	52 / 0 Å Å Å Å Å	Cannabivarin
Phosphodiesterase 10A	PDE10A	Q9Y233	CHEMBL4409	Phosphodiesterase	0	314 / 0 Å Å Å Å Å	Cannabivarin
TGF-beta receptor type II	TGFBR2	P37173	CHEMBL4267	Kinase	0	5 / 0 Å Å Å Å Å	Cannabivarin
TGF-beta receptor type I	TGFBR1	P36897	CHEMBL4439	Kinase	0	39 / 0 Å Å Å Å Å	Cannabivarin
Serine/threonine-protein kinase RIPK2	RIPK2	O43353	CHEMBL5014	Kinase	0	4 / 0 Å Å Å Å Å	Cannabivarin
Phosphodiesterase 7A	PDE7A	Q13946	CHEMBL3012	Phosphodiesterase	0	15 / 0 Å Å Å Å Å	Cannabivarin
Cholecystokinin B receptor	CCKBR	P32239	CHEMBL298	Family A G protein-coupled receptor	0	180 / 0 Å Å Å Å Å	Cannabivarin
p53-binding protein Mdm-2	MDM2	Q00987	CHEMBL5023	Other nuclear protein	0	38 / 0 Å Å Å Å Å	Cannabivarin
Leucine-rich repeat serine/threonine-protein kinase 2	LRRK2	Q5S007	CHEMBL1075104	Kinase	0	27 / 0 Å Å Å Å Å	Cannabivarin
Bile acid receptor FXR	NR1H4	Q96RI1	CHEMBL2047	Nuclear receptor	0	26 / 0 Å Å Å Å Å	Cannabivarin
Cannabinoid receptor 1	CNR1	P21554	CHEMBL218	Family A G protein-coupled receptor	0.959682	818 / 372 Å Å Å Å Å	Δ8-Tetrahydrocannabinol
Cannabinoid receptor 2	CNR2	P34972	CHEMBL253	Family A G protein-coupled receptor	0.959682	715 / 360 Å Å Å Å Å	Δ8-Tetrahydrocannabinol
Vascular endothelial growth factor receptor 2	KDR	P35968	CHEMBL279	Kinase	0.864805	163 / 15 Å Å Å Å Å	Δ8-Tetrahydrocannabinol
N-arachidonyl glycine receptor	GPR18	Q14330	CHEMBL2384898	Family A G protein-coupled receptor	0.434822	2 / 2 Å Å Å Å Å	Δ8-Tetrahydrocannabinol
Glycine receptor subunit alpha-1	GLRA1	P23415	CHEMBL5845	Ligand-gated ion channel	0.434822	1 / 1 Å Å Å Å Å	Δ8-Tetrahydrocannabinol

Glucagon receptor	GCGR	P47871	CHEMBL1985	Family B G protein-coupled receptor	0.101614	33 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Cystic fibrosis transmembrane conductance regulator	CFTR	P13569	CHEMBL4051	Other ion channel	0.101614	3 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
5-lipoxygenase activating protein	ALOX5 AP	P20292	CHEMBL4550	Other cytosolic protein	0.101614	55 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Cathepsin D	CTSD	P07339	CHEMBL2581	Protease	0.101614	15 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Calcium sensing receptor	CASR	P41180	CHEMBL1878	Family C G protein-coupled receptor	0.101614	33 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
PH domain leucine-rich repeat-containing protein phosphatase 1	PHLPP1	O60346	CHEMBL3414405	Reader	0.101614	0 / 2Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Serine/threonine-protein kinase ILK-1	ILK	Q13418	CHEMBL5247	Kinase	0.101614	0 / 2Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Epoxide hydratase	EPHX2	P34913	CHEMBL2409	Protease	0.101614	153 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Protein kinase C (PKC)	PRKCZ	Q05513	CHEMBL3438	Kinase	0.101614	2 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Nitric oxide synthase, inducible (by homology)	NOS2	P35228	CHEMBL4481	Enzyme	0.101614	49 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Thromboxane A2 receptor	TBXA2 R	P21731	CHEMBL2069	Family A G protein-coupled receptor	0.101614	7 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Prenyl protein specific protease	RCE1	Q9Y256	CHEMBL3411	Protease	0.101614	6 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Quinone reductase 2	NQO2	P16083	CHEMBL3959	Enzyme	0.101614	9 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Corticotropin releasing factor receptor 1	CRHR1	P34998	CHEMBL1800	Family B G protein-coupled receptor	0.101614	150 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Melanocortin receptor 4	MC4R	P32245	CHEMBL259	Family A G protein-coupled receptor	0.101614	22 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Poly [ADP-ribose] polymerase-1	PARP1	P09874	CHEMBL3105	Enzyme	0.101614	15 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol
Neurokinin 2 receptor	TACR2	P21452	CHEMBL2327	Family A G protein-coupled receptor	0.101614	10 / 0Â Â Â Â Â	Δ8-Tetrahydrocannabinol

Estradiol 17-beta-dehydrogenase 3	HSD17B3	P37058	CHEMBL4234	Enzyme	0.101614	6 / 0	Δ8-Tetrahydrocannabinol
Voltage-gated potassium channel subunit Kv1.5	KCNA5	P22460	CHEMBL4306	Voltage-gated ion channel	0.101614	106 / 0	Δ8-Tetrahydrocannabinol
Neurokinin 3 receptor	TACR3	P29371	CHEMBL4429	Family A G protein-coupled receptor	0.101614	107 / 0	Δ8-Tetrahydrocannabinol
Serine/threonine-protein kinase AKT	AKT1	P31749	CHEMBL4282	Kinase	0.101614	14 / 18	Δ8-Tetrahydrocannabinol
Translocator protein (by homology)	TSPO	P30536	CHEMBL5742	Membrane receptor	0.101614	370 / 0	Δ8-Tetrahydrocannabinol
Prostanoid EP1 receptor	PTGER1	P34995	CHEMBL1811	Family A G protein-coupled receptor	0.101614	36 / 0	Δ8-Tetrahydrocannabinol
G-protein coupled receptor 55	GPR55	Q9Y2T6	CHEMBL1075322	Family A G protein-coupled receptor	0.101614	14 / 2	Δ8-Tetrahydrocannabinol
Androgen Receptor	AR	P10275	CHEMBL1871	Nuclear receptor	0.101614	61 / 30	Δ8-Tetrahydrocannabinol
Histone deacetylase 2	HDAC2	Q92769	CHEMBL1937	Eraser	0.101614	8 / 0	Δ8-Tetrahydrocannabinol
Protoporphyrinogen oxidase	PPOX	P50336	CHEMBL1926488	Oxidoreductase	0	1 / 0	Δ8-Tetrahydrocannabinol
Kinesin-like protein 1	KIF11	P52732	CHEMBL4581	Other cytosolic protein	0	33 / 0	Δ8-Tetrahydrocannabinol
P2X purinoceptor 3	P2RX3	P56373	CHEMBL2998	Ligand-gated ion channel	0	38 / 0	Δ8-Tetrahydrocannabinol
Peregrin	BRPF1	P55201	CHEMBL3132741	Reader	0	19 / 0	Δ8-Tetrahydrocannabinol
Sodium channel protein type II alpha subunit	SCN2A	Q99250	CHEMBL4187	Voltage-gated ion channel	0	31 / 0	Δ8-Tetrahydrocannabinol
Type-1 angiotensin II receptor (by homology)	AGTR1	P30556	CHEMBL227	Family A G protein-coupled receptor	0	3 / 0	Δ8-Tetrahydrocannabinol
Calcium-activated potassium channel subunit alpha-1	KCNMA1	Q12791	CHEMBL4304	Voltage-gated ion channel	0	10 / 0	Δ8-Tetrahydrocannabinol
Orexin receptor 2	HCRT2	O43614	CHEMBL4792	Family A G protein-coupled receptor	0	240 / 0	Δ8-Tetrahydrocannabinol
Orexin receptor 1	HCRT1	O43613	CHEMBL5113	Family A G protein-	0	208 / 0	Δ8-Tetrahydrocannabinol

				coupled receptor			
Estradiol 17-beta-dehydrogenase 2	HSD17B2	P37059	CHEMBL2789	Enzyme	0	19 / 0	Δ^8 -Tetrahydrocannabinol
Hormone sensitive lipase	LIPE	Q05469	CHEMBL3590	Enzyme	0	56 / 0	Δ^8 -Tetrahydrocannabinol
Beta secretase 2	BACE2	Q9Y5Z0	CHEMBL2525	Protease	0	25 / 0	Δ^8 -Tetrahydrocannabinol
LDL-associated phospholipase A2	PLA2G7	Q13093	CHEMBL3514	Enzyme	0	17 / 0	Δ^8 -Tetrahydrocannabinol
Cholecystokinin B receptor (by homology)	CCKBR	P32239	CHEMBL298	Family A G protein-coupled receptor	0	209 / 0	Δ^8 -Tetrahydrocannabinol
Phosphodiesterase 10A	PDE10A	Q9Y233	CHEMBL4409	Phosphodiesterase	0	301 / 0	Δ^8 -Tetrahydrocannabinol
Tyrosine-protein kinase ABL	ABL1	P00519	CHEMBL1862	Kinase	0	84 / 0	Δ^8 -Tetrahydrocannabinol
Thymidylate synthase	TYMS	P04818	CHEMBL1952	Transferase	0	13 / 0	Δ^8 -Tetrahydrocannabinol
Signal transducer and activator of transcription 3	STAT3	P40763	CHEMBL4026	Transcription factor	0	18 / 0	Δ^8 -Tetrahydrocannabinol
Anandamide amidohydrolase	FAAH	O00519	CHEMBL2243	Enzyme	0	78 / 0	Δ^8 -Tetrahydrocannabinol
Estrogen receptor beta	ESR2	Q92731	CHEMBL242	Nuclear receptor	0	19 / 41	Δ^8 -Tetrahydrocannabinol
Serine/threonine-protein kinase PAK 1	PAK1	Q13153	CHEMBL4600	Kinase	0	1 / 0	Δ^8 -Tetrahydrocannabinol
ADAMTS5	ADAMTS5	Q9UNA0	CHEMBL2285	Protease	0	16 / 0	Δ^8 -Tetrahydrocannabinol
Bombesin receptor subtype-3	BRS3	P32247	CHEMBL4080	Family A G protein-coupled receptor	0	1 / 0	Δ^8 -Tetrahydrocannabinol
Integrin alpha2/beta1	ITGB1 ITGA2	P05556 P17301	CHEMBL3137268	Unclassified protein	0	1 / 0	Δ^8 -Tetrahydrocannabinol
Voltage-gated potassium channel, KQT; KCNQ2(Kv7.2)/KCNQ3(Kv7.3)	KCNQ3 KCNQ2	O43525 O43526	CHEMBL2221348	Voltage-gated ion channel	0	5 / 0	Δ^8 -Tetrahydrocannabinol
Cathepsin S	CTSS	P25774	CHEMBL2954	Protease	0	104 / 0	Δ^8 -Tetrahydrocannabinol

L-lactate dehydrogenase A chain	LDHA	P00338	CHEMBL4835	Enzyme	0	7 / 0	Δ^8 -Tetrahydrocannabinol
Isocitrate dehydrogenase [NADP] cytoplasmic	IDH1	O75874	CHEMBL2007625	Enzyme	0	189 / 0	Δ^8 -Tetrahydrocannabinol
GABA-A receptor; alpha-3/beta-3/gamma-2	GABRB3 GABRA3 GABRG2	P28472 P34903 P18507	CHEMBL2094120	Ligand-gated ion channel	0	70 / 0	Δ^8 -Tetrahydrocannabinol
GABA-A receptor; alpha-1/beta-3/gamma-2	GABRB3 GABRG2 GABRA1	P28472 P18507 P14867	CHEMBL2094121	Ligand-gated ion channel	0	56 / 0	Δ^8 -Tetrahydrocannabinol
GABA-A receptor; alpha-5/beta-3/gamma-2	GABRB3 GABRG2 GABRA5	P28472 P18507 P31644	CHEMBL2094122	Ligand-gated ion channel	0	62 / 0	Δ^8 -Tetrahydrocannabinol
GABA-A receptor; alpha-2/beta-3/gamma-2	GABRA2 GABRB3 GABRG2	P47869 P28472 P18507	CHEMBL2094130	Ligand-gated ion channel	0	67 / 0	Δ^8 -Tetrahydrocannabinol
Monoglyceride lipase	MGLL	Q99685	CHEMBL4191	Enzyme	0	15 / 0	Δ^8 -Tetrahydrocannabinol
Sodium channel protein type V alpha subunit	SCN5A	Q14524	CHEMBL1980	Voltage-gated ion channel	0	19 / 0	Δ^8 -Tetrahydrocannabinol
Egl nine homolog 1	EGLN1	Q9GZT9	CHEMBL5697	Oxidoreductase	0	7 / 0	Δ^8 -Tetrahydrocannabinol
Prostanoid IP receptor	PTGIR	P43119	CHEMBL1995	Family A G protein-coupled receptor	0	0 / 10	Δ^8 -Tetrahydrocannabinol
Leucine-rich repeat serine/threonine-protein kinase 2	LRRK2	Q5S007	CHEMBL1075104	Kinase	0	19 / 0	Δ^8 -Tetrahydrocannabinol
G-protein coupled bile acid receptor 1	GPBAR1	Q8TDU6	CHEMBL5409	Family A G protein-coupled receptor	0	23 / 0	Δ^8 -Tetrahydrocannabinol
Troponin, cardiac muscle	TNNC1 TNNT2 TNNI3	P63316 P45379 P19429	CHEMBL2095202	Unclassified protein	0	3 / 0	Δ^8 -Tetrahydrocannabinol
Lysosomal Pro-X carboxypeptidase	PRCP	P42785	CHEMBL2335	Protease	0	10 / 0	Δ^8 -Tetrahydrocannabinol
Serine/threonine-protein	ERN1	O75460	CHEMBL1163101	Enzyme	0	2 / 0	Δ^8 -Tetrahydrocannabinol

kinase/endoribonucle ase IRE1							
Cyclin-dependent kinase 5/CDK5 activator 1	CDK5R1 CDK5	Q15078 Q00535	CHEMBL1907600	Kinase	0	64 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Tyrosine-protein kinase JAK3	JAK3	P52333	CHEMBL2148	Kinase	0	143 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
c-Jun N-terminal kinase 1	MAPK8	P45983	CHEMBL2276	Kinase	0	53 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Adenosine A2a receptor	ADORA 2A	P29274	CHEMBL251	Family A G protein- coupled receptor	0	96 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Tyrosine-protein kinase JAK1	JAK1	P23458	CHEMBL2835	Kinase	0	59 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Tyrosine-protein kinase JAK2	JAK2	O60674	CHEMBL2971	Kinase	0	138 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
JAK3/JAK1	JAK3 JAK1	P52333 P23458	CHEMBL3038491	Kinase	0	15 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Serine/threonine- protein kinase Aurora-C	AURKC	Q9UQB 9	CHEMBL3935	Kinase	0	9 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Serine/threonine- protein kinase Aurora-A	AURKA	O14965	CHEMBL4722	Kinase	0	16 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Thrombin and coagulation factor X	F10	P00742	CHEMBL244	Protease	0	79 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Histone deacetylase 4	HDAC4	P56524	CHEMBL3524	Eraser	0	6 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Histone deacetylase 10	HDAC10	Q969S8	CHEMBL5103	Eraser	0	5 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Cholecystokinin A receptor (by homology)	CCKAR	P32238	CHEMBL1901	Family A G protein- coupled receptor	0	26 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
FK506-binding protein 1A	FKBP1A	P62942	CHEMBL1902	Isomerase	0	64 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Liver glycogen phosphorylase	PYGL	P06737	CHEMBL2568	Enzyme	0	46 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Nitric-oxide synthase, brain	NOS1	P29475	CHEMBL3568	Enzyme	0	34 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Cathepsin (V and K)	CTSV	O60911	CHEMBL3272	Protease	0	17 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol
Sodium channel protein type IX alpha subunit	SCN9A	Q15858	CHEMBL4296	Voltage- gated ion channel	0	43 / 0Â Â Â Â Â	Δ 8- Tetrahydrocann abinol

Nitric-oxide synthase, endothelial	NOS3	P29474	CHEMBL4803	Enzyme	0	14 / 0	Δ^8 -Tetrahydrocannabinol
Macrophage migration inhibitory factor	MIF	P14174	CHEMBL2085	Enzyme	0	2 / 0	Δ^8 -Tetrahydrocannabinol
p53-binding protein Mdm-2	MDM2	Q00987	CHEMBL5023	Other nuclear protein	0	59 / 0	Δ^8 -Tetrahydrocannabinol
Serine/threonine-protein kinase PIM1	PIM1	P11309	CHEMBL2147	Kinase	0	71 / 0	Δ^8 -Tetrahydrocannabinol
Phosphodiesterase 2A	PDE2A	O00408	CHEMBL2652	Phosphodiesterase	0	32 / 0	Δ^8 -Tetrahydrocannabinol
Serine/threonine-protein kinase PIM2	PIM2	Q9P1W9	CHEMBL4523	Kinase	0	59 / 0	Δ^8 -Tetrahydrocannabinol
Glutamate NMDA receptor; GRIN1/GRIN2B	GRIN1 GRIN2B	Q05586 Q13224	CHEMBL1907603	Ligand-gated ion channel	0	1 / 0	Δ^8 -Tetrahydrocannabinol
Carboxypeptidase B	CPB1	P15086	CHEMBL2552	Protease	0	3 / 0	Δ^8 -Tetrahydrocannabinol
Phosphodiesterase 7A	PDE7A	Q13946	CHEMBL3012	Phosphodiesterase	0	12 / 0	Δ^8 -Tetrahydrocannabinol
Tumor necrosis factor receptor R1	TNFRSF1A	P19438	CHEMBL3378	Membrane receptor	0	3 / 0	Δ^8 -Tetrahydrocannabinol
Cannabinoid receptor 1	CNR1	P21554	CHEMBL218	Family A G protein-coupled receptor	0.959682	1029 / 367	Δ^9 -Tetrahydrocannabinol
Cannabinoid receptor 2	CNR2	P34972	CHEMBL253	Family A G protein-coupled receptor	0.959682	959 / 358	Δ^9 -Tetrahydrocannabinol
N-arachidonyl glycine receptor	GPR18	Q14330	CHEMBL2384898	Family A G protein-coupled receptor	0.809839	8 / 2	Δ^9 -Tetrahydrocannabinol
Glycine receptor subunit alpha-1	GLRA1	P23415	CHEMBL5845	Ligand-gated ion channel	0.809839	1 / 1	Δ^9 -Tetrahydrocannabinol
Vascular endothelial growth factor receptor 2	KDR	P35968	CHEMBL279	Kinase	0.63486	249 / 13	Δ^9 -Tetrahydrocannabinol
Glucagon receptor	GCGR	P47871	CHEMBL1985	Family B G protein-coupled receptor	0.101614	53 / 0	Δ^9 -Tetrahydrocannabinol
Cystic fibrosis transmembrane conductance regulator	CFTR	P13569	CHEMBL4051	Other ion channel	0.101614	5 / 0	Δ^9 -Tetrahydrocannabinol
G-protein coupled receptor 55	GPR55	Q9Y2T6	CHEMBL1075322	Family A G protein-	0.101614	17 / 2	Δ^9 -Tetrahydrocannabinol

				coupled receptor			
5-lipoxygenase activating protein	ALOX5 AP	P20292	CHEMBL4550	Other cytosolic protein	0.101614	77 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Cathepsin D	CTSD	P07339	CHEMBL2581	Protease	0.101614	34 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Serotonin 2b (5-HT2b) receptor	HTR2B	P41595	CHEMBL1833	Family A G protein-coupled receptor	0.101614	43 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Serotonin 2c (5-HT2c) receptor	HTR2C	P28335	CHEMBL225	Family A G protein-coupled receptor	0.101614	67 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Epoxide hydratase	EPHX2	P34913	CHEMBL2409	Protease	0.101614	218 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Prenyl protein specific protease	RCE1	Q9Y256	CHEMBL3411	Protease	0.101614	6 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Calcium sensing receptor	CASR	P41180	CHEMBL1878	Family C G protein-coupled receptor	0.101614	40 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Monoamine oxidase A	MAOA	P21397	CHEMBL1951	Oxidoreductase	0.101614	103 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Protein kinase C (PKC)	PRKCZ	Q05513	CHEMBL3438	Kinase	0.101614	2 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Nitric oxide synthase, inducible (by homology)	NOS2	P35228	CHEMBL4481	Enzyme	0.101614	68 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Glycine transporter 1 (by homology)	SLC6A9	P48067	CHEMBL2337	Electrochemical transporter	0.101614	74 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Prostanoid EP1 receptor	PTGER1	P34995	CHEMBL1811	Family A G protein-coupled receptor	0.101614	47 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Thromboxane A2 receptor	TBXA2R	P21731	CHEMBL2069	Family A G protein-coupled receptor	0.101614	8 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Autotaxin	ENPP2	Q13822	CHEMBL3691	Enzyme	0.101614	2 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Phosphodiesterase 10A	PDE10A	Q9Y233	CHEMBL4409	Phosphodiesterase	0.101614	611 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
PH domain leucine-rich repeat-containing protein phosphatase 1	PHLPP1	O60346	CHEMBL3414405	Reader	0.101614	0 / 2 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Serine/threonine-protein kinase ILK-1	ILK	Q13418	CHEMBL5247	Kinase	0.101614	0 / 2 Å Å Å Å Å	Δ9-Tetrahydrocannabinol

P2X purinoceptor 3	P2RX3	P56373	CHEMBL2998	Ligand-gated ion channel	0.101614	46 / 0	Δ^9 -Tetrahydrocannabinol
Kinesin-like protein 1	KIF11	P52732	CHEMBL4581	Other cytosolic protein	0.101614	54 / 0	Δ^9 -Tetrahydrocannabinol
Translocator protein (by homology)	TSPO	P30536	CHEMBL5742	Membrane receptor	0.101614	371 / 0	Δ^9 -Tetrahydrocannabinol
Estradiol 17-beta-dehydrogenase 3	HSD17B3	P37058	CHEMBL4234	Enzyme	0.101614	6 / 0	Δ^9 -Tetrahydrocannabinol
Voltage-gated potassium channel subunit Kv1.5	KCNA5	P22460	CHEMBL4306	Voltage-gated ion channel	0.101614	108 / 0	Δ^9 -Tetrahydrocannabinol
Melanocortin receptor 4	MC4R	P32245	CHEMBL259	Family A G protein-coupled receptor	0.101614	14 / 0	Δ^9 -Tetrahydrocannabinol
Methyl-CpG-binding protein 2	MECP2	P51608	CHEMBL3638346	Reader	0.101614	1 / 0	Δ^9 -Tetrahydrocannabinol
Methyl-CpG-binding domain protein 2	MBD2	Q9UBB5	CHEMBL3707462	Reader	0.101614	1 / 0	Δ^9 -Tetrahydrocannabinol
Quinone reductase 2	NQO2	P16083	CHEMBL3959	Enzyme	0.101614	12 / 0	Δ^9 -Tetrahydrocannabinol
Signal transducer and activator of transcription 3	STAT3	P40763	CHEMBL4026	Transcription factor	0.101614	30 / 0	Δ^9 -Tetrahydrocannabinol
Histone deacetylase 2	HDAC2	Q92769	CHEMBL1937	Eraser	0.101614	19 / 0	Δ^9 -Tetrahydrocannabinol
NADPH oxidase 4	NOX4	Q9NPH5	CHEMBL1250375	Enzyme	0.101614	3 / 0	Δ^9 -Tetrahydrocannabinol
Protoporphyrinogen oxidase	PPOX	P50336	CHEMBL1926488	Oxidoreductase	0.101614	2 / 0	Δ^9 -Tetrahydrocannabinol
Corticotropin releasing factor receptor 1	CRHR1	P34998	CHEMBL1800	Family B G protein-coupled receptor	0.101614	205 / 0	Δ^9 -Tetrahydrocannabinol
Metabotropic glutamate receptor 5 (by homology)	GRM5	P41594	CHEMBL3227	Family C G protein-coupled receptor	0.101614	487 / 0	Δ^9 -Tetrahydrocannabinol
Type-1 angiotensin II receptor (by homology)	AGTR1	P30556	CHEMBL227	Family A G protein-coupled receptor	0.101614	8 / 0	Δ^9 -Tetrahydrocannabinol
Serine/threonine-protein kinase AKT	AKT1	P31749	CHEMBL4282	Kinase	0	24 / 17	Δ^9 -Tetrahydrocannabinol
Peregrin	BRPF1	P55201	CHEMBL3132741	Reader	0	27 / 0	Δ^9 -Tetrahydrocannabinol

Hormone sensitive lipase	LIPE	Q05469	CHEMBL3590	Enzyme	0	63 / 0	Δ^9 -Tetrahydrocannabinol
FK506-binding protein 1A	FKBP1A	P62942	CHEMBL1902	Isomerase	0	74 / 0	Δ^9 -Tetrahydrocannabinol
Neurokinin 2 receptor	TACR2	P21452	CHEMBL2327	Family A G protein-coupled receptor	0	13 / 0	Δ^9 -Tetrahydrocannabinol
Serotonin 6 (5-HT6) receptor	HTR6	P50406	CHEMBL3371	Family A G protein-coupled receptor	0	101 / 0	Δ^9 -Tetrahydrocannabinol
Neurokinin 3 receptor	TACR3	P29371	CHEMBL4429	Family A G protein-coupled receptor	0	133 / 0	Δ^9 -Tetrahydrocannabinol
Anandamide amidohydrolase	FAAH	O00519	CHEMBL2243	Enzyme	0	140 / 0	Δ^9 -Tetrahydrocannabinol
Mitogen-activated protein kinase kinase 5	MAP3K5	Q99683	CHEMBL5285	Kinase	0	6 / 0	Δ^9 -Tetrahydrocannabinol
ADAMTS5	ADAMTS5	Q9UNAO	CHEMBL2285	Protease	0	21 / 0	Δ^9 -Tetrahydrocannabinol
LDL-associated phospholipase A2	PLA2G7	Q13093	CHEMBL3514	Enzyme	0	21 / 0	Δ^9 -Tetrahydrocannabinol
Estradiol 17-beta-dehydrogenase 2	HSD17B2	P37059	CHEMBL2789	Enzyme	0	29 / 0	Δ^9 -Tetrahydrocannabinol
Calcium-activated potassium channel subunit alpha-1	KCNMA1	Q12791	CHEMBL4304	Voltage-gated ion channel	0	10 / 0	Δ^9 -Tetrahydrocannabinol
Phosphodiesterase 5A	PDE5A	O76074	CHEMBL1827	Phosphodiesterase	0	156 / 0	Δ^9 -Tetrahydrocannabinol
Glutaminyl-peptide cyclotransferase	QPCT	Q16769	CHEMBL4508	Enzyme	0	31 / 0	Δ^9 -Tetrahydrocannabinol
MAP kinase p38 alpha	MAPK14	Q16539	CHEMBL260	Kinase	0	425 / 0	Δ^9 -Tetrahydrocannabinol
Voltage-gated potassium channel, KQT; KCNQ2(Kv7.2)/KCNQ3(Kv7.3)	KCNQ3 KCNQ2	O43525 O43526	CHEMBL2221348	Voltage-gated ion channel	0	6 / 0	Δ^9 -Tetrahydrocannabinol
Liver glycogen phosphorylase	PYGL	P06737	CHEMBL2568	Enzyme	0	51 / 0	Δ^9 -Tetrahydrocannabinol
Proteinase-activated receptor 1	F2R	P25116	CHEMBL3974	Family A G protein-coupled receptor	0	54 / 0	Δ^9 -Tetrahydrocannabinol

Sodium channel protein type II alpha subunit	SCN2A	Q99250	CHEMBL4187	Voltage-gated ion channel	0	37 / 0	Δ^9 -Tetrahydrocannabinol
Serine/threonine-protein kinase PAK 1	PAK1	Q13153	CHEMBL4600	Kinase	0	1 / 0	Δ^9 -Tetrahydrocannabinol
Nuclear receptor ROR-gamma	RORC	P51449	CHEMBL1741186	Nuclear receptor	0	79 / 0	Δ^9 -Tetrahydrocannabinol
C-C chemokine receptor type 1	CCR1	P32246	CHEMBL2413	Family A G protein-coupled receptor	0	55 / 0	Δ^9 -Tetrahydrocannabinol
Beta secretase 2	BACE2	Q9Y5Z0	CHEMBL2525	Protease	0	51 / 0	Δ^9 -Tetrahydrocannabinol
G-protein coupled bile acid receptor 1	GPBAR1	Q8TDU6	CHEMBL5409	Family A G protein-coupled receptor	0	33 / 0	Δ^9 -Tetrahydrocannabinol
Formyl peptide receptor 1	FPR1	P21462	CHEMBL3359	Family A G protein-coupled receptor	0	3 / 0	Δ^9 -Tetrahydrocannabinol
Casein kinase II alpha	CSNK2A1	P68400	CHEMBL3629	Kinase	0	5 / 0	Δ^9 -Tetrahydrocannabinol
Thymidylate synthase	TYMS	P04818	CHEMBL1952	Transferase	0	19 / 0	Δ^9 -Tetrahydrocannabinol
Serine/threonine-protein kinase PIM1	PIM1	P11309	CHEMBL2147	Kinase	0	77 / 0	Δ^9 -Tetrahydrocannabinol
Lysosomal Pro-X carboxypeptidase	PRCP	P42785	CHEMBL2335	Protease	0	17 / 0	Δ^9 -Tetrahydrocannabinol
Serine/threonine-protein kinase PIM2	PIM2	Q9P1W9	CHEMBL4523	Kinase	0	56 / 0	Δ^9 -Tetrahydrocannabinol
Orexin receptor 2	HCRT2	O43614	CHEMBL4792	Family A G protein-coupled receptor	0	469 / 0	Δ^9 -Tetrahydrocannabinol
L-lactate dehydrogenase B chain	LDHB	P07195	CHEMBL4940	Enzyme	0	2 / 0	Δ^9 -Tetrahydrocannabinol
Orexin receptor 1	HCRT1	O43613	CHEMBL5113	Family A G protein-coupled receptor	0	405 / 0	Δ^9 -Tetrahydrocannabinol
Serine/threonine-protein kinase PIM3	PIM3	Q86V86	CHEMBL5407	Kinase	0	10 / 0	Δ^9 -Tetrahydrocannabinol
Pyroglutamylated RFamide peptide receptor	QRFR	Q96P65	CHEMBL5852	Family A G protein-coupled receptor	0	9 / 0	Δ^9 -Tetrahydrocannabinol

Microtubule-associated protein tau	MAPT	P10636	CHEMBL1293224	Unclassified protein	0	5 / 0	Δ^9 -Tetrahydrocannabinol
Glutamate NMDA receptor; GRIN1/GRIN2B	GRIN1 GRIN2B	Q05586 Q13224	CHEMBL1907603	Ligand-gated ion channel	0	2 / 0	Δ^9 -Tetrahydrocannabinol
Adenosine A2b receptor	ADORA2B	P29275	CHEMBL255	Family A G protein-coupled receptor	0	41 / 0	Δ^9 -Tetrahydrocannabinol
Sodium channel protein type IX alpha subunit	SCN9A	Q15858	CHEMBL4296	Voltage-gated ion channel	0	65 / 0	Δ^9 -Tetrahydrocannabinol
Leucine-rich repeat serine/threonine-protein kinase 2	LRRK2	Q5S007	CHEMBL1075104	Kinase	0	31 / 0	Δ^9 -Tetrahydrocannabinol
Serine/threonine-protein kinase/endoribonuclease IRE1	ERN1	O75460	CHEMBL1163101	Enzyme	0	2 / 0	Δ^9 -Tetrahydrocannabinol
Tyrosine-protein kinase ABL	ABL1	P00519	CHEMBL1862	Kinase	0	114 / 0	Δ^9 -Tetrahydrocannabinol
Poly [ADP-ribose] polymerase-1	PARP1	P09874	CHEMBL3105	Enzyme	0	36 / 0	Δ^9 -Tetrahydrocannabinol
Integrin alpha2/beta1	ITGB1 ITGA2	P05556 P17301	CHEMBL3137268	Unclassified protein	0	1 / 0	Δ^9 -Tetrahydrocannabinol
P2X purinoceptor 7	P2RX7	Q99572	CHEMBL4805	Ligand-gated ion channel	0	189 / 0	Δ^9 -Tetrahydrocannabinol
6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 3	PFKFB3	Q16875	CHEMBL2331053	Enzyme	0	70 / 0	Δ^9 -Tetrahydrocannabinol
Trace amine-associated receptor 1 (by homology)	TAAR1	Q96RJ0	CHEMBL5857	Family A G protein-coupled receptor	0	21 / 0	Δ^9 -Tetrahydrocannabinol
Cholesteryl ester transfer protein	CETP	P11597	CHEMBL3572	Other ion channel	0	10 / 4	Δ^9 -Tetrahydrocannabinol
Muscarinic acetylcholine receptor M4	CHRM4	P08173	CHEMBL1821	Family A G protein-coupled receptor	0	22 / 0	Δ^9 -Tetrahydrocannabinol
Muscarinic acetylcholine receptor M5	CHRM5	P08912	CHEMBL2035	Family A G protein-coupled receptor	0	10 / 0	Δ^9 -Tetrahydrocannabinol
Thrombin and coagulation factor X	F10	P00742	CHEMBL244	Protease	0	133 / 0	Δ^9 -Tetrahydrocannabinol
Muscarinic acetylcholine receptor M3	CHRM3	P20309	CHEMBL245	Family A G protein-coupled receptor	0	82 / 0	Δ^9 -Tetrahydrocannabinol

Cholecystokinin B receptor	CCKBR	P32239	CHEMBL298	Family A G protein-coupled receptor	0	275 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Protein kinase C delta	PRKCD	Q05655	CHEMBL2996	Kinase	0	19 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Histone deacetylase 4	HDAC4	P56524	CHEMBL3524	Eraser	0	9 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Protein kinase C theta	PRKCQ	Q04759	CHEMBL3920	Kinase	0	31 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Histone deacetylase 10	HDAC10	Q969S8	CHEMBL5103	Eraser	0	5 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Gamma-secretase	PSEN2 PSENEN NCSTN APH1A PSEN1 APH1B	P49810 Q9NZ4 2 Q92542 Q96BI3 P49768 Q8WW 43	CHEMBL2094135	Protease	0	144 / 0 Å Å Å Å Å	Δ9-Tetrahydrocannabinol
Cannabinoid receptor 1	CNR1	P21554	CHEMBL218	Family A G protein-coupled receptor	0.732225	577 / 367 Å Å Å Å Å	Tetrahydrocannabinavarin
N-arachidonyl glycine receptor	GPR18	Q14330	CHEMBL2384898	Family A G protein-coupled receptor	0.690848	2 / 2 Å Å Å Å Å	Tetrahydrocannabinavarin
Cannabinoid receptor 2	CNR2	P34972	CHEMBL253	Family A G protein-coupled receptor	0.690848	460 / 358 Å Å Å Å Å	Tetrahydrocannabinavarin
Glycine receptor subunit alpha-1	GLRA1	P23415	CHEMBL5845	Ligand-gated ion channel	0.690848	1 / 1 Å Å Å Å Å	Tetrahydrocannabinavarin
Vascular endothelial growth factor receptor 2	KDR	P35968	CHEMBL279	Kinase	0.5096	171 / 13 Å Å Å Å Å	Tetrahydrocannabinavarin
Glucagon receptor	GCGR	P47871	CHEMBL1985	Family B G protein-coupled receptor	0.097875	27 / 0 Å Å Å Å Å	Tetrahydrocannabinavarin
Melanocortin receptor 4	MC4R	P32245	CHEMBL259	Family A G protein-coupled receptor	0.097875	20 / 0 Å Å Å Å Å	Tetrahydrocannabinavarin
Quinone reductase 2	NQO2	P16083	CHEMBL3959	Enzyme	0.097875	10 / 0 Å Å Å Å Å	Tetrahydrocannabinavarin
Cystic fibrosis transmembrane conductance regulator	CFTR	P13569	CHEMBL4051	Other ion channel	0.097875	1 / 0 Å Å Å Å Å	Tetrahydrocannabinavarin
Calcium sensing receptor	CASR	P41180	CHEMBL1878	Family C G protein-	0.097875	29 / 0 Å Å Å Å Å	Tetrahydrocannabinavarin

				coupled receptor			
Poly [ADP-ribose] polymerase-1	PARP1	P09874	CHEMBL3105	Enzyme	0.097875	15 / 0Â Â Â Â Â	Tetrahydrocannabivarin
Epoxide hydratase	EPHX2	P34913	CHEMBL2409	Protease	0.097875	107 / 0Â Â Â Â Â	Tetrahydrocannabivarin
Serotonin 2b (5-HT2b) receptor	HTR2B	P41595	CHEMBL1833	Family A G protein-coupled receptor	0.097875	39 / 0Â Â Â Â Â	Tetrahydrocannabivarin
Serotonin 2c (5-HT2c) receptor	HTR2C	P28335	CHEMBL225	Family A G protein-coupled receptor	0.097875	45 / 0Â Â Â Â Â	Tetrahydrocannabivarin
Translocator protein (by homology)	TSPO	P30536	CHEMBL5742	Membrane receptor	0.097875	347 / 0Â Â Â Â Â	Tetrahydrocannabivarin
Cathepsin D	CTSD	P07339	CHEMBL2581	Protease	0.097875	11 / 0Â Â Â Â Â	Tetrahydrocannabivarin
L-lactate dehydrogenase A chain	LDHA	P00338	CHEMBL4835	Enzyme	0.097875	6 / 0Â Â Â Â Â	Tetrahydrocannabivarin
Protein kinase C (PKC)	PRKCZ	Q05513	CHEMBL3438	Kinase	0.097875	2 / 0Â Â Â Â Â	Tetrahydrocannabivarin
Estradiol 17-beta-dehydrogenase 3	HSD17B3	P37058	CHEMBL4234	Enzyme	0.097875	9 / 0Â Â Â Â Â	Tetrahydrocannabivarin
Nitric oxide synthase, inducible (by homology)	NOS2	P35228	CHEMBL4481	Enzyme	0.097875	72 / 0Â Â Â Â Â	Tetrahydrocannabivarin
PH domain leucine-rich repeat-containing protein phosphatase 1	PHLPP1	O60346	CHEMBL3414405	Reader	0.097875	0 / 2Â Â Â Â Â	Tetrahydrocannabivarin
Serine/threonine-protein kinase ILK-1	ILK	Q13418	CHEMBL5247	Kinase	0.097875	0 / 2Â Â Â Â Â	Tetrahydrocannabivarin
Anandamide amidohydrolase	FAAH	O00519	CHEMBL2243	Enzyme	0.097875	35 / 0Â Â Â Â Â	Tetrahydrocannabivarin
LDL-associated phospholipase A2	PLA2G7	Q13093	CHEMBL3514	Enzyme	0.097875	14 / 0Â Â Â Â Â	Tetrahydrocannabivarin
Estradiol 17-beta-dehydrogenase 2	HSD17B2	P37059	CHEMBL2789	Enzyme	0.097875	15 / 0Â Â Â Â Â	Tetrahydrocannabivarin
5-lipoxygenase activating protein	ALOX5AP	P20292	CHEMBL4550	Other cytosolic protein	0.097875	31 / 0Â Â Â Â Â	Tetrahydrocannabivarin
GABA-A receptor; alpha-1/beta-2/gamma-2	GABRA1 GABRB2 GABRG2	P14867 P47870 P18507	CHEMBL2095172	Ligand-gated ion channel	0.097875	14 / 0Â Â Â Â Â	Tetrahydrocannabivarin
Sodium channel protein type II alpha subunit	SCN2A	Q99250	CHEMBL4187	Voltage-gated ion channel	0.097875	23 / 0Â Â Â Â Â	Tetrahydrocannabivarin
Prostanoid EP1 receptor	PTGER1	P34995	CHEMBL1811	Family A G protein-coupled receptor	0.097875	25 / 0Â Â Â Â Â	Tetrahydrocannabivarin
Calcium-activated potassium channel subunit alpha-1	KCNMA1	Q12791	CHEMBL4304	Voltage-gated ion channel	0.097875	11 / 0Â Â Â Â Â	Tetrahydrocannabivarin

Cholecystokinin B receptor	CCKBR	P32239	CHEMBL298	Family A G protein-coupled receptor	0	146 / 0	Tetrahydrocannabinol
Monoglyceride lipase	MGLL	Q99685	CHEMBL4191	Enzyme	0	11 / 0	Tetrahydrocannabinol
Orexin receptor 2	HCRT2	O43614	CHEMBL4792	Family A G protein-coupled receptor	0	207 / 0	Tetrahydrocannabinol
Orexin receptor 1	HCRT1	O43613	CHEMBL5113	Family A G protein-coupled receptor	0	170 / 0	Tetrahydrocannabinol
G-protein coupled receptor 55	GPR55	Q9Y2T6	CHEMBL1075322	Family A G protein-coupled receptor	0	8 / 2	Tetrahydrocannabinol
Tyrosine-protein kinase JAK3	JAK3	P52333	CHEMBL2148	Kinase	0	166 / 0	Tetrahydrocannabinol
Tyrosine-protein kinase JAK2	JAK2	O60674	CHEMBL2971	Kinase	0	159 / 0	Tetrahydrocannabinol
Macrophage migration inhibitory factor	MIF	P14174	CHEMBL2085	Enzyme	0	3 / 0	Tetrahydrocannabinol
Peregrin	BRPF1	P55201	CHEMBL3132741	Reader	0	19 / 0	Tetrahydrocannabinol
Histone deacetylase 2	HDAC2	Q92769	CHEMBL1937	Eraser	0	11 / 0	Tetrahydrocannabinol
Serine/threonine-protein kinase/endoribonuclease IRE1	ERN1	O75460	CHEMBL1163101	Enzyme	0	2 / 0	Tetrahydrocannabinol
Myosin light chain kinase, smooth muscle	MYLK	Q15746	CHEMBL2428	Kinase	0	6 / 0	Tetrahydrocannabinol
Endothelin-converting enzyme 2	ECE2	O60344	CHEMBL5890	Protease	0	1 / 0	Tetrahydrocannabinol
Thromboxane A2 receptor	TBXA2R	P21731	CHEMBL2069	Family A G protein-coupled receptor	0	4 / 0	Tetrahydrocannabinol
Thymidylate synthase	TYMS	P04818	CHEMBL1952	Transferase	0	20 / 0	Tetrahydrocannabinol
Serine/threonine-protein kinase PAK 1	PAK1	Q13153	CHEMBL4600	Kinase	0	1 / 0	Tetrahydrocannabinol
Cholesteryl ester transfer protein	CETP	P11597	CHEMBL3572	Other ion channel	0	4 / 4	Tetrahydrocannabinol
Prenyl protein specific protease	RCE1	Q9Y256	CHEMBL3411	Protease	0	6 / 0	Tetrahydrocannabinol
Gonadotropin-releasing hormone receptor	GNRHR	P30968	CHEMBL1855	Family A G protein-coupled receptor	0	4 / 0	Tetrahydrocannabinol
Hormone sensitive lipase	LIPE	Q05469	CHEMBL3590	Enzyme	0	50 / 0	Tetrahydrocannabinol
Bombesin receptor subtype-3	BRS3	P32247	CHEMBL4080	Family A G protein-	0	1 / 0	Tetrahydrocannabinol

				coupled receptor			
Leucine-rich repeat serine/threonine-protein kinase 2	LRRK2	Q5S007	CHEMBL1075104	Kinase	0	24 / 0	Tetrahydrocannabivarin
Serine/threonine-protein kinase PIM1	PIM1	P11309	CHEMBL2147	Kinase	0	66 / 0	Tetrahydrocannabivarin
Voltage-gated potassium channel subunit Kv1.5	KCNA5	P22460	CHEMBL4306	Voltage-gated ion channel	0	99 / 0	Tetrahydrocannabivarin
Serine/threonine-protein kinase PIM2	PIM2	Q9P1W9	CHEMBL4523	Kinase	0	58 / 0	Tetrahydrocannabivarin
Microtubule-associated protein tau	MAPT	P10636	CHEMBL1293224	Unclassified protein	0	2 / 0	Tetrahydrocannabivarin
Cyclin-dependent kinase 5/CDK5 activator 1	CDK5R1 CDK5	Q15078 Q00535	CHEMBL1907600	Kinase	0	65 / 0	Tetrahydrocannabivarin
Sodium channel protein type V alpha subunit	SCN5A	Q14524	CHEMBL1980	Voltage-gated ion channel	0	15 / 0	Tetrahydrocannabivarin
Serotonin 6 (5-HT6) receptor	HTR6	P50406	CHEMBL3371	Family A G protein-coupled receptor	0	71 / 0	Tetrahydrocannabivarin
Serine/threonine-protein kinase Aurora-C	AURKC	Q9UQB9	CHEMBL3935	Kinase	0	9 / 0	Tetrahydrocannabivarin
Serine/threonine-protein kinase Aurora-A	AURKA	O14965	CHEMBL4722	Kinase	0	19 / 0	Tetrahydrocannabivarin
Protoporphyrinogen oxidase	PPOX	P50336	CHEMBL1926488	Oxidoreductase	0	1 / 0	Tetrahydrocannabivarin
Tumor necrosis factor receptor R1	TNFRSF1A	P19438	CHEMBL3378	Membrane receptor	0	2 / 0	Tetrahydrocannabivarin
G-protein coupled bile acid receptor 1	GPBAR1	Q8TDU6	CHEMBL5409	Family A G protein-coupled receptor	0	24 / 0	Tetrahydrocannabivarin
Serine/threonine-protein kinase AKT	AKT1	P31749	CHEMBL4282	Kinase	0	14 / 17	Tetrahydrocannabivarin
Monoamine oxidase A	MAOA	P21397	CHEMBL1951	Oxidoreductase	0	67 / 0	Tetrahydrocannabivarin
Cathepsin (V and K)	CTSV	O60911	CHEMBL3272	Protease	0	6 / 0	Tetrahydrocannabivarin
Androgen Receptor	AR	P10275	CHEMBL1871	Nuclear receptor	0	56 / 27	Tetrahydrocannabivarin
Dual-specificity tyrosine-phosphorylation regulated kinase 1A (by homology)	DYRK1A	Q13627	CHEMBL2292	Kinase	0	38 / 0	Tetrahydrocannabivarin
Serotonin 3a (5-HT3a) receptor	HTR3A	P46098	CHEMBL1899	Ligand-gated ion channel	0	11 / 0	Tetrahydrocannabivarin
Lysosomal Pro-X carboxypeptidase	PRCP	P42785	CHEMBL2335	Protease	0	8 / 0	Tetrahydrocannabivarin
Kinesin-like protein 1	KIF11	P52732	CHEMBL4581	Other cytosolic protein	0	26 / 0	Tetrahydrocannabivarin

Muscarinic acetylcholine receptor M4	CHRM4	P08173	CHEMBL1821	Family A G protein-coupled receptor	0	7 / 0	Tetrahydrocannabivarin
Beta secretase 2	BACE2	Q9Y5Z0	CHEMBL2525	Protease	0	22 / 0	Tetrahydrocannabivarin
Serine/threonine-protein kinase mTOR	MTOR	P42345	CHEMBL2842	Kinase	0	25 / 0	Tetrahydrocannabivarin
PI3-kinase p110-alpha subunit	PIK3CA	P42336	CHEMBL4005	Enzyme	0	54 / 0	Tetrahydrocannabivarin
Pyruvate kinase isozymes M1/M2	PKM	P14618	CHEMBL1075189	Enzyme	0	3 / 0	Tetrahydrocannabivarin
Corticotropin releasing factor receptor 1	CRHR1	P34998	CHEMBL1800	Family B G protein-coupled receptor	0	68 / 0	Tetrahydrocannabivarin
GABA-A receptor; alpha-1/beta-3/gamma-2	GABRB3 GABRG2 GABRA1	P28472 P18507 P14867	CHEMBL2094121	Ligand-gated ion channel	0	51 / 0	Tetrahydrocannabivarin
Cyclin-dependent kinase 1/cyclin B	CCNB3 CDK1 CCNB1 CCNB2	Q8WWL7 P06493 P14635 O95067	CHEMBL2094127	Other cytosolic protein	0	35 / 0	Tetrahydrocannabivarin
Norepinephrine transporter	SLC6A2	P23975	CHEMBL222	Electrochemical transporter	0	9 / 0	Tetrahydrocannabivarin
Phosphodiesterase 2A	PDE2A	O00408	CHEMBL2652	Phosphodiesterase	0	44 / 0	Tetrahydrocannabivarin
Tyrosine-protein kinase JAK1	JAK1	P23458	CHEMBL2835	Kinase	0	64 / 0	Tetrahydrocannabivarin
JAK3/JAK1	JAK3 JAK1	P52333 P23458	CHEMBL3038491	Kinase	0	15 / 0	Tetrahydrocannabivarin
Phosphodiesterase 10A	PDE10A	Q9Y233	CHEMBL4409	Phosphodiesterase	0	265 / 0	Tetrahydrocannabivarin
Egl nine homolog 1	EGLN1	Q9GZT9	CHEMBL5697	Oxidoreductase	0	7 / 0	Tetrahydrocannabivarin
Cholecystokinin A receptor (by homology)	CCKAR	P32238	CHEMBL1901	Family A G protein-coupled receptor	0	12 / 0	Tetrahydrocannabivarin
PI3-kinase p110-alpha/p85-alpha	PIK3CA PIK3R1	P42336 P27986	CHEMBL2111367	Enzyme	0	6 / 0	Tetrahydrocannabivarin
Bromodomain-containing protein 1	BRD1	O95696	CHEMBL2176774	Reader	0	6 / 0	Tetrahydrocannabivarin
Adenosine A2a receptor	ADORA2A	P29274	CHEMBL251	Family A G protein-coupled receptor	0	101 / 0	Tetrahydrocannabivarin
Transcription intermediary factor 1-alpha	TRIM24	O15164	CHEMBL3108638	Reader	0	10 / 0	Tetrahydrocannabivarin
Histone deacetylase 9	HDAC9	Q9UKV0	CHEMBL4145	Eraser	0	5 / 0	Tetrahydrocannabivarin

GABA-A receptor; alpha-3/beta-3/gamma-2	GABRB3 GABRA3 GABRG2	P28472 P34903 P18507	CHEMBL2094120	Ligand-gated ion channel	0	58 / 0	Tetrahydrocannabinol
GABA-A receptor; alpha-5/beta-3/gamma-2	GABRB3 GABRG2 GABRA5	P28472 P18507 P31644	CHEMBL2094122	Ligand-gated ion channel	0	58 / 0	Tetrahydrocannabinol
GABA-A receptor; alpha-2/beta-3/gamma-2	GABRA2 GABRB3 GABRG2	P47869 P28472 P18507	CHEMBL2094130	Ligand-gated ion channel	0	54 / 0	Tetrahydrocannabinol
Trace amine-associated receptor 1 (by homology)	TAAR1	Q96RJ0	CHEMBL5857	Family A G protein-coupled receptor	0	27 / 0	Tetrahydrocannabinol
Tyrosine-protein kinase receptor FLT3	FLT3	P36888	CHEMBL1974	Kinase	0	29 / 0	Tetrahydrocannabinol
Nitric-oxide synthase, brain	NOS1	P29475	CHEMBL3568	Enzyme	0	52 / 0	Tetrahydrocannabinol
Bcl2-antagonist of cell death (BAD)	BAD	Q92934	CHEMBL3817	Other cytosolic protein	0	6 / 0	Tetrahydrocannabinol
Nitric-oxide synthase, endothelial	NOS3	P29474	CHEMBL4803	Enzyme	0	19 / 0	Tetrahydrocannabinol

Table S3. Disgenet-predicted disease targets for rheumatoid arthritis

Disease	Disease id	Gene	Gene id	UniProt	Gene Full Name	Protein Class	N_diseases_g	DSI_g	DPI_g	pLI	Score_gda	EL_gda	EI_gda	N_PMI_Ds	N_SNPs_gda	Filters_Ref	Last_Ref
Rheumatoid Arthritis	C0003873	PTPN22	26191	Q9Y2R2	protein tyrosine phosphatase non-receptor type 22		400	0.438	0.486	3.49E-21	0.7		0.899	158	7	2004	2019
Rheumatoid Ar	C0003873	SLC2A4	6583	Q9H015	solute carrier family 22 member 4	Transporter	90	0.603	0.679	1.83E-08	0.7		0.857	21	3	2003	2019

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN F	7 1 2 4	P0137 5	tumor necrosis factor	Sig nal ing	27 24	0 . 2 3 1	0 . 9 6 2	0. 8 0 3 3	0. 7		0. 9 7 5	10 14	8	19 89	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CR P	1 4 0 1	P0274 1	C-reactive protein		14 83	0 . 2 9 9	0 . 9 6 2	0. 0 3 6 9 7	0. 6		0. 9 5 5	19 9	1	19 89	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL6 ST	3 5 7 2	P4018 9	interleuk in 6 signal transduc er	Sig nal ing	26 0	0 . 4 7 5	0 . 8 0 8	0. 9 9 7 8	0. 59		0. 9 0 9	11	1	20 00	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC R6	1 2 3 5	P5168 4	C-C motif chemoki ne receptor 6	G- pro tei n co upl ed rec ept or	23 1	0 . 4 8 5	0 . 8 0 8	0. 0 5 7 7	0. 5		1	27	8	20 01	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FC GR 2A	2 2 1 2	P1231 8	Fc fragmen t of IgG receptor IIa	Ce ll ad hes ion	22 7	0 . 4 8	0 . 7 6 9	2. 0 1 E - 0 6	0. 5		0. 8 5 2	27	3	20 02	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PA DI4	2 3 5 6 9	Q9U M07	peptidyl arginine deiminase 4		19 6	0 . 4 9 4	0 . 8 0 8	4. 6 E - 1 6	0. 5		0. 9 1 2	12 5	10	20 03	2 0 2 0
Rh eu	C 00	HL A-	3 1	P0444 0	major histoco	Im mu	32 4	0 . .	0 . .	5. 3	0. 5		0. 9	32	62	19 88	2 0

matoid Arthritis	03 87 3	DP B1	1 5		mpatibility complex , class II, DP beta 1	ne res po nse		4 5 3	9 2 3	3 E - 1 0			3 8				2 0
Rheuma matoid Arthritis	C 00 03 87 3	HL A- DR B1	3 1 2 3	P0191 1	major histoco mpatibil ity complex , class II, DR beta 1	Im mu ne res po nse	10 18	0 . 3 3 3	0 . 9 2 3	0. 0 1 1	0. 5		0. 9 3 6	57 5	7	19 89	2 0 2 0
Rheuma matoid Arthritis	C 00 03 87 3	IL2 RA	3 5 5 9	P0158 9	interleuk in 2 receptor subunit alpha	Re ce pto r	54 0	0 . 3 8 9	0 . 8 8 5	0. 0 5 4 7 0 9	0. 5		1	32	3	19 92	2 0 1 9
Rheuma matoid Arthritis	C 00 03 87 3	IL6 R	3 5 7 0	P0888 7	interleuk in 6 receptor	Sig nal ing	26 1	0 . 4 7 1	0 . 8 4 6	3. 1 7 E - 0 5	0. 5		0. 9 7 1	34	5	20 01	2 0 1 9
Rheuma matoid Arthritis	C 00 03 87 3	IL1 0	3 5 8 6	P2230 1	interleukin 10		16 79	0 . 2 8 1	0 . 9 2 3	0. 0 5 8 8 7	0. 5		0. 9 4 6	12 9	3	19 94	2 0 2 0
Rheuma matoid Arthritis	C 00 03 87 3	IRF 5	3 6 6 3	Q135 68	interfero n regulato ry factor 5	Tr ans cri pti on fac tor	22 6	0 . 4 8 9	0 . 7 3 1	0. 0 9 0 3 7	0. 5		0. 9 0 6	32	6	20 06	2 0 1 9
Rheuma matoid Arthritis	C 00 03 87 3	CII TA	4 2 6 1	P3307 6	class II major histocompatib ility complex transactivator		14 9	0 . 5 3 6	0 . 8 0 8	1. 3 6 E - 0 7	0. 5		0. 5 3 3	15	3	20 06	2 0 1 7

Rheumatoid Arthritis	C0003873	STAT4	6775	Q14765	signal transducer and activator of transcription 4	Nucleic acid binding	316	0.471	0.762	0.75		0.889	63	9	2000	2019	
Rheumatoid Arthritis	C0003873	TNF- α P3	7128	P21580	TNF- α induced protein 3	Enzyme	212	0.481	0.897	0.972	0.5		1	35	8	2007	2018
Rheumatoid Arthritis	C0003873	TRAF1	7185	Q13077	TNF receptor associated factor 1	Signaling	119	0.554	0.731	0.764	0.5		0.85	40	3	2007	2019
Rheumatoid Arthritis	C0003873	TRAF6	7189	Q9Y4K3	TNF receptor associated factor 6	Signaling	254	0.472	0.803	0.979	0.5		1	13	1	2008	2019
Rheumatoid Arthritis	C0003873	CD28	940	P10747	CD28 molecule		364	0.436	0.857	0.979	0.5		1	36	2	1996	2018
Rheumatoid Arthritis	C0003873	CD40	958	P25942	CD40 molecule		528	0.396	0.846	0.903	0.5		0.848	33	5	2002	2019
Rheumatoid Ar	C0003873	PTPN2	5771	P17706	protein tyrosine phosphatase non-receptor type 2		134	0.538	0.692	0.953	0.49		1	13	4	2012	2019

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TY K2	7 2 9 7	P2959 7	tyrosine kinase 2	Ki nas e	17 2	0 . 5 0 5	0 . 7 6 9	4. 5 E - 0 8	0. 49		1	15	3	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RU NX 1	8 6 1	Q011 96	RUNX family transcrip tion factor 1	Tr ans cri pti on fac tor	41 2	0 . 4 2 5	0 . 8 0 8	0. 6 5 3 7 7	0. 49		0. 7 8 6	14	4	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PT PR C	5 7 8 8	P0857 5	protein tyrosine phospha tase receptor type C	En zy me	36 6	0 . 4 3 5	0 . 8 0 8	1	0. 48		1	10	1	19 91	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AG ER	1 7 7	Q151 09	advance d glycosyl ation end- product specific receptor	Re ce pto r	45 0	0 . 4 2	0 . 8 8 5	6. 3 5 E - 1 6	0. 47		1	10	5	20 02	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2 RB	3 5 6 0	P1478 4	interleuk in 2 receptor subunit beta	Re ce pto r	22 6	0 . 4 9 1	0 . 8 4 6	0. 2 9 0 9 5	0. 47		0. 9 0 9	11	4	19 92	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NF KB IL1	4 7 9 5	Q9UB C1	NFKB inhibitor like 1		41	0 . 6 5 3	0 . 6 1 5	0. 0 2 5 1 5	0. 47		1	10	4	20 01	2 0 1 1
Rh eu ma toi	C 00 03	AF F3	3 8 9 9	P5182 6	AF4/FM R2 family	Tr ans cri pti	77	0 . 6	0 . 6	0. 9 9 9	0. 46		1	11	5	20 09	2 0 1 6

d Ar thr itis	87 3				member 3	on fac tor		2 3	9 2	9 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RE L	5 9 6 6	Q048 64	REL proto- oncogen e, NF- kB subunit	Tr ans cri pti on fac tor	90	0 . 5 7 9	0 . 6 9 2	0. 9 8 3 6	0. 46		0. 9 0 9	11	2	20 09	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BL K	6 4 0	P5145 1	BLK proto- oncogen e, Src family tyrosine kinase	Ki nas e	86	0 . 5 8 5	0 . 7 6 9	8. 3 5 E - 1 4	0. 46		1	9	3	20 09	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD K6	1 0 2 1	Q005 34	cyclin depend ent kinase 6	Ki nas e	26 6	0 . 4 7 1	0 . 7 3 1	0. 9 8 3 1 5	0. 44		0. 7 1 4	7	2	20 08	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 244	5 1 7 4 4	Q9BZ W8	CD244 molecule		42	0 . 6 5 3	0 . 5	0. 0 5 7 2 8 8	0. 44		0. 5	4	2	20 08	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	M ME L1	7 9 2 5 8	Q495 T6	membra ne metalloe ndopepti dase like 1	En zy me	74	0 . 6 0 6	0 . 6 9 2	1. 2 4 E - 2 2	0. 44		0. 9 0 9	11	5	20 08	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AN KR D5	7 9 7 2 2	Q3KP 44	ankyrin repeat domain 55		46	0 . 6 5	0 . 4 6 2	6. 7 6 E - 0 8	0. 44		1	11	3	20 10	2 0 1 9

Rheumatoid Arthritis	C0003873	GATA3	2625	P23771	GATA binding protein 3		429	0.415	0.846	0.887	0.43		1	7	3	2005	2019
Rheumatoid Arthritis	C0003873	NFKBIE	4794	O00221	NFKB inhibitor epsilon		26	0.75	0.385	0.7098	0.42		1	3	2	2012	2016
Rheumatoid Arthritis	C0003873	PLD4	122618	Q96BZ4	phospholipase D family member 4		12	0.78	0.5	7.3E-13	0.41		1	3	2	2012	2018
Rheumatoid Arthritis	C0003873	DNASE1L3	1776	Q13609	deoxyribonuclease 1 like 3		126	0.555	0.769	3E-05	0.41		1	4	1	2012	2019
Rheumatoid Arthritis	C0003873	KIF5A	3798	Q12840	kinesin family member 5A	Cellular structure	112	0.593	0.731	0.995	0.41		1	4	1	2008	2014
Rheumatoid Arthritis	C0003873	ARID5B	84159	Q14865	AT-rich interaction domain 5B	Transcription factor	56	0.638	0.5	1	0.41		1	6	3	2012	2019
Rheumatoid Ar	C0003873	RASGRP1	10125	O95267	RAS guanyl releasing protein 1	Enzyme modul	110	0.572	0.731	0.9654	0.4		1	4	2	2012	2019

thr itis						ato r											
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CS F2	1 4 3 7	P0414 1	colony stimulati ng factor 2	Sig nal ing	10 28	0 . 3 3	0 . 9 6 2	0. 8 3 4 6 8	0. 4		1	39	0	19 89	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CT LA 4	1 4 9 3	P1641 0	cytotoxic T- lymphocyte associated protein 4		72 2	0 . 3 6 9	0 . 9 2 3	0. 9 4 0 8 5	0. 4		0. 9 3 1	58	3	19 98	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC AN	1 7 6	P1611 2	aggreca n	Ex tra cel lul ar str uct ure	18 7	0 . 5 2 8	0 . 8 4 6	1	0. 4		1	12	0	19 98	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RC AN 1	1 8 2 7	P5380 5	regulato r of calcineu rin 1	Sig nal ing	11 0	0 . 5 7 2	0 . 8 0 8	0. 0 6 6 7 5	0. 4		1	2	2	20 12	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AH R	1 9 6	P3586 9	aryl hydrocar bon receptor	Tr ans cri pti on fac tor	53 2	0 . 4 1	0 . 9 2 3	0. 9 9 9 9	0. 4		0. 9 2 9	14	1	20 08	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SP RE D2	2 0 0 7 3 4	Q7Z6 98	sprouty related EVH1 domain containi ng 2	Re ce pto r	38	0 . 7 1 1	0 . 5 7 7	2. 8 7 E - 0 7	0. 4		1	7	6	20 10	2 0 1 9
Rh eu ma toi	C 00 03	EN O1	2 0 2 3	P0673 3	enolase 1	En zy me	23 1	0 . 4	0 . 8	1. 9 1 E	0. 4		0. 9 0 5	21	0	20 08	2 0 1 9

d Ar thr itis	87 3							8 1	8 5	- 0 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AN XA 3	3 0 6	P1242 9	annexin A3		66	0 . 6 1	0 . 6 1 5	6. 5 2 E - 1 2	0. 4		1	1	1	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DQ A2	3 1 1 8	P0190 6	major histoco mpatibil ity complex , class II, DQ alpha 2	Im mu ne res po nse	58	0 . 6 1 7	0 . 7 6 9	1. 0 1 E - 0 5	0. 4		1	4	15	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IFN G	3 4 5 8	P0157 9	interferon gamma		15 19	0 . 2 8 8	0 . 9 6 2	0. 4 7 1 5 6	0. 4		0. 9 4 7	76	2	19 90	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC N1	3 4 9 1	O006 22	cellular commun ication network factor 1	Sig nal ing	24 6	0 . 4 7 3	0 . 7 3 1	0. 7 1 3 8 8	0. 4		0. 9 2 9	14	0	20 06	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 B	3 5 5 3	P0158 4	interleukin beta	1	18 01	0 . 2 7 6	0 . 9 6 2	0. 1 3 0 0 5	0. 4		0. 9 7 6	24 7	1	19 89	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 RN	3 5 5 7	P1851 0	interleukin receptor antagonist	1	70 1	0 . 3 7 3	0 . 9 2 3	0. 0 3 0 9 1 4	0. 4		0. 9 4 7	57	1	19 92	2 0 2 0
Rh eu	C 00	IL6	3 5	P0523 1	interleukin 6		23 67	0 . .	0 . .	0. 3	0. 4		0. 9	36 9	3	19 88	2 0

ma toi d Ar thr itis	03 87 3		6 9					2 4 8	9 6 2	1 5 3 6			7 6				2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CX CL 8	3 5 7 6	P1014 5	C-X-C motif chemoki ne ligand 8	Sig nal ing	12 54	0 . 3 1	0 . 9 6 2	0. 0 0 2 7 4	0. 4		0. 9 6 8	93	0	19 90	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 8	3 6 0 6	Q141 16	interleukin 18		75 0	0 . 3 6 5	0 . 9 2 3	0. 0 3 0 7 1 7	0. 4		0. 9 1 7	48	4	19 99	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI F	4 2 8 2	P1417 4	macrophage migration inhibitory factor		45 5	0 . 4 1 2	0 . 8 8 5	0. 0 1 2 6 2	0. 4		0. 8 9 5	19	2	19 99	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	M MP 2	4 3 1 3	P0825 3	matrix metallop eptidase 2	En zy me	10 21	0 . 3 3 3	0 . 9 2 3	0. 8 3 8 7 8	0. 4		0. 9 2 3	26	1	19 98	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MP O	4 3 5 3	P0516 4	myelope roxidase	En zy me	65 3	0 . 3 7 7	0 . 9 2 3	7. 1 1 E - 1 5	0. 4		1	13	0	20 12	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MT HF R	4 5 2 4	P4289 8	methylenetet rahydrofolate reductase		98 5	0 . 3 3 7	0 . 8 8 5	3. 2 1 E - 1 0	0. 4		0. 9 2 3	52	6	20 01	2 0 1 8

Rheumatoid Arthritis	C0003873	NC F2	4688	P19878	neutrophil cytosolic factor 2	Enzyme	90	0.601	0.692	4.01E-07	0.4		1	3	1	2003	2019
Rheumatoid Arthritis	C0003873	TNFRSF11B	4982	O00300	TNF receptor superfamily member 11b		443	0.422	0.808	0.161	0.4		0.929	42	5	2001	2019
Rheumatoid Arthritis	C0003873	FOX P3	50943	Q9BZS1	forkhead box P3		688	0.368	0.846	0.994	0.4		0.973	37	1	2005	2020
Rheumatoid Arthritis	C0003873	IL23A	51561	Q9NPF7	interleukin 23 subunit alpha	Signaling	427	0.415	0.846	0.35806	0.4		1	36	0	1989	2020
Rheumatoid Arthritis	C0003873	ABC B1	5243	P08183	ATP binding cassette subfamily B member 1	Transporter	933	0.344	0.885	1.26E-05	0.4		0.95	20	1	1995	2020
Rheumatoid Arthritis	C0003873	PON1	5444	P27169	paraoxonase 1		496	0.409	0.885	9.81E-11	0.4		0.917	12	2	2003	2019
Rheumatoid Ar	C0003873	PTGS2	5743	P35354	prostaglandin-endoperoxide synthase 2	Enzyme	1234	0.314	0.962	0.99597	0.4		0.952	42	0	1994	2019

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC L21	6 3 6 6	O005 85	C-C motif chemoki ne ligand 21	Sig nal ing	18 6	0 . 5 0 2	0 . 7 6 9	0. 0 3 6 2 3 9	0. 4		0. 8 5 7	14	2	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C1 1A 1	6 5 5 6	P4927 9	solute carrier family 11 member 1	Tr ans por ter	14 1	0 . 5 2 5	0 . 8 4 6	1. 5 5 E - 1 9	0. 4		0. 9 3 8	16	6	19 96	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ST AT 1	6 7 7 2	P4222 4	signal transduc er and activator of transcrip tion 1	Nu cle ic aci d bin din g	53 1	0 . 3 9 9	0 . 8 8 5	0. 9 9 9 9	0. 4		0. 8 6 7	15	0	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TL R2	7 0 9 7	O606 03	toll receptor 2	like	74 9	0 . 3 6 1	0 . 9 2 3	1. 0 2 E - 0 6	0. 4		0. 9 6 6	29	2	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	VE GF A	7 4 2 2	P1569 2	vascular endothel ial growth factor A	Sig nal ing	18 99	0 . 2 6 6	0 . 9 2 3	2. 4 1 E - 0 5	0. 4		0. 9 8 7	75	7	19 94	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CX CR 4	7 8 5 2	P6107 3	C-X-C motif chemoki ne receptor 4	G- pro tei n co upl ed rec ept or	73 9	0 . 3 6 2	0 . 9 2 3	0. 0 1 7 8 0 4	0. 4		0. 9 4 4	18	0	20 00	2 0 1 9

Rheumatoid Arthritis	C0003873	CAT	847	P04040	catalase	Enzyme	794	0.359	0.362	1.63E-10	0.4		0.917	12	0	2006	2019
Rheumatoid Arthritis	C0003873	ADIPOQ	9370	Q15848	adiponectin, C1Q and collagen domain containing		679	0.376	0.385	4.64E-09	0.4		0.957	23	4	2003	2020
Rheumatoid Arthritis	C0003873	CCN2	1490	P29279	cellular communication network factor 2	Signaling	518	0.399	0.386	0.00502	0.39		1	10	0	2006	2020
Rheumatoid Arthritis	C0003873	TNFSF14	8740	O43557	TNF superfamily member 14	Signaling	143	0.529	0.379	0.005663	0.39		1	10	0	2003	2017
Rheumatoid Arthritis	C0003873	DHFR	1719	P00374	dihydrofolate reductase	Enzyme	191	0.513	0.383	0.00433	0.38		0.889	9	0	2003	2019
Rheumatoid Arthritis	C0003873	TNFRSF14	8764	Q92956	TNF receptor superfamily member 14		100	0.568	0.371	0.00752	0.38		0.889	9	0	2003	2017
Rheumatoid Ar	C0003873	TGAP	117289	Q8N103	T cell activation RhoGTPase	Enzyme modulator	24	0.7	0.462	0.008621	0.37		1	9	2	2010	2018

thr itis					activatin g protein	ato r											
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IR AK 1	3 6 5 4	P5161 7	interleuk in 1 receptor associat ed kinase 1	Ki nas e	20 0	0 . 5 0 6	0 . 8 0 8	0. 9 8 7 4	0. 36		0. 8 5 7	7	3	20 08	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO L2 A1	1 2 8 0	P0245 8	collagen type II alpha 1 chain		49 6	0 . 4 4 4	0 . 8 4 6	1	0. 35		0. 8 5 7	7	0	19 93	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AL OX 5	2 4 0	P0991 7	arachido nate 5- lipoxyge nase	En zy me	34 2	0 . 4 4 7	0 . 8 8 5	1. 2 1 E - 0 6	0. 35		1	6	0	19 95	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GC	2 6 3 8	P0277 4	GC vitamin D binding protein	Tr ans por ter	21 9	0 . 4 8 9	0 . 8 8 5	2. 7 3 E - 1 1	0. 35		0. 8	5	1	19 85	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HO XD 13	3 2 3 9	P3545 3	homeobox D13		25 9	0 . 4 8 3	0 . 8 0 8 6 0 6	0. 0 0 8 6 0 6	0. 35		1	6	0	19 97	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NC F1	6 5 3 3 6 1	P1459 8	neutrophil cytosolic factor 1		17 0	0 . 5 2 1	0 . 8 0 8	2. 8 3 E - 0 5	0. 35		1	7	1	20 03	2 0 1 8
Rh eu ma toi	C 00 03	TX ND C5	8 1 5	Q8NB S9	thioredoxin domain containing 5		65	0 . 6	0 . 5	4. 8 7 E	0. 35		1	6	2	20 11	2 0 1 8

d Ar thr itis	87 3		6 7					1 5	7 7	- 1 3							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GR K2	1 5 6	P2509 8	G protein- coupled receptor kinase 2	Ki nas e	15 9	0 . 5 3 2	0 . 6 5 4	0. 9 9 9 8	0. 34		1	4	0	19 99	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FP GS	2 3 5 6	Q059 32	folylpol yglutam ate synthase	En zy me	40	0 . 6 4 4	0 . 4 2 3	1. 1 6 E - 0 6	0. 34		1	5	3	20 07	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IGF BP 3	3 4 8 6	P1793 6	insulin like growth factor binding protein 3	En zy me mo dul ato r	35 0	0 . 4 3 9	0 . 8 0 8	0. 9 1 0 2 9	0. 34		0. 7 5	4	0	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FA SL G	3 5 6	P4802 3	Fas ligand	Sig nal ing	39 8	0 . 4 3	0 . 8 8 5	0. 1 8 3 4 5	0. 34		1	5	2	20 08	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AT IC	4 7 1	P3193 9	5- aminoim idazole- 4- carboxa mide ribonucl eotide formyltr ansferas e/IMP cyclohy drolase	En zy me	10 0	0 . 5 7 6	0 . 7 3 1	3. 0 1 E - 1 9	0. 34		1	5	1	20 04	2 0 1 6
Rh eu ma toi d	C 00 03 87 3	PR KC Q	5 5 8 8	Q047 59	protein kinase C theta	Ki nas e	53	0 . 6 3 6	0 . 6 5 4	0. 2 9 7 2	0. 34		1	7	0	20 08	2 0 1 9

Ar thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PT GS 1	5 7 4 2	P2321 9	prostagl andin- endoper oxide synthase 1	En zy me	31 8	0 . 4 6	0 . 8 5	6. 2 4 E - 0 7	0. 34		1	4	0	19 94	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC L8	6 3 5 5	P8007 5	C-C motif chemoki ne ligand 8	Sig nal ing	11 5	0 . 5 4 6	0 . 6 9 2	0. 0 4 1 4 1 2	0. 34		1	5	0	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SO D2	6 6 4 8	P0417 9	superoxi de dismutas e 2	En zy me	66 8	0 . 3 7 9	0 . 9 2 3	0. 1 5 4 9 9	0. 34		0. 7 1 4	7	1	20 00	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GG H	8 8 3 6	Q928 20	gamma- glutamyl hydrolas e	En zy me	66	0 . 6 0 8	0 . 5 8 1 3 2	0. 5 8 1 3 2	0. 34		1	5	3	20 04	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	B3 GN T2	1 0 6 7 8	Q9N Y97	UDP- GlcNAc :betaGal beta-1,3- N- acetylgl ucosami nyltransf erase 2	En zy me	20	0 . 7 0 5	0 . 5 8 7 2 2	0. 8 8 7 2 2	0. 33		1	3	0	19 88	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CP	1 3 5 6	P0045 0	cerulopl asmin	En zy me	28 3	0 . 4 6 6	0 . 8 4 6	4. 2 E - 1 0	0. 33		1	4	0	20 02	2 0 1 8
Rh eu	C 00	PL B1	1 5	Q6P1 J6	phospholipase B1		21 9	0 . .	0 . .	1. 7	0. 33		1	3	0	20 04	2 0

matoid Arthritis	03873		1056					488	846	3E-72						14	
Rheumatoid Arthritis	C0003873	MP12	4321	P39900	matrix metalloproteinase 12	Enzyme	216	0.484	0.885		0.33		1	4	1	2003	2009
Rheumatoid Arthritis	C0003873	ACKR3	57007	P25106	atypical chemokine receptor 3	G-protein coupled receptor	400	0.428	0.8534	0.333		1	4	0		1999	2010
Rheumatoid Arthritis	C0003873	PRDM1	639	O75626	PR/SET domain 1		126	0.538	0.731	0.9565	0.333		0.833	6	0	2009	2019
Rheumatoid Arthritis	C0003873	CD83	9308	Q01151	CD83 molecule		96	0.566	0.731	0.05214	0.333		0.75	4	0	2003	2017
Rheumatoid Arthritis	C0003873	ADORA2A	135	P29274	adenosine A2a receptor	G-protein coupled receptor	213	0.526	0.791	0.5971	0.32		1	3	1	2009	2019
Rheumatoid	C0003	CEC12A	1603	Q5QGZ9	C-type lectin domain family 12 member A		34	0.6	0.3	2.6E-	0.32		0.667	3	0	2007	2016

d Ar thr itis	87 3		6 4					8 6	4 6	0 7							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IK ZF 3	2 2 8 0 6	Q9U KT9	IKARO S family zinc finger 3	Tr ans cri pti on fac tor	64	0 . 6 0 8	0 . 6 9 2	0. 9 8 4 1 6	0. 32		1	3	0	20 12	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FK BP 5	2 2 8 9	Q134 51	FKBP prolyl isomeras e 5	En zy me	17 9	0 . 5 2 4	0 . 7 6 9	0. 7 3 3 9 3	0. 32		1	3	0	20 03	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CX CL 2	2 9 2 0	P1987 5	C-X-C motif chemoki ne ligand 2	Sig nal ing	18 6	0 . 5 1 3	0 . 8 8 5	3. 6 1 E - 0 7	0. 32		1	3	0	20 04	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HS D1 1B 1	3 2 9 0	P2884 5	hydroxysteroi d 11-beta dehydrogenas e 1		16 3	0 . 5 2	0 . 7 3 1	0. 4 1 6 9 6	0. 32		1	3	0	20 09	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RB PJ	3 5 1 6	Q063 30	recombi nation signal binding protein for immuno globulin kappa J region	Nu cle ic aci d bin din g	16 1	0 . 5 1 8	0 . 8 0 8 3	0. 9 8 5 3	0. 32		1	4	0	20 10	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ST S	4 1 2	P0884 2	steroid sulfatase	En zy me	38 2	0 . 4 3 1	0 . 8 4 6	0. 8 0 8 8 6	0. 32		1	3	0	20 05	2 0 1 9

Rheumatoid Arthritis	C0003873	MP10	4319	P09238	matrix metalloproteinase 10	Enzyme	123	0.553	0.808	5.91E-15	0.32		1	3	0	1989	2009
Rheumatoid Arthritis	C0003873	BGN	633	P21810	biglycan		253	0.484	0.8029	0.4529	0.32		1	3	0	2004	2018
Rheumatoid Arthritis	C0003873	BM P4	652	P12644	bone morphogenetic protein 4	Signaling	423	0.422	0.8084	0.9564	0.32		1	3	0	2006	2019
Rheumatoid Arthritis	C0003873	SM S	6611	P52788	spermine synthase		263	0.491	0.846	0.97297	0.32		1	3	0	1998	2017
Rheumatoid Arthritis	C0003873	ABCC5	10057	O15440	ATP binding cassette subfamily C member 5	Transporter	71	0.606	0.64152	0.004152	0.31		1	1	0	2013	2013
Rheumatoid Arthritis	C0003873	ABCC4	10257	O15439	ATP binding cassette subfamily C member 4	Transporter	146	0.536	0.769	1.07E-07	0.31		1	2	1	2013	2017
Rheumatoid Ar	C0003873	CTSD	1509	P07339	cathepsin D	Enzyme	242	0.478	0.846	0.0009	0.31		1	2	0	1995	2003

thr itis									1 7							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DD X6	1 6 5 6	P2619 6	DEAD-box helicase 6		52	0 . 6 6 3	0 . 3 8 5	0. 9 9 9 6 4	0. 31		1	2	0	20 12 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GR K6	2 8 7 0	P4325 0	G protein- coupled receptor kinase 6	Ki nas e	51	0 . 6 7	0 . 6 5 4	0. 0 0 0 4 8 7	0. 31		1	1	0	19 99 9 9 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HC LS 1	3 0 5 9	P1431 7	hematop oietic cell- specific Lyn substrate 1	Ce llul ar str uct ure	13 2	0 . 5 3 9	0 . 8 4 6	1. 3 2 E - 0 6	0. 31		1	2	0	19 92 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HO XD 10	3 2 3 6	P2835 8	homeobox D10		83	0 . 5 9	0 . 5 3 8	0. 0 6 2 9 1 8	0. 31		1	2	0	20 07 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PX K	5 4 8 9 9	Q7Z7 A4	PX domain containi ng serine/th reonine kinase like	Ki nas e	13	0 . 8 2 1	0 . 2 3 1	0. 0 1 0 8 4 7	0. 31		1	2	0	20 10 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BC L2 A1	5 9 7	Q165 48	BCL2 related protein A1	Sig nal ing	15 0	0 . 5 2 9	0 . 7 3 1	0. 2 0 7 8 5	0. 31		1	2	0	20 09 0 1 7
Rh eu ma toi	C 00 03	BM P6	6 5 4	P2200 4	bone morpho genetic protein 6	Sig nal ing	13 7	0 . 5	0 . 8	0. 7 5 9	0. 31		1	2	0	20 03 0 1 0

d Ar thr itis	87 3							3 1	0 8	4 7							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NR 4A 3	8 0 1 3	Q925 70	nuclear receptor subfamil y 4 group A member 3	Nu cle ar rec ept or	18 6	0 . 5 0 2	0 . 8 0 8	0. 9 1 2 6	0. 31		1	2	0	20 02	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GD F5	8 2 0 0	P4302 6	growth different iation factor 5	Sig nal ing	23 8	0 . 5 1 1	0 . 6 9 2	0. 6 7 0 0 2	0. 31		1	2	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA V2	8 5 8	P5163 6	caveolin 2	En zy me mo dul ato r	96	0 . 5 7 5	0 . 6 9 2	0. 0 2 6 9 7 3	0. 31		1	1	0	20 07	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AB CC 3	8 7 1 4	O154 38	ATP binding cassette subfamil y C member 3	Tr ans por ter	16 0	0 . 5 1 7	0 . 7 6 9	1. 2 1 E - 2 6	0. 31		1	2	0	20 12	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GP RC 5A	9 0 5 2	Q8NF J5	G protein- coupled receptor class C group 5 member A	G- pro tei n co upl ed rec ept or	90	0 . 5 7 9	0 . 6 9 2	6. 7 9 E - 0 8	0. 31		1	1	0	20 07	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 2	9 1 4	P0672 9	CD2 molecule		50	0 . 6 4 1	0 . 5 7 7	0. 4 7 1 0 8	0. 31		1	2	0	20 12	2 0 1 7

Rheumatoid Arthritis	C0003873	LHX2	9355	P50458	LIM homeobox 2	Nucleic acid binding	39	0.678	0.615	0.9812	0.31		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	MA B2 1L2	10586	Q9Y586	mab-21 like 2		22	0.743	0.308	0.4369	0.3		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	TX NIP	10628	Q9H3M7	thioredoxin interacting protein		208	0.49	0.731	0.15918	0.3		1	1	0	2009	2009
Rheumatoid Arthritis	C0003873	AB CC 2	1244	Q92887	ATP binding cassette subfamily C member 2	Transporter	254	0.483	0.808	5.247	0.3		1	1	0	2013	2013
Rheumatoid Arthritis	C0003873	HA PL N1	1404	P10915	hyaluronan and proteoglycan link protein 1	Extracellular structure	36	0.633	0.577	0.6242	0.3		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	GS DM E	1687	O60443	gasdermin E		44	0.656	0.423	3.28E-09	0.3		1	1	0	2007	2007
Rheumatoid Ar	C0003873	F2	2147	P00734	coagulation factor II, thrombin	Enzyme	490	0.415	0.885	0.011	0.3		1	1	0	2015	2015

thr itis										1 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LY 96	2 3 6 4 3	Q9Y6 Y9	lymphoc yte antigen 96	Re ce pto r	54	0 . 6 3 6	0 . 6 1 5	7. 4 2 E - 0 5	0. 3		1	1	0	20 07	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA RT	2 6 1 8	P2210 2	phospho ribosylgl ycinami de formyltr ansferas e, phospho ribosylgl ycinami de syntheta se, phospho ribosyla minoimi dazole syntheta se	En zy me	48	0 . 6 3 1	0 . 6 1 5	0. 0 0 0 2 7 7	0. 3		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RG MB	2 8 5 7 0 4	Q6N W40	repulsive guidance molecule BMP receptor b	co-	24	0 . 7 1 1	0 . 4 6 2	0. 0 7 1 9 5 5	0. 3		1	1	0	20 07	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NR 3C 1	2 9 0 8	P0415 0	nuclear receptor subfamil y 3 group C member 1	Nu cle ar rec ept or	59 0	0 . 3 9 3	0 . 8 8 5	0. 9 6 9 5 8	0. 3		0. 8 8 9	18	3	20 01	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HO XD 11	3 2 3 7	P3127 7	homeobox D11		45	0 . 6 7	0 . 4 6 2	0. 0 0 1 1 4 2	0. 3		1	1	0	20 07	2 0 0 7

Rheumatoid Arthritis	C0003873	IRF8	3394	Q02556	interferon regulatory factor 8	Transcription factor	149	0.539	0.8807	0.9407	0.3		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	ITGA6	3655	P23229	integrin subunit alpha 6		137	0.539	0.769	1.907	0.3		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	LCN2	3934	P80188	lipocalin 2	Enzyme	497	0.405	0.885	1.409	0.3		1	1	0	1995	1995
Rheumatoid Arthritis	C0003873	MARCKS	4082	P29966	myristoylated alanine rich protein kinase C substrate		102	0.59	0.769	0.3648	0.3		1	1	0	2009	2009
Rheumatoid Arthritis	C0003873	RAB8A	4218	P61006	RAB8A, member RAS oncogene family		69	0.61	0.577	0.9743	0.3		1	1	0	2003	2003
Rheumatoid Arthritis	C0003873	PLEK	5341	P08567	pleckstrin	Cellular structure	83	0.588	0.731	0.01067	0.3		1	1	0	2003	2003
Rheumatoid Ar	C0003873	POU3F1	5453	Q03052	POU class 3 homeobox 1		25	0.711	0.462	0.54669	0.3		1	1	0	2012	2012

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DD IT4	5 4 5 4 1	Q9N X09	DNA damage inducible transcript 4		92	0 .576	0 .769	0. 00683	0. 03		1	1	0	20 07	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GI N1	5 4 8 2 6	Q9N XP7	gypsy retrotransposo n integrase 1		4	0 .89	0 .269	2. 42E-05	0. 3		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BA IAP 2L1	5 5 9 7 1	Q9U HR4	BAR/IM D domain containi ng adaptor protein 2 like 1	Re ce pto r	15	0 .805	0 .308	0. 00104	0. 03		1	1	0	20 07	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PS G5	5 6 7 3	Q152 38	pregnancy specific beta- 1-glycoprotein 5		61	0 .631	0 .615	8. 82E-22	0. 3		1	1	0	20 07	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ND UF A4 L2	5 6 9 0 1	Q9NR X3	NDUFA 4 mitocho ndrial complex associat ed like 2	En zy me	19	0 .736	0 .346	0. 00867	0. 03		1	1	0	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PT K2	5 7 4 7	Q053 97	protein tyrosine kinase 2	Ki nas e	20 5	0 .497	0 .808	0. 9987	0. 03		1	1	0	20 03	2 0 0 3
Rh eu ma toi	C 00 03	RA P2 A	5 9 1 1	P1011 4	RAP2A, member of RAS	En zy me mo	19	0 .7	0 .5	0. 850	0. 03		1	1	0	20 03	2 0 0 3

d Ar thr itis	87 3				oncogen e family	dul ato r		5 1	3 8	6 8							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BD KR B2	6 2 4	P3041 1	bradykin in receptor B2	G- pro tei n co upl ed rec ept or	10 5	0 . 5 8 5	0 . 8 0 8	0. 1 1 8 6 3	0. 3		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CX CL 6	6 3 7 2	P8016 2	C-X-C motif chemoki ne ligand 6	Sig nal ing	90	0 . 5 8 2	0 . 6 9 2	2. 7 1 E - 0 9	0. 3		1	1	0	20 04	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TL E3	7 0 9 0	Q047 26	TLE family member 3, transcrip tional corepres sor	Tr ans cri pti on fac tor	38	0 . 6 7 4	0 . 4 6 2	1	0. 3		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TM PO	7 1 1 2	P4216 6;P42 167	thymopo ietin	Sig nal ing	58	0 . 6 3 1	0 . 5 7 7	1. 5 5 E - 0 7	0. 3		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FAI P2	7 1 2 7	Q031 69	TNF alpha induced protein 2	Tr ans por ter	25	0 . 7 1 1	0 . 4 2 3	8. 2 5 E - 0 5	0. 3		1	1	0	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZF P36	7 5 3 8	P2665 1	ZFP36 ring finger protein	Nu cle ic aci d bin din g	16 1	0 . 5 2 3	0 . 6 9 2	0. 7 5 2 4 4	0. 3		1	13	0	20 04	2 0 1 9

Rheumatoid Arthritis	C0003873	TFPI2	7980	P48307	tissue factor pathway inhibitor 2	Enzyme modulator	161	0.521	0.769	0.0843	0.3		1	2	0	2004	2007
Rheumatoid Arthritis	C0003873	CALD1	800	Q05682	caldesmon 1		94	0.578	0.692	0.9879	0.3		1	1	0	2004	2004
Rheumatoid Arthritis	C0003873	ST6GALNACT5	81849	Q9BVH7	ST6 N-acetylgalactosaminide alpha-2,6-sialyltransferase 5		23	0.729	0.346	0.1967	0.3		1	2	0	2007	2007
Rheumatoid Arthritis	C0003873	MGAR	84709	Q8TDB4	mitochondria localized glutamic acid rich protein		1	1	0.115	3.88E-05	0.3		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	B3GN	84752	Q6UX72	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 9	Enzyme	1	1	0.115	1.74E-05	0.3		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	RUNX2	8660	Q13950	RUNX family transcription factor 2	Transcription factor	405	0.437	0.846	0.984	0.3		1	1	0	2010	2010
Rheumatoid Arthritis	C0003873	SLC25A12	8604	O75746	solute carrier family 25	Transporter	34	0.711	0.462	0.216	0.3		1	1	0	2003	2003

Ar thr itis					member 12					0 4							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 3E	9 1 6	P0776 6	CD3e molecule		73	0 . 6 1 5	0 . 6 1 5	0. 0 0 0 3 4 5	0. 3		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 5	9 2 1	P0612 7	CD5 molecule		32	0 . 6 8 2	0 . 3 0 8	2. 3 1 E - 1 0	0. 3		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AB CG 2	9 4 2 9	Q9U NQ0	ATP binding cassette subfamil y G member 2 (Junior blood group)	Tr ans por ter	42 0	0 . 4 1 9	0 . 8 8 5	2. 1 E - 3 2	0. 3		1	1	1	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	M MP 14	4 3 2 3	P5028 1	matrix metallo peptidase 14	En zy me	34 0	0 . 4 4 7	0 . 7 6 9	0. 9 9 5 2 2	0. 28		1	11	0	19 98	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZA P70	7 5 3 5	P4340 3	zeta chain of T cell receptor associat ed protein kinase 70	Ki nas e	21 2	0 . 4 9 7	0 . 7 6 9	0. 8 7 6 9 6	0. 24		1	6	0	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DN AS E2	1 7 7 7	O001 15	deoxyrib onucleas e 2, lysosom al	En zy me	29	0 . 7	0 . 4 6 2	0. 0 0 0 4 5 2	0. 23		1	3	0	20 09	2 0 1 2

Rheumatoid Arthritis	C0003873	HN RN PA 2B1	3181	P22626	heterogeneous nuclear ribonucleoprotein A2/B1	131	0.566	0.888	0.99732	0.21		1	2	0	2002	2007
Rheumatoid Arthritis	C0003873	CD226	1066	Q15762	CD226 molecule	124	0.548	0.769	0.03921	0.2		0.909	11	2	2009	2018
Rheumatoid Arthritis	C0003873	PA DI2	11240	Q9Y2J8	peptidyl arginine deiminase 2	67	0.61	0.615	4.95E-11	0.2		0.857	14	5	2004	2019
Rheumatoid Arthritis	C0003873	FC RL3	115352	Q96P31	Fc receptor like 3	62	0.612	0.769	5.97E-21	0.2		0.857	28	4	2005	2016
Rheumatoid Arthritis	C0003873	HL A-A	3105	P04439	major histocompatibility complex, class I, A	672	0.37	0.846	0.00133	0.2		1	17	2	1981	2014
Rheumatoid Arthritis	C0003873	HL A-B	3106	P01889	major histocompatibility complex, class I, B	706	0.379	0.885	3.86E-05	0.2		1	16	45	1982	2018
Rheumatoid Ar	C0003873	HL A-C	3107	P10321	major histocompatibility complex, class I, C	435	0.415	0.846	1.57E-6	0.2		0.944	18	14	1993	2019

thr itis									0 6								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DQ A1	3 1 1 7	P0190 9	major histoco mpatibil ity complex , class II, DQ alpha 1	Im mu ne res po nse	42 7	0 . 4 1 6	0 . 8 4 6	0. 0 2 3 9 4 7	0. 0 2		0. 9 6 2	26	8	19 90	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DQ B1	3 1 1 9	P0192 0	major histoco mpatibil ity complex , class II, DQ beta 1	Im mu ne res po nse	50 4	0 . 4 0 7	0 . 8 8 5	0. 0 0 8 9 2 6	0. 0 2		1	14	4	19 97	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ISG 20	3 6 6 9	Q96A Z6	interferon stimulated exonuclease gene 20		41 4	0 . 4 1 4	0 . 8 4 6	0. 0 0 2 8 9 9	0. 0 2		1	17	1	19 92	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TA P2	6 8 9 1	Q035 19	transport er 2, ATP binding cassette subfamil y B member	Tr ans por ter	15 5	0 . 5 1 7	0 . 8 0 8	6. 8 9 E - 1 1	0. 0 2		1	14	7	19 94	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DP P4	1 8 0 3	P2748 7	dipeptid yl peptidas e 4	En zy me	45 1	0 . 4 2	0 . 8 0 8	7. 2 8 E - 0 9	0. 0 19		0. 9	10	1	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AI RE	3 2 6	O439 18	autoimmune regulator		17 5	0 . 5 1 6	0 . 8 0 8	4. 0 5 E - 1 2	0. 0 19		1	9	7	20 11	2 0 1 9
Rh eu ma toi	C 00 03	MI CA	1. 0 1 E	Q299 83	MHC class I polypeptide- related sequence A		24 8	0 . 4	0 . 8	0. 0 0 4	0. 0 18		1	11	8	20 01	2 0 1 9

d Ar thr itis	87 3		+ 0 8					7 3	4 6	9 7							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DM B	3 1 0 9	P2806 8	major histoco mpatibil ity complex , class II, DM beta	Im mu ne res po nse	41	0 . 6 3 8	0 . 6 1 5	0. 0 2 4 6 3	0. 18		0. 8	10	5	19 97	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AT G5	9 4 7 4	Q9H1 Y0	autopha gy related 5	Tr ans por ter	28 2	0 . 4 6 2	0 . 8 8 5	0. 9 7 7 5 8	0. 17		1	11	4	20 04	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AIF 1	1 9 9	P5500 8	allograft inflamm atory factor 1	Ca lci um - bin din g pro tei n	16 6	0 . 5 2 1	0 . 8 0 8	1. 8 8 E - 0 6	0. 16		1	8	5	20 07	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	C5	7 2 7	P0103 1	comple ment C5	En zy me mo dul ato r	12 9	0 . 5 5	0 . 7 3 1	8. 0 8 E - 2 4	0. 16		1	8	3	20 07	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ME CP 2	4 2 0 4	P5160 8	methyl- CpG binding protein 2	Ep ige net ic reg ula tor	66 4	0 . 4 1 4	0 . 8 4 6	0. 8 9 3 8 2	0. 15		1	6	1	20 13	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NO TC H4	4 8 5 5	Q994 66	notch receptor 4		15 0	0 . 5 3 4	0 . 7 3 1	2. 0 5 E - 2 3	0. 15		1	8	25	20 01	2 0 1 3

Rheumatoid Arthritis	C0003873	TNIP1	10318	Q15025	TNFAIP3 interacting protein 1		93	0.564	0.769	0.459	0.14		1	5	1	2003	2019
Rheumatoid Arthritis	C0003873	CCR3	1232	P51677	C-C motif chemokine receptor 3	G-protein coupled receptor	149	0.527	0.808	0.00126	0.14		1	5	1	1997	2017
Rheumatoid Arthritis	C0003873	HLA-DOA	3111	P06340	major histocompatibility complex, class II, DO alpha	Immune response	160	0.509	0.808	2.98-10	0.14		1	7	11	1986	2016
Rheumatoid Arthritis	C0003873	HLA-DPA1	3113	P20036	major histocompatibility complex, class II, DP alpha 1	Immune response	139	0.552	0.846	2.5-06	0.14		0.857	7	8	1990	2017
Rheumatoid Arthritis	C0003873	PTPN11	5781	Q06124	protein tyrosine phosphatase non-receptor type 11		702	0.385	0.923	0.998	0.14		1	5	1	2003	2019
Rheumatoid Arthritis	C0003873	CFB	629	P00751	complement factor B		139	0.532	0.769	4.67E-16	0.14		0.857	7	7	1985	2015
Rheumatoid	C0003	SFTPD	6441	P35247	surfactant protein D	Surfactant	194	0.5	0.89	7.49E	0.14		0.833	6	2	2008	2019

d Ar thr itis	87 3								4 6	- 0 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TS BP 1	1 0 6 6 5	Q5SR N2	testis expressed basic protein 1		48	0 . 6 3 8	0 . 6 9 2	1. 4 8 E - 1 6	0. 13		0. 8 8 9	9	14 9	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC L27	1 0 8 5 0	Q9Y4 X3	C-C motif chemoki ne ligand 27	Sig nal ing	18 5	0 . 5 0 2	0 . 8 4 6	0. 0 1 3 5 1 1	0. 13		1	4	1	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PS OR S1 C1	1 7 0 6 7 9	Q9UI G5	psoriasis susceptibility 1 candidate 1		43	0 . 6 5 6	0 . 7 3 1	0. 0 0 2 6 5	0. 13		1	5	11	20 07	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI CB	4 2 7 7	Q299 80	MHC class I polypeptide- related sequence B		95	0 . 5 7 6	0 . 7 3 1	4. 0 6 E - 0 5	0. 13		1	4	1	20 01	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AP OM	5 5 9 3 7	O954 45	apolipoprotein M		82	0 . 5 9	0 . 7 6 9	0. 0 0 9 5 6	0. 13		1	5	5	20 07	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RA D5 1B	5 8 9 0	O153 15	RAD51 paralog B		12 6	0 . 5 5 6	0 . 7 6 9	2. 0 8 E - 1 5	0. 13		1	7	3	20 13	2 0 1 9

Rheumatoid Arthritis	C0003873	BACH2	60468	Q9BYV9	BTB domain and CNC homolog 2		130	0.539	0.731	0.9803	0.13		1	5	1	2012	2016
Rheumatoid Arthritis	C0003873	PRRC2A	7916	P48634	proline rich coiled-coil 2A	Enzyme	45	0.656	0.654	1	0.13		1	6	15	1998	2011
Rheumatoid Arthritis	C0003873	DDX39B	7919	Q13838	DExD-box helicase 39B		50	0.641	0.88	0.9725	0.13		1	6	8	2001	2011
Rheumatoid Arthritis	C0003873	LSIT1	7940	O00453	leukocyte specific transcript 1		17	0.792	0.38	0.013	0.13		1	6	2	2006	2016
Rheumatoid Arthritis	C0003873	CDSN	1041	Q15517	corneodesmosin		101	0.585	0.731	0.46391	0.12		1	3	2	2002	2013
Rheumatoid Arthritis	C0003873	RPP14	11102	O95059	ribonuclease P/MRP subunit p14		117	0.544	0.88	0.01927	0.12		1	5	1	1990	2019
Rheumatoid Ar	C0003873	ICOSLG	23308	O75144	inducible T cell costimulator ligand		69	0.601	0.654	0.003	0.12		1	4	3	2003	2019

thr itis										5 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PH F19	2 6 1 4 7	Q5T6 S3	PHD finger protein 19	Nu cle ic aci d bin din g	28	0 . 7 1 6	0 . 3 8 5	0. 9 9 4 6	0. 12		0. 8 5 7	7	6	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UB AS H3 A	5 3 3 4 7	P5707 5	ubiquitin associated and SH3 domain containing A		43	0 . 6 3 8	0 . 5 3 8	1. 0 5 E - 1 0	0. 12		1	6	4	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR KC H	5 5 8 3	P2472 3	protein kinase C eta	Ki nas e	55	0 . 6 5 3	0 . 5 7 7	0. 4 2 8 7 8	0. 12		1	5	4	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GS DM B	5 5 8 7 6	Q8TA X9	gasdermin B		44	0 . 6 7	0 . 5	3. 3 4 E - 0 7	0. 12		1	3	1	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BT NL 2	5 6 2 4 4	Q9UI R0	butyrop hilin like 2	En zy me mo dul ato r	14 5	0 . 5 4 6	0 . 8 0 8	8. 5 6 E - 1 1	0. 12		1	6	31	20 05	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO G6	5 7 5 1 1	Q9Y2 V7	component of oligomeric golgi complex 6		62	0 . 6 4 4	0 . 5 7 7	6. 3 6 E - 1 6	0. 12		1	2	1	20 16	2 0 1 7
Rh eu ma toi	C 00 03	C2	7 1 7	P0668 1	complement C2		71	0 . 6	0 . 6	1. 3 5 E	0. 12		1	5	13	19 76	2 0 1 1

d Ar thr itis	87 3							1 7	9 2	- 1 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UB E2 L3	7 3 3 2	P6803 6	ubiquiti n conjugat ing enzyme E2 L3	En zy me	56	0 . 6 4 4	0 . 6 1 5	0. 8 3 8 4 4	0. 12		0. 6 6 7	3	1	20 11	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NE LF E	7 9 3 6	P1861 5	negative elongation factor complex member E		40	0 . 6 8 6	0 . 5	0. 0 0 6 8 9 5	0. 12		0. 6 6 7	3	8	19 97	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KI AA 110 9	8 4 1 6 2	Q2LD 37	KIAA11 09		86	0 . 6 0 3	0 . 6 5 4	3. 2 6 E - 2 1	0. 12		1	3	2	20 09	2 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA SP1 0	8 4 3	Q928 51	caspase 10	En zy me	16 6	0 . 5 2 8	0 . 6 9 2	4. 6 4 E - 1 2	0. 12		1	3	1	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA CI R	9 0 3 5 5	Q96G V9	macrophage immunometab olism regulator		32	0 . 6 9 1	0 . 4 6 2	0. 4 2 7 4 6	0. 12		1	8	3	20 10	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SY NG R1	9 1 4 5	O437 59	synapto gyrin 1	Tr ans por ter	17	0 . 7 3 6	0 . 3 4 6	0. 4 5 1 2 1	0. 12		1	5	1	20 14	2 0 1 9

Rheumatoid Arthritis	C0003873	CD247	919	P20963	CD247 molecule	140	0.539	0.731	0.06734	0.12		1	3	4	2012	2016
Rheumatoid Arthritis	C0003873	COL4A1	1282	P02462	collagen type IV alpha 1 chain	277	0.484	0.731	1	0.11		1	1	1	2018	2018
Rheumatoid Arthritis	C0003873	COL11A2	1302	P13942	collagen type XI alpha 2 chain	399	0.435	0.846	0.797	0.11		1	3	3	2007	2011
Rheumatoid Arthritis	C0003873	DAXX	1616	Q9UER7	death domain associated protein	137	0.544	0.692	0.0633	0.11		1	2	1	2007	2011
Rheumatoid Arthritis	C0003873	ETFA	2108	P13804	electron transfer flavoprotein subunit alpha	195	0.508	0.719	0.0222	0.11		1	2	1	2013	2018
Rheumatoid Arthritis	C0003873	RTKN2	21970	Q8IZC4	rhotekin 2	22	0.722	0.385	5.46E-15	0.11		1	1	1	2012	2012
Rheumatoid Ar	C0003873	HSPA1L	3305	P34931	heat shock protein family A (Hsp70) member 1 like	65	0.603	0.654	1.06E-	0.11		1	4	2	2000	2011

thr itis										0 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IC AM 3	3 3 8 5	P3294 2	intercellular adhesion molecule 3		59	0 . 6 1 9	0 . 6 5 4	2. 7 3 E - 2 5	0. 11		1	2	1	20 03	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SM TN L2	3 4 2 5 2 7	Q2TA L5	smoothelin like 2		1	1	0 . 1 1 5	0. 0 0 0 2 3 8	0. 11		1	1	1	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 2R B2	3 5 9 5	Q996 65	interleuk in 12 receptor subunit beta 2	Sig nal ing	59	0 . 6 0 8	0 . 6 9 2	1. 6 2 E - 0 9	0. 11		1	2	1	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FA DS 1	3 9 9 2	O604 27	fatty acid desaturase 1		12 5	0 . 5 8 2	0 . 7 6 9	0. 3 7 3 8 4	0. 11		1	4	1	20 09	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MB P	4 1 5 5	P0268 6	myelin protein	basic	18 4	0 . 5 1	0 . 8 8 5	0. 2 8 4 4 6	0. 11		1	1	1	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EM CN	5 1 7 0 5	Q9UL C0	endomucin		25	0 . 7 1 6	0 . 4 2 3	8. 6 4 E - 0 5	0. 11		1	2	2	20 11	2 0 1 8
Rh eu ma toi	C 00 03	AT P6 V1 G2	5 3 4	O956 70	ATPase H+ transport ing V1	Tr ans por ter	7	0 . 8	0 . 2	0. 0 0 2	0. 11		1	3	3	20 01	2 0 1 1

d Ar thr itis	87 3				subunit G2			3 9	6 9	8 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SU PT 20 H	5 5 5 7 8	Q8NE M7	SPT20 homolog , SAGA complex compon ent	Tr ans cri pti on fac tor	18	0 . 7 5 1	0 . 3 4 6	2. 7 3 E - 1 4	0. 11		1	1	1	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PS MB 8	5 6 9 6	P2806 2	proteasome 20S subunit beta 8		16 5	0 . 5 3 3	0 . 8 0 8	0. 0 2 1 7 9 5	0. 11		1	3	4	19 98	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PS MB 9	5 6 9 8	P2806 5	proteasome 20S subunit beta 9		16 7	0 . 5 1 4	0 . 8 0 2 7 5	0. 0 11		1	2	3	19 98	2 0 0 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	W DF Y4	5 7 7 0 5	Q6ZS 81	WDFY family member 4		10	0 . 7 9 2	0 . 1 9 2	0. 3 4 0 0 9	0. 11		1	5	3	20 09	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RA RB	5 9 1 5	P1082 6	retinoic acid receptor beta	Nu cle ar rec ept or	25 4	0 . 4 7 8	0 . 8 4 6	0. 9 9 8 3	0. 11		1	1	1	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GP SM 3	6 3 9 4 0	Q9Y4 H4	G protein signaling modulator 3		17	0 . 7 5 1	0 . 4 2 3	0. 2 8 6 4 1	0. 11		1	3	4	20 07	2 0 1 6

Rheumatoid Arthritis	C0003873	CARD9	64170	Q9H257	caspase recruitment domain family member 9	103	0.566	0.54	8.15E-13	0.11		1	2	1	2015	2019
Rheumatoid Arthritis	C0003873	TNXB	7148	P22105	tenascin XB	127	0.572	0.731	0.018547	0.11		1	4	23	2001	2011
Rheumatoid Arthritis	C0003873	TPD52	7163	P55327	tumor protein D52	76	0.597	0.692	8.49E-05	0.11		1	3	1	2001	2019
Rheumatoid Arthritis	C0003873	MPIG6B	80739	O95866	megakaryocyte and platelet inhibitory receptor G6b	30	0.695	0.65	1.08E-06	0.11		1	2	1	2000	2011
Rheumatoid Arthritis	C0003873	TMEM187	8269	Q14656	transmembrane protein 187	8	0.839	0.231	0.01577	0.11		1	2	1	2012	2017
Rheumatoid Arthritis	C0003873	MYO18B	84700	Q8IUG5	myosin XVIIIIB	63	0.628	0.615	1.03E-31	0.11		1	2	1	2013	2019
Rheumatoid Ar	C0003873	NTN1	9423	O95631	netrin 1	Enzyme mod	209	0.509	0.84687	0.11		1	2	1	2009	2009

thr itis						ato r											
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SH 3P XD 2A	9 6 4 4	Q5TC Z1	SH3 and PX domains 2A		32	0 . 7 2 9	0 . 3 8 5	0. 9 8 9 7	0. 11		1	2	1	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EL MO 1	9 8 4 4	Q925 56	engulfm ent and cell motility 1	Sig nal ing	72	0 . 6 0 8	0 . 6 1 5	0. 8 9 9 7	0. 11		1	3	2	20 12	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NA T2	1 0	P1124 5	N- acetyltra nsferase 2	En zy me	31 1	0 . 4 5 1	0 . 8 8 5	3. 2 7 E - 0 6	0. 1		1	10	3	20 02	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZD HH C2 OP2	1 E + 0 8		zinc finger DHHC-type containing 20 pseudogene 2		3	0 . 8 9	0 . 1 9 2		0. 1		1	1	1	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TM PO P1	1 E + 0 8		thymopoietin pseudogene 1		2	1	0 . 1 1 5		0. 1		1	2	1	20 07	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	W AK MA R2	1 E + 0 8		wound and keratinocyte migration associated lncRNA 2		2	0 . 9 3 1	0 . 1 1 5		0. 1		1	1	1	20 17	2 0 1 7
Rh eu ma toi	C 00 03	HN RN PA 1P2	1 E +		heterogeneous nuclear ribonucleoprot		2	1	0 . 1		0. 1		1	1	1	20 11	2 0 1 1

d Ar thr itis	87 3		0 8		ein A1 pseudogene 2			1 5								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NO NO P2	1 E + 0 8		non-POU domain containing, octamer- binding pseudogene 2	6	0 . 8 6 1	0 . 2 3 1		0. 1		1	1	1	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UB DP 1	1 E + 0 8		ubiquitin D pseudogene 1	2	1	0 . 1 1 5		0. 1		1	1	1	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AP 4B 1- AS 1	1 E + 0 8		AP4B1 antisense RNA 1	13	0 . 8 0 5	0 . 2 3 1		0. 1		1	2	12	20 09	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY P4F 23P	1 E + 0 8		cytochrome P450 family 4 subfamily F member 23, pseudogene	1	1	0 . 1 1 5		0. 1		1	1	1	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PS MB 8- AS 1	1. 0 1 E + 0 8		PSMB8 antisense RNA 1 (head to head)	6	0 . 8 3 9	0 . 3 8 5		0. 1		1	1	3	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MU C2 2	1. 0 1 E + 0 8	E2RY F6	mucin 22	19	0 . 7 2 9	0 . 5 4 0 4 7	0. 1	0. 1		1	2	6	20 07	2 0 0 9
Rh eu	C 00	MS H5-	1. 0		MSH5- SAPCD1	21	0 .	0 .		0. 1		1	3	10	20 07	2 0

ma toi d Ar thr itis	03 87 3	SA PC D1	1 E + 0 8		readthrough (NMD candidate)		7 6	4 2 3								1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AT P6 V1 G2- DD X3 9B	1. 0 1 E + 0 8		ATP6V1G2- DDX39B readthrough (NMD candidate)	15	0 . 7 6 9	0 . 4 2 3		0. 1		1	3	8	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PP T2- EG FL 8	1. 0 1 E + 0 8		PPT2-EGFL8 readthrough (NMD candidate)	17	0 . 7 9 2	0 . 4 6 2		0. 1		1	3	6	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD H1 1	1 0 0 9	P5528 7	cadherin 11	20 3	0 . 5 1 2	0 . 8 0 8	0. 9 9 9	0. 1		0. 9 1 7	12	0	20 04	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TS PA N5	1 0 0 9 8	P6207 9	tetraspanin 5	9	0 . 7 8	0 . 3 0 8	0. 9 0 9 5 1	0. 1		1	1	1	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TRI M1 0	1 0 1 0 7	Q9U DY6	tripartite motif containing 10	14	0 . 8 2 1	0 . 2 6 9	3. 7 4 E - 0 9	0. 1		1	2	3	20 07	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI NC 019 34	1. 0 2 E + 0 8		long intergenic non-protein coding RNA 1934	11	0 . 8 2 1	0 . 3 0 8		0. 1		1	1	1	20 16	2 0 1 6

Rheumatoid Arthritis	C0003873	LNCPRESS1	1.02E+08		lncRNA p53 regulated and ESC associated 1	1	1	0.115	0.1		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	LINC00824	1.02E+08		long intergenic non-protein coding RNA 824	24	0.695	0.346	0.1		1	3	2	2014	2019
Rheumatoid Arthritis	C0003873	TSBP1-AS1	1.02E+08		TSBP1 and BTNL2 antisense RNA 1	63	0.638	0.692	0.1		1	6	221	2007	2014
Rheumatoid Arthritis	C0003873	C3orf67-AS1	1.02E+08		C3orf67 antisense RNA 1	3	0.89	0.154	0.1		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	C2-AS1	1.02E+08		C2 antisense RNA 1	10	0.821	0.912	0.1		1	3	5	2007	2011
Rheumatoid Arthritis	C0003873	HCG9	10255		HLA complex group 9	22	0.7	0.5	0.1		1	2	2	2007	2009
Rheumatoid Ar	C0003873	LOC102723407	1.03E+		immunoglobulin heavy variable 4-38-2-like	159	0.514	0.769	0.1		1	10	0	1993	2017

thr itis			0 8														
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AS B1 5- AS 1	1. 0 3 E + 0 8		ASB15 antisense RNA 1		1	1	0 . 1 1 5		0. 1		1	1	1	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LO C1 027 249 71	1. 0 3 E + 0 8		putative V-set and immunoglobul in domain- containing- like protein IGHV4OR15- 8		13 9	0 . 5 2 7	0 . 7 6 9		0. 1		1	10	0	19 93	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ST AG 1	1 0 2 7 4	Q8W VM7	stromal antigen 1	Nu cle ic aci d bin din g	56	0 . 6 5 6	0 . 5 7 7	1	0. 1		1	2	1	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NE BL	1 0 5 2 9	O760 41	nebulette		48	0 . 6 5	0 . 6 9 2	1. 7 7 E - 3 6	0. 1		1	1	1	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI NC 023 56	1. 0 5 E + 0 8		long intergenic non-protein coding RNA 2356		7	0 . 9 3 1	0 . 1 1 5		0. 1		1	2	1	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI NC 023 57	1. 0 5 E + 0 8		long intergenic non-protein coding RNA 2357		10	0 . 8 0 5	0 . 2 3 1		0. 1		1	3	4	20 12	2 0 1 5
Rh eu ma toi	C 00 03	LI NC 025 71	1. 0 5 E		long intergenic non-protein		28	0 . 7	0 . 5		0. 1		1	2	9	20 07	2 0 1 1

d Ar thr itis	87 3		+ 0 8		coding RNA 2571			4 3									
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ET V7- AS 1	1. 0 5 E + 0 8		ETV7 and PTX1 antisense RNA 1		2	0 . 9 3 1	0 . 1 1 5		0. 1		1	2	1	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI NC 017 48	1. 0 5 E + 0 8		long intergenic non-protein coding RNA 1748		3	0 . 8 9	0 . 1 5 4		0. 1		1	1	1	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AG PA T1	1 0 5 5 4	Q999 43	1- acylglycerol- 3-phosphate O- acyltransferas e 1		18	0 . 7 4 3	0 . 4 2 3	0. 9 7 2 1 5	0. 1		1	1	10	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CX CL 13	1 0 5 6 3	O439 27	C-X-C motif chemoki ne ligand 13	Signal ing	24 6	0 . 4 7 2	0 . 7 3 1	0. 8 2 5 6 6	0. 1		1	13	0	20 01	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AH SA 1	1 0 5 9 8	O954 33	activator of HSP90 ATPase activity 1		52 6	0 . 3 9 6	0 . 9 2 3	0. 9 8 9 6	0. 1		1	23	1	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD C4 2E P3	1 0 6 0 2	Q9U KI2	CDC42 effector protein 3		24	0 . 7 2 2	0 . 4 2 3	0. 1 8 5 6 2	0. 1		1	1	1	20 19	2 0 1 9
Rh eu	C 00	EH MT	1. 0		EHMT2 and SLC44A4		14	0 .	0 .		0. 1		1	3	4	20 07	2 0

ma toi d Ar thr itis	03 87 3	2- AS 1	6 E + 0 8		antisense RNA 1		7 8	4 6 2								1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MD C1- AS 1	1. 0 6 E + 0 8		MDC1 antisense RNA 1	16	0 . 7 4 3	0 . 3 0 8		0. 1		1	1	1	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CE LF 2	1 0 6 5 9	O953 19	CUGBP Elav- like family member 2	58	0 . 6 2 8	0 . 6 9 2 6 5	0. 9 9 6 5	0. 1		1	1	1	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FS F13 B	1 0 6 7 3	Q9Y2 75	TNF superfamily member 13b	28 2	0 . 4 6	0 . 7 3 1 9 3	0. 9 8 1 9 3	0. 1		1	28	0	20 02	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MT CO 2P1 2	1. 0 7 E + 0 8		MT-CO2 pseudogene 12	70 3	0 . 3 6 8	0 . 9 6 2		0. 1		1	25	0	19 94	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PH TF 1	1 0 7 4 5	Q9U MS5	putative homeod omain transcrip tion factor 1	2	0 . 9 3 1	0 . 1 9 2	9. 6 9 E - 2 6	0. 1		1	1	3	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI NC 021 96	1. 0 8 E + 0 8		long intergenic non-protein coding RNA 2196	3	0 . 9 3 1	0 . 2 3 1		0. 1		1	1	2	20 13	2 0 1 3

Rheumatoid Arthritis	C0003873	HC P5	10866	Q6M ZN7	HLA complex P5		79	0.595	0.808		0.1		1	2	5	2007	2009
Rheumatoid Arthritis	C0003873	PA POLA	10914	P51003	poly(A) polymerase alpha	Nucleic acid binding	79	0.593	0.731	0.9998	0.1		1	1	1	2009	2009
Rheumatoid Arthritis	C0003873	EH MT2	10919	Q96K Q7	euchromatic histone lysine methyltransferase 2	Epigenetic regulator	86	0.59	0.808	0.0013	0.1		1	3	6	2007	2011
Rheumatoid Arthritis	C0003873	OS9	10956	Q13438	OS9 endoplasmic reticulum lectin		5	0.931	0.154	2.86E-09	0.1		1	3	2	2014	2019
Rheumatoid Arthritis	C0003873	HT D2	11E+08	P86397	hydroxyacyl-thioester dehydratase type 2		2	1	0.15		0.1		1	3	1	2014	2019
Rheumatoid Arthritis	C0003873	TRI M31	11074	Q9BZ Y9	tripartite motif containing 31		61	0.626	0.577	4.32E-06	0.1		1	2	4	2007	2009
Rheumatoid Ar	C0003873	CHI3L1	1116	P36222	chitinase like 1 3		420	0.419	0.885	1.11E-	0.1		0.944	18	1	1993	2019

thr itis										0 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FA M1 07 A	1 1 1 7 0	O959 90	family with sequence similarity 107 member A		36	0 . 6 7 4	0 . 4 6 2	8. 2 8 E - 0 7	0. 1		1	3	1	20 10	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NR M	1 1 2 7 0	Q8IX M6	nurim		16	0 . 7 6	0 . 2 3 1	0. 0 2 1 8 2 8	0. 1		1	1	1	20 07	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 7F	1 1 2 7 4 4	Q96P D4	interleukin 17F		23 6	0 . 4 8	0 . 8 0 8	0. 0 3 9 1 6 5	0. 1		0. 8 6 7	15	2	20 09	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SM IM 40	1. 1 4 E + 0 8	Q5ST R5	small integral membrane protein 40		1	1	0 . 1 1 5		0. 1		1	1	2	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NL RP 3	1 1 4 5 4 8	Q96P 20	NLR family pyrin domain containing 3		80 5	0 . 3 6 1	0 . 9 6 2	0. 0 0 8 1 1	0. 1		0. 8 7	23	2	20 04	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CS MD 3	1 1 4 7 8 8	Q7Z4 07	CUB and Sushi multiple domains 3		31	0 . 6 9 5	0 . 5 5 7 1 0 5	0. 0 1		1	1	1	20 18	2 0 1 8	
Rh eu ma toi	C 00 03	PH AC TR 3	1 1 6 1	Q96K R7	phospha tase and actin	En zy me mo	6	0 . 8	0 . 2	0. 9 9 6	0. 1		1	3	2	20 07	2 0 1 9

d Ar thr itis	87 3		5 4		regulato r 3	dul ato r		6 1	3 1	8 7							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RP L3 P2	1 1 6 9 3 5		ribosomal protein L3 pseudogene 2		1	1	0 . 1 1 5		0. 1		1	1	2	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IP6 K3	1 1 7 2 8 3	Q96P C2	inositol hexakisphosphate kinase 3	Ki nas e	10	0 . 8 3 9	0 . 2 3 1	3. 0 9 E - 0 7	0. 1		1	3	8	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CLI C1	1 1 9 2	O002 99	chloride intracell ular channel 1	Ion ch an nel	74	0 . 6 0 1	0 . 5	0. 0 0 1 9 3	0. 1		1	1	2	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC R5	1 2 3 4	P5168 1	C-C motif chemoki ne receptor 5 (gene/ps eudogen e)	G- pro tei n co upl ed rec ept or	50 8	0 . 3 9 8	0 . 8 8 5	4. 3 1 E - 1 0	0. 1		0. 9 6 7	30	0	19 98	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZP BP 2	1 2 4 6 2 6	Q6X7 84	zona pellucida binding protein 2		20	0 . 7 2 9	0 . 3 0 8	1. 2 2 E - 0 8	0. 1		1	1	1	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RA VE R1	1 2 5 9 5 0	Q8IY 67	ribonucl eoprotei n, PTB binding 1	Nu cle ic aci d bin din g	9	0 . 8 0 5	0 . 2 3 1	0. 9 1 0 1	0. 1		1	1	1	20 12	2 0 1 2

Rheumatoid Arthritis	C0003873	CNTR	1271	P26992	ciliary neurotrophic factor receptor	Signal ing	19	0.722	0.385	0.9549	0.1		1	1	1	2009	2009
Rheumatoid Arthritis	C0003873	RB M45	129831	Q8IUH3	RNA binding motif protein 45		557	0.383	0.846	2.11E-10	0.1		0.89	200	1	1989	2019
Rheumatoid Arthritis	C0003873	FLAC1	130540	Q96Q35	flagellum associated containing coiled-coil domains 1		18	0.729	0.269	1.31E-22	0.1		1	2	2	2014	2019
Rheumatoid Arthritis	C0003873	TRIM40	135644	Q6P9F5	tripartite motif containing 40		6	0.89	0.192	6.17E-11	0.1		1	2	3	2007	2009
Rheumatoid Arthritis	C0003873	MUCL3	135656	Q3MIW9	mucin like 3		32	0.691	0.731	1.23E-05	0.1		1	2	3	2007	2009
Rheumatoid Arthritis	C0003873	SGCZ	137868	Q96LD1	sarcogly can zeta	Cellular structure	22	0.751	0.385	6.4E-09	0.1		1	1	1	2019	2019
Rheumatoid Ar	C0003873	ATF6B	1388	Q99941	activating transcription factor 6 beta		14	0.839	0.192	3.1E-07	0.1		1	3	2	2007	2011

thritis																	
Rheumatoid Arthritis	C0003873	CRH	1392	P06850	corticotropin releasing hormone	Signaling	402	0439	0808	0.71614	0.1		0.923	13	0	1993	2012
Rheumatoid Arthritis	C0003873	CRK	1398	P46108	CRK proto-oncogene, adaptor protein		544	0394	0923	0.95936	0.1		1	23	0	2003	2019
Rheumatoid Arthritis	C0003873	CRYGD	1421	P07320	crystallin gamma D		168	051	0800303	0.003	0.1		0.927	123	0	2005	2020
Rheumatoid Arthritis	C0003873	ASB15	142685	Q8W XK1	ankyrin repeat and SOCS box containing 15		9	0792	0231	1.84E-15	0.1		1	1	1	2009	2009
Rheumatoid Arthritis	C0003873	MAPK14	1432	Q16539	mitogen-activated protein kinase 14	Kinase	626	0379	0923	0.37466	0.1		1	30	0	2000	2019
Rheumatoid Arthritis	C0003873	DRAC	145837		downregulated RNA in cancer, inhibitor of cell invasion and migration		21	0736	0423		0.1		1	4	1	2012	2019
Rheumatoid	C0003	CSNK2B	1460	P67870	casein kinase 2 beta	Kinase	34	06	05	0.917	0.1		1	1	4	2011	2011

d Ar thr itis	87 3							8 6	3 8	2 8							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL3 4	1 4 6 4 3 3	Q6Z MJ4	interleukin 34		10 3	0 . 5 6	0 . 7 6 9	0. 5 5 4 4	0. 1		1	15	0	20 12	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CS TF 3	1 4 7 9	Q129 96	cleavage stimulati on factor subunit 3	Nu cle ic aci d bin din g	6	0 . 8 9	0 . 1 5 4	0. 9 8 2 7 9	0. 1		1	1	1	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2 3R	1 4 9 2 3 3	Q5V WK5	interleuk in 23 receptor	Sig nal ing	30 6	0 . 4 6 6	0 . 7 6 9	0. 0 0 0 5 6	0. 1		0. 7 5	20	8	20 07	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI NC 011 04	1 5 0 5 7 7		long intergenic non-protein coding RNA 1104		9	0 . 8 0 5	0 . 1 1 5		0. 1		1	2	2	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZN F59 5	1 5 2 6 8 7	Q8IY B9	zinc finger protein 595		1	1	0 . 1 1 5	0. 3 0 5 5	0. 1		1	1	1	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ERI CH 1	1 5 7 6 9 7	Q86X 53	glutamate rich 1		2	0 . 9 3 1	0 . 1 9 2	1. 1 4 E - 1 4	0. 1		1	1	1	20 19	2 0 1 9

Rheumatoid Arthritis	C0003873	CYP21A2	1589	P08686	cytochrome P450 family 21 subfamily A member 2		166	0.525	0.769	0.0026	0.1		1	3	46	2007	2011
Rheumatoid Arthritis	C0003873	DGKQ	1609	P52824	diacylglycerol kinase theta	Kinase	17	0.736	0.743	1.76E-09	0.1		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	MDGA2	161357	Q7Z553	MAM domain containing glycosylphosphatidylinositol anchor 2		24	0.766	0.738	0.6457	0.1		1	1	1	2013	2013
Rheumatoid Arthritis	C0003873	ZNFX09	168417	Q8IYX0	zinc finger protein 679		1	1	0.1157	0.11547	0.1		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	CLYBL	171425	Q8N0X4	citrate lyase beta like		18	0.743	0.75	1.64E-09	0.1		1	1	1	2015	2015
Rheumatoid Arthritis	C0003873	DLG2	1740	Q15700	discs large MAGUK scaffold protein 2	Receptor	44	0.677	0.779	0.7096	0.1		1	1	1	2018	2018
Rheumatoid Ar	C0003873	EGFR	1956	P00533	epidermal growth factor receptor	Kinase	1394	0.295	0.885	0.36837	0.1		1	10	3	2005	2018

thritis																	
Rheumatoid Arthritis	C0003873	C3orf67	200844	Q6ZVT6	chromosome 3 open reading frame 67	Enzyme	3	0.89	0.192	9.4E-11	0.1		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	TRIM39-RPP21	202658		TRIM39-RPP21 readthrough		6	0.821	0.269	0.7425	0.1		1	1	1	2009	2009
Rheumatoid Arthritis	C0003873	EPHB2	2048	P29323	EPH receptor B2	Kinase	649	0.374	0.846	0.9997	0.1		0.923	13	0	2007	2020
Rheumatoid Arthritis	C0003873	AKT1	207	P31749	AKT serine/threonine kinase 1	Kinase	1250	0.311	0.962	0.9759	0.1		0.938	16	0	2007	2019
Rheumatoid Arthritis	C0003873	ESR1	2099	P03372	estrogen receptor 1	Nuclear receptor	1101	0.324	0.962	0.992	0.1		0.977	44	0	2000	2020
Rheumatoid Arthritis	C0003873	ALB	213	P02768	albumin	Transporter	1198	0.317	0.962	0.64329	0.1		0.95	20	0	1996	2020
Rheumatoid	C0003873	FCGR3A	2214	P08637	Fc fragment of IgG	Cell ad	352	0.4	0.9	3.7E-	0.1		0.909	33	3	1990	2019

d Ar thr itis	87 3				receptor IIIa	hes ion		3 2	6 2	0 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FC GR 3B	2 2 1 5	O750 15	Fc fragmen t of IgG receptor IIIb	Ce ll ad hes ion	29 1	0 . 4 5 2	0 . 9 6 2	3. 0 3 E - 0 7	0. 1		0. 9 2 3	26	2	19 90	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	JA ZF 1	2 2 1 8 9 5	Q86V Z6	JAZF finger 1	zinc	10 2	0 . 5 8 2	0 . 6 5 4	0. 8 9 5 8 2	0. 1		1	1	1	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NK AP L	2 2 2 6 9 8	Q5M9 Q1	NFKB activating protein like		4	0 . 8 9	0 . 2 3 1	9. 2 2 E - 0 5	0. 1		1	1	1	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FG F2	2 2 4 7	P0903 8	fibroblas t growth factor 2	Sig nal ing	63 5	0 . 3 8 3	0 . 9 2 3	0. 0 1 8 4	0. 1		1	11	0	19 92	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GP C5	2 2 6 2	P7833 3	glypican 5		65	0 . 6 2 6	0 . 6 5 4	3. 9 9 E - 1 0	0. 1		1	1	1	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DK K1	2 2 9 4 3	O949 07	dickkopf WNT signaling pathway inhibitor 1		37 2	0 . 4 3 9	0 . 8 8 5	0. 1 7 4 2 3	0. 1		1	16	0	20 08	2 0 1 9

Rheumatoid Arthritis	C0003873	ABCF1	23	Q8NE71	ATP binding cassette subfamily F member 1	Enzyme	31	0.674	0.538	1.28E-09	0.1		1	2	1	2007	2009
Rheumatoid Arthritis	C0003873	PLCL2	23228	Q9UPR0	phospholipase C like 2	Enzyme	30	0.743	0.308	0.9999	0.1		1	2	1	2014	2019
Rheumatoid Arthritis	C0003873	PDSS5A	23244	Q29RF7	PDS5 cohesin associated factor A	Nucleic acid binding	16	0.792	0.346	1	0.1		1	1	2	2009	2009
Rheumatoid Arthritis	C0003873	FN1	2335	P02751	fibronectin 1	Signaling	724	0.365	0.962	0.0014	0.1		1	18	0	1992	2019
Rheumatoid Arthritis	C0003873	SIRT1	23411	Q96EB6	sirtuin 1	Epigenetic regulator	675	0.3788	0.8873	0.00026	0.1		0.938	16	0	2011	2020
Rheumatoid Arthritis	C0003873	TNPO3	23534	Q9Y5L0	transport in 3	Transporter	66	0.663	0.577	1.75E-06	0.1		1	2	4	2017	2019
Rheumatoid Ar	C0003873	SDF2L1	23753	Q9HCN8	stromal cell derived factor 2 like 1		12	0.805	0.385	0.18957	0.1		1	1	1	2019	2019

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2 7	2 4 6 7 7 8	Q8NE V9	interleukin 27		28 6	0 . 4 5 7	0 . 8 0 8	0. 7 8 2 3 2	0. 1		1	10	0	20 10	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HC G2 7	2 5 3 0 1 8		HLA complex group 27		14	0 . 8 0 5	0 . 3 4 6	0. 0 2 3 0 6 3	0. 1		1	3	4	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	W DR 27	2 5 3 7 6 9	A2RR H5	WD repeat domain 27		4	0 . 9 3 1	0 . 1 9 2	3. 8 E - 1 7	0. 1		1	1	1	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA BB R1	2 5 5 0	Q9UB S5	gamma- aminobu tyric acid type B receptor subunit 1	G- pro tei n co upl ed rec ept or	82	0 . 5 8 7	0 . 7 6 9	0. 9 9 9 1	0. 1		1	1	6	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AS F1 A	2 5 8 4 2	Q9Y2 94	anti- silencin g function 1A histone chapero ne	Nu cle ic aci d bin din g	36	0 . 6 7	0 . 6 1 5	0. 8 0 5 4 2	0. 1		1	10	0	20 02	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RN F19 A	2 5 8 9 7	Q9N V58	ring finger protein 19A, RBR E3 ubiquiti n protein ligase	En zy me	52 3	0 . 3 9 7	0 . 9 2 3	0. 0 2 5 3 0 5	0. 1		1	23	0	20 03	2 0 1 9

Rheumatoid Arthritis	C0003873	RCHY1	25898	Q96PM5	ring finger and CHY zinc finger domain containing 1	Enzyme	26	0.76	0.42	0.06203	0.1		1	1	1	2013	2013
Rheumatoid Arthritis	C0003873	LY6G6F	259215	Q5SQ64	lymphocyte antigen family member G6F	6	5	0.861	0.308	9.56E-07	0.1		1	2	3	2007	2009
Rheumatoid Arthritis	C0003873	MA6I3	260425	Q5TCQ9	membrane associated guanylate kinase, WW and PDZ domain containing 3		17	0.751	0.346	0.02978	0.1		1	1	1	2009	2009
Rheumatoid Arthritis	C0003873	PO6LDIP2	260733	Q9Y2S7	DNA polymerase delta interacting protein 2		530	0.396	0.923	0.04407	0.1		1	23	0	2003	2019
Rheumatoid Arthritis	C0003873	FB6XW8	26259	Q8N3Y1	F-box and WD repeat domain containing 8		18	0.743	0.385	5.24E-16	0.1		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	GC6H1	2643	P30793	GTP cyclohydrolase 1	Enzyme	254	0.511	0.846	0.9022	0.1			0	0		
Rheumatoid	C0003873	GE6M	2669	P55040	GTP binding protein overexpressed in skeletal muscle		251	0.467	0.769	1.18E-1	0.1		0.9	10	0	2006	2019

Ar thr itis								0 8								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A-S	2 6 7 0 1 5		major histocompatib ility complex, class I, S (pseudogene)	2	0 . 9 3 1	0 . 1 9 2		0. 1		1	3	1	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GF RA 1	2 6 7 4	P5615 9	GDNF family receptor alpha 1	73	0 . 6 1 9	0 . 6 1 5	0. 1 1 7 5	0. 1		1	1	1	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DK K3	2 7 1 2 2	Q9UB P4	dickkopf WNT signaling pathway inhibitor 3	18 6	0 . 5	0 . 7 3 1	4. 1 E - 0 6	0. 1		1	1	1	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL3 7	2 7 1 7 8	Q9NZ H6	interleukin 37	28 0	0 . 4 5 9	0 . 8 4 6	0. 0 0 0 1 2 3	0. 1		1	12	1	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 7B	2 7 1 9 0	Q9U HF5	interleukin 17B	11 6	0 . 5 5 3	0 . 7 6 9	0. 0 3 3 6 3 1	0. 1		0. 9 2 3	13	0	20 06	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HP GD S	2 7 3 0 6	O607 60	hematopoietic prostaglandin D synthase	57 0	0 . 3 8 8	0 . 9 2 3	1. 8 1 E - 0 6	0. 1		1	10	0	19 99	2 0 1 9
Rh eu ma	C 00 03	GN L1	2 7	P3691 5	G protein nucleolar 1 (putative)	11	0 . 8	0 . 4	0. 9 9	0. 1		1	2	1	20 07	2 0

to id Ar thr itis	87 3		9 4					0 5	2 3	9 2 8						0 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GPI	2 8 2 1	P0674 4	glucose- 6- phospha te isomeras e	En zy me	21 8	0 . 4 9 1	0 . 7 6 9	2. 8 4 E - 0 6	0. 1		1	16	0	20 02	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI NC 002 94	2 8 3 2 6 7		long intergenic non-protein coding RNA 294		1	1	0 . 1 1 5		0. 1		1	1	1	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CX CR 3	2 8 3 3	P4968 2	C-X-C motif chemoki ne receptor 3	G- pro tei n co upl ed rec ept or	36 7	0 . 4 3 6	0 . 8 0 8	0. 1 1	0. 1		1	11	0	20 01	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HE CT D4	2 8 3 4 5 0	Q9Y4 D8	HECT domain E3 ubiquitin protein ligase 4		55	0 . 7	0 . 4 6 2	1	0. 1		1	1	1	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TM EM 235	2 8 3 9 9 9	A6NF C5	transmembran e protein 235		1	1	0 . 1 1 5	0. 0 0 4 5 8	0. 1		1	1	1	20 19	2 0 1 9
Rh eu ma toi d Ar	C 00 03 87 3	HC G2 2	2 8 5 8 3 4	E2RY F7	HLA complex group 22 (gene/pseudog ene)		20	0 . 7 3 6	0 . 4 2 3		0. 1		1	2	2	20 07	2 0 0 9

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GS TM 1	2 9 4 4	P0948 8	glutathione S- transferase mu 1		62 7	0 . 3 8	0 . 9 2 3	0. 0 0 2 0 6 4	0. 1		0. 8	15	0	19 99	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GS TT 1	2 9 5 2	P3071 1	glutathione S- transferase theta 1		54 1	0 . 3 9 3	0 . 9 2 3	0. 0 0 1 4 8	0. 1		0. 9	10	0	19 99	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GU CY 1B 2	2 9 7 4	O753 43	guanylate cyclase 1 soluble subunit beta 2 (pseudogene)		2	1	0 . 1 1 5		0. 1		1	1	1	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HIF 1A	3 0 9 1	Q166 65	hypoxia inducibl e factor 1 subunit alpha	Tr ans cri pti on fac tor	10 44	0 . 3 2 7	0 . 9 2 3	0. 9 7 7	0. 1		1	19	0	20 03	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DO B	3 1 1 2	P1376 5	major histoco mpatibil ity complex , class II, DO beta	Im mu ne res po nse	24	0 . 7 0 5	0 . 5	1. 9 2 E - 0 6	0. 1		1	4	8	20 07	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DP B2	3 1 1 6		major histocompatib ility complex, class II, DP beta 2 (pseudogene)		15	0 . 7 4 3	0 . 5		0. 1		1	1	1	20 09	2 0 0 9
Rh eu ma toi	C 00 03	HL A- DQ B2	3 1 2 0	P0553 8	major histoco mpatibil ity	Im mu ne res	91	0 . 5	0 . 7	0. 0 4 2	0. 1		1	3	3	20 07	2 0 1 1

d Ar thr itis	87 3				complex , class II, DQ beta 2	po nse		7 3	3 1	6 7 9							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DQ B3	3 1 2 1		major histocompatib ility complex, class II, DQ beta 3		2	0 . 9 3 1	0 . 1 9 2		0. 1		1	1	11	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DR A	3 1 2 2	P0190 3	major histoco mpatibil ity complex , class II, DR alpha	Im mu ne res po nse	92	0 . 5 8 1	0 . 7 6 9	0. 5 1 9 4 9	0. 1		1	3	36	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DR B4	3 1 2 6	P1376 2	major histoco mpatibil ity complex , class II, DR beta 4	Im mu ne res po nse	87	0 . 5 6 5	0 . 8 4 6		0. 1		0. 8	10	0	19 89	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DR B9	3 1 3 2		major histocompatib ility complex, class II, DR beta 9 (pseudogene)		33	0 . 6 8 2	0 . 6 5 4		0. 1		1	6	21	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- G	3 1 3 5	P1769 3	major histocompatib ility complex, class I, G		27 9	0 . 4 6 1	0 . 7 6 9	1. 3 7 E - 1 1	0. 1		0. 9	10	2	20 06	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HM GB 1	3 1 4 6	P0942 9	high mobility group box 1	Nu cle ic aci d bin din g	72 4	0 . 3 6 8	0 . 9 2 3	0. 8 2 0 3 5	0. 1		1	20	3	20 03	2 0 2 0

Rheumatoid Arthritis	C00873	HS PA 4	3308	P34932	heat shock protein family A (Hsp70) member 4	550	0.394	0.923	0.9954	0.1		0.929	14	0	1996	2019
Rheumatoid Arthritis	C00873	HS PD 1	3329	P10809	heat shock protein family D (Hsp60) member 1	398	0.432	0.808	0.9257	0.1		1	12	1	1993	2020
Rheumatoid Arthritis	C00873	IC AM 1	3383	P05362	intercellular adhesion molecule 1	737	0.364	0.962	0.03295	0.1		0.963	27	3	1996	2020
Rheumatoid Arthritis	C00873	IFN A1	3439	P01562	interferon alpha 1	662	0.371	0.923		0.1		0.857	14	0	2003	2019
Rheumatoid Arthritis	C00873	IFN A1 3	3447	P01562	interferon alpha 13	646	0.374	0.923		0.1		0.857	14	0	2003	2019
Rheumatoid Arthritis	C00873	IGF 1	3479	P05019	insulin like growth factor 1	1206	0.3188	0.816	0.2716	0.1		0.941	17	0	1995	2019
Rheumatoid Ar	C00873	FA S	355	P25445	Fas cell surface death receptor	754	0.372	0.923	0.817	0.1		0.7	10	2	1999	2015

thr itis																
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 A	3 5 5 2	P0158 3	interleukin 1 alpha	10 02	0 . 3 3	0 . 9 6 2	0. 0 0 1 6	0. 1		1	10 4	1	19 88	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2	3 5 5 8	P6056 8	interleukin 2	95 0	0 . 3 6	0 . 8 8 5	0. 4 7 9 6 8	0. 1		0. 9 7 8	46	1	19 86	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL4	3 5 6 5	P0511 2	interleukin 4	99 6	0 . 3 2	0 . 9 6 2	0. 0 4 7 3 7	0. 1		0. 9 4 2	52	1	19 92	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL7	3 5 7 4	P1323 2	interleukin 7	27 5	0 . 4 6 4	0 . 8 0 8	0. 9 2 5 7 4	0. 1		1	11	0	20 05	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL9	3 5 7 8	P1524 8	interleukin 9	29 1	0 . 4 6 1	0 . 8 4 6	8. 1 1 E - 0 7	0. 1		1	12	0	20 00	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 3	3 5 9 6	P3522 5	interleukin 13	58 7	0 . 3 8 6	0 . 8 4 6	0. 0 1 4 4 2 6	0. 1		1	13	1	19 96	2 0 1 9
Rh eu ma toi	C 00 03	IL1 5	3 6 0 0	P4093 3	interleukin 15	42 6	0 . 4	0 . 8	0. 7 0 8	0. 1		1	27	0	19 99	2 0 1 9

d Ar thr itis	87 3						2 2	4 6	5 9								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 7A	3 6 0 5	Q165 52	interleukin 17A		10 74	0 . 3 2 4	0 . 9 2 3	0. 0 4 3 0 4 9	0. 1		0. 9 5 9	19 4	7	19 99	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ILF 3	3 6 0 9	Q129 06	interleuk in enhance r binding factor 3	Nu cle ic aci d bin din g	68	0 . 6 2 1	0 . 6 5 4	1	0. 1		1	1	1	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CX CL 10	3 6 2 7	P0277 8	C-X-C motif chemoki ne ligand 10	Sig nal ing	63 1	0 . 3 7 8	0 . 8 8 5	0. 3 6 8 6 5	0. 1		0. 9	20	1	20 01	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AR	3 6 7	P1027 5	androge n receptor	Nu cle ar rec ept or	85 4	0 . 3 5 1	0 . 8 4 6	0. 9 8 8 3 7	0. 1		0. 9	10	0	19 99	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ITP R3	3 7 1 0	Q145 73	inositol 1,4,5- trisphos phate receptor type 3	Ion ch an nel	11 2	0 . 5 5 5	0 . 8 0 8	2. 5 5 E - 2 2	0. 1		1	3	8	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	JA K1	3 7 1 6	P2345 8	Janus kinase 1	Ki nas e	23 9	0 . 4 7 4	0 . 7 6 9	0. 9 9 9 8	0. 1		1	30	0	20 13	2 0 2 0

Rheumatoid Arthritis	C0003873	JA K2	3717	O60674	Janus kinase 2	Kinase	644	0.385	0.885	0.6572	0.1		1	19	0	2011	2020
Rheumatoid Arthritis	C0003873	JA K3	3718	P52333	Janus kinase 3	Kinase	194	0.505	0.731	5.93E-06	0.1		0.923	13	0	2011	2020
Rheumatoid Arthritis	C0003873	GA LNT18	374378	Q6P9A2	polypeptide N-acetylgalactosaminyltransferase 18		3	0.931	0.192	0.0033	0.1		1	1	1	2013	2013
Rheumatoid Arthritis	C0003873	KD R	3791	P35968	kinase insert domain receptor	Kinase	623	0.378	0.885	0.9982	0.1		1	10	3	2002	2019
Rheumatoid Arthritis	C0003873	KI R3DL1	3811	P43629	killer cell immunoglobulin like receptor, three Ig domains and long cytoplasmic tail 1	Receptor	231	0.475	0.769	8.36E-14	0.1		0.909	11	0	2006	2019
Rheumatoid Arthritis	C0003873	ZK SCAN4	387032	Q969J2	zinc finger with KRAB and SCAN domains 4		8	0.839	0.269	0.00142	0.1		1	1	2	2009	2009

Rheumatoid Arthritis	C0003873	TEM179	388021	Q6ZVK1	transmembrane protein 179		1	1	0.115	0.67923	0.1		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	SFTA2	389376	Q6UW10	surfactant associated 2		25	0.695	0.577	0.03641	0.1		1	2	3	2007	2009
Rheumatoid Arthritis	C0003873	COL1A2P1	394214		collagen type XI alpha 2 pseudogene 1		7	0.805	0.462		0.1		1	3	5	2007	2011
Rheumatoid Arthritis	C0003873	LEP	39952	P41159	leptin		931	0.349	0.84691	0.4691	0.1		0.929	14	1	2007	2020
Rheumatoid Arthritis	C0003873	LGALS3	3958	P17931	galectin 3	Signaling	557	0.392	0.846	2.32E-05	0.1		0.917	12	2	2000	2019
Rheumatoid Arthritis	C0003873	LIINC02649	399715		long intergenic non-protein coding RNA 2649		10	0.792	0.308		0.1		1	5	2	2012	2019
Rheumatoid Ar	C0003873	LIINC02656	399716		long intergenic non-protein coding RNA 2656		4	0.931	0.154		0.1		1	1	2	2012	202

thr itis																
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA TA 3- AS 1	3 9 9 7 1 7		GATA3 antisense RNA 1	2	0 . 9 3 1	0 . 1 9 2		0. 1		1	1	1	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LM NA	4 0 0 0	P0254 5	lamin A/C	82 4	0 . 3 8 4	0 . 8 8 5	0. 9 9 4	0. 1		1	1	1	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI NC 011 85	4 0 0 9 5 7		long intergenic non-protein coding RNA 1185	13	0 . 7 4 3	0 . 3 4 6		0. 1		1	2	2	20 09	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI NC 002 43	4 0 1 2 4 7		long intergenic non-protein coding RNA 243	24	0 . 7 2 9	0 . 4 2 3		0. 1		1	2	6	20 07	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MC CD 1	4 0 1 2 5 0	P5994 2	mitochondrial coiled-coil domain 1	6	0 . 8 9	0 . 2 3 1	0. 0 0 1 9 3 2	0. 1		1	1	3	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TRI M2 6B P	4 0 4 0 2 4		tripartite motif containing 26B, pseudogene	4	0 . 8 6 1	0 . 2 6 9		0. 1		1	1	1	20 09	2 0 0 9
Rh eu ma toi	C 00 03	MT CO 3P1	4 0 4 0		MT-CO3 pseudogene 1	5	0 . 8	0 . 2		0. 1		1	1	2	20 11	2 0 1 1

d Ar thr itis	87 3		2 6				6 1	3 1									
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LT A	4 0 4 9	P0137 4	lymphot oxin alpha	Sig nal ing	35 3	0 . 4 3 4	0 . 8 8 5	0. 1 9 6 8 5	0. 1		0. 8 6 7	15	7	19 94	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 46 A	4 0 6 9 3 8		microRNA 146a		50 5	0 . 3 9 8	0 . 8 8 5		0. 1		0. 8 8 9	36	1	20 08	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 55	4 0 6 9 4 7		microRNA 155		58 4	0 . 3 8 4	0 . 8 8 5		0. 1		1	29	1	20 08	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 23	4 0 7 0 0 8		microRNA 223		34 8	0 . 4 3 3	0 . 8 0 8		0. 1		1	15	0	20 10	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DD R1- DT	4 1 4 7 7 1		DDR1 divergent transcript		2	0 . 9 3 1	0 . 1 1 5		0. 1		1	2	1	20 07	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HC G1 8	4 1 4 7 7 7		HLA complex group 18		27	0 . 7 2 2	0 . 5 3 8		0. 1		1	2	4	20 07	2 0 0 9

Rheumatoid Arthritis	C0003873	HG17	414778		HLA complex group 17		17	0.769	0.346		0.1		1	2	6	2007	2009
Rheumatoid Arthritis	C0003873	MBL2	4153	P11226	mannose binding lectin 2	Receptor	563	0.39	0.846	0.02684	0.1		0.875	32	5	1998	2019
Rheumatoid Arthritis	C0003873	MEFV	4210	O15553	MEFV innate immunity regulator, pyrin		410	0.44	0.885	1.02E-14	0.1		0.929	14	2	2004	2019
Rheumatoid Arthritis	C0003873	MAP3K4	4216	Q9Y6R4	mitogen-activated protein kinase kinase kinase 4	Kinase	21	0.729	0.462	1	0.1		1	1	2	2013	2013
Rheumatoid Arthritis	C0003873	MP1	4312	P03956	matrix metalloproteinase 1	Enzyme	589	0.385	0.885	7.72E-18	0.1		0.982	56	0	1992	2019
Rheumatoid Arthritis	C0003873	MP3	4314	P08254	matrix metalloproteinase 3	Enzyme	473	0.408	0.885	5.74E-15	0.1		0.974	78	0	1996	2019
Rheumatoid Ar	C0003873	MP9	4318	P14780	matrix metalloproteinase 9	Enzyme	1337	0.305	0.923	1.89E-3	0.1		1	32	1	1999	2019

thr itis									1 7								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	M MP 13	4 3 2 2	P4545 2	matrix metallo peptidase 13	En zy me	32 8	0 . 4 5 2	0 . 9 2 3	7. 8 8 E - 1 8	0. 1		1	34	0	19 96	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BC L2 L15	4 4 0 6 0 3	Q5TB C7	BCL2 like 15		4	0 . 8 9	0 . 1 9 2	0. 0 4 8 2 4 6	0. 1		1	1	2	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MY L8 P	4 4 2 2 0 4		myosin light chain 8, pseudogene		1	1	0 . 1 1 5		0. 1		1	1	1	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MS H5	4 4 3 9	O431 96	mutS homolog 5	Nu cle ic aci d bin din g	51	0 . 6 4 1	0 . 6 9 2	3. 2 E - 1 1	0. 1		1	3	10	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MS I1	4 4 4 0	O433 47	musashi RNA binding protein 1		11 6	0 . 5 5	0 . 6 1 5	0. 9 9 3 5 7	0. 1		1	1	1	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO X2	4 5 1 3	P0040 3	cytochro me c oxidase subunit II	En zy me	87 5	0 . 3 5 2	0 . 9 6 2		0. 1		1	27	0	19 94	2 0 1 9
Rh eu ma toi	C 00 03	MT F1	4 5 2 0	Q148 72	metal regulato ry transcrip	Tr ans cri pti	21	0 . 7	0 . 5	0. 9 6 8	0. 1		1	2	1	20 14	2 0 1 9

d Ar thr itis	87 3				tion factor 1	on fac tor		5 1		9 7							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MT X1	4 5 8 0	Q135 05	metaxin 1		12 4	0 . 5 4 6	0 . 7 3 1	0. 0 1 3 2 7 1	0. 1		0. 9 6 9	32	0	20 02	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LR RC 18	4 7 4 3 5 4	Q8N4 56	leucine rich repeat containing 18		2	0 . 9 3 1	0 . 1 1 5	3. 5 1 E - 0 5	0. 1		1	1	2	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NF KB 1	4 7 9 0	P1983 8	nuclear factor kappa B subunit 1	Tr ans cri pti on fac tor	55 1	0 . 3 9 6	0 . 9 2 3	1	0. 1		0. 9 2 9	14	2	20 02	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NM	4 8 2 7		neutrophil migration		25 0	0 . 4 7 3	0 . 8 0 8		0. 1		0. 9 1 7	12	0	20 00	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NO S3	4 8 4 6	P2947 4	nitric oxide synthase 3		70 6	0 . 3 7 8	0 . 8 8 5	6. 7 2 E - 0 7	0. 1		1	10	1	20 04	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC R	4 9	P1032 3	acrosin	En zy me	23 0	0 . 4 9 3	0 . 8 4 6	0. 0 1 2 2 1 5	0. 1		1	51	1	19 93	2 0 2 0
Rh eu	C 00	NU P88	4 9	Q995 67	nucleop orin 88	Tr ans	58	0 .	0 .	1. 9	0. 1		1	2	1	20 14	2 0

ma toi d Ar thr itis	03 87 3		2 7			por ter		6 5 9	5 7 7	6 E - 0 8							1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2 0	5 0 6 0 4	Q9N YY1	interleukin 20		11 1	0 . 5 5 6	0 . 7 6 9	1. 3 4 E - 0 6	0. 1		0. 9 2 9	14	0	20 06	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2 2	5 0 6 1 6	Q9GZ X6	interleukin 22		55 1	0 . 3 9 3	0 . 8 8 5	0. 0 0 0 1 8 8	0. 1		0. 9 3 3	45	0	20 05	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SN HG 32	5 0 8 5 4		small nucleolar RNA host gene 32		12	0 . 8 0 5	0 . 3 0 8	0. 0 2 3 6 2 1	0. 1		1	1	1	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PB X2	5 0 8 9	P4042 5	PBX homeob ox 2	Tr ans cri pti on fac tor	29	0 . 6 8 6	0 . 4 6 2	0. 9 9 5 3 2	0. 1		1	2	5	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CP A4	5 1 2 0 0	Q9UI 42	carboxy peptidas e A4	En zy me	49	0 . 6 3 3	0 . 5 9 E - 1 8	9. 3 9 E - 1 8	0. 1		1	1	1	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PD CD 1	5 1 3 3	Q151 16	programmed cell death 1		49 7	0 . 4 0 2	0 . 8 4 6	0. 4 1 7 0 6	0. 1		0. 9	20	4	20 04	2 0 1 9

Rheumatoid Arthritis	C0003873	PD E2A	5138	O00408	phosphodiesterase 2A		47	0.666	0.577	0.631	0.1		1	1	1	2012	2012
Rheumatoid Arthritis	C0003873	WNT16	51384	Q9UBV4	Wnt family member 16	Signaling	29	0.686	0.654	1.65E-06	0.1		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	RAB14	51552	P61106	RAB14, member RAS oncogene family		35	0.674	0.615	0.99047	0.1		1	1	1	2009	2009
Rheumatoid Arthritis	C0003873	CYRI B	51571	Q9NUQ9	CYFIP related Rac1 interactor B		25	0.766	0.538	0.97612	0.1		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	SERPINA1	5265	P01009	serpin family A member 1	Enzyme modulator	482	0.411	0.923	6.85E-08	0.1		0.933	15	0	1976	2017
Rheumatoid Arthritis	C0003873	PIK3CA	5290	P42336	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha	Kinase	1511	0.292	0.923	1	0.1		1	30	0	2005	2020
Rheumatoid Arthritis	C0003873	PIK3CB	5291	P42338	phosphatidylinositol-4,5-bisphosphate 3-	Kinase	1083	0.322	0.895	0.99	0.1		1	29	0	2005	2020

Ar thr itis					kinase catalytic subunit beta					6 4							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PIK 3C D	5 2 9 3	O003 29	phospha tidylinos itol-4,5- bisphosp hate 3- kinase catalytic subunit delta	Ki nas e	11 19	0 . 3 1 9	0 . 8 8 5	0. 9 9 9 9	0. 1		1	33	0	20 05	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PIK 3C G	5 2 9 4	P4873 6	phospha tidylinos itol-4,5- bisphosp hate 3- kinase catalytic subunit gamma	Ki nas e	11 01	0 . 3 2	0 . 8 8 5	1. 4 1 E - 0 6	0. 1		1	31	0	20 05	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PL CL 1	5 3 3 4	Q151 11	phospho lipase C like 1 (inactive)	En zy me	69	0 . 6 0 8	0 . 6 5 4	0. 0 1 2 0 5 9	0. 1		1	1	1	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 7D	5 3 3 4 2	Q8TA D2	interleukin 17D		25 9	0 . 4 6 4	0 . 8 0 8	0. 1 9 7 9 6	0. 1		1	10	0	20 10	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PL G	5 3 4 0	P0074 7	plasmin ogen	En zy me	58 6	0 . 3 8 9	0 . 9 2 3	0. 0 1 0 3 4 5	0. 1		1	13	0	19 96	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GD AP 1	5 4 3 3 2	Q8TB 36	ganglioside induced differentiation associated protein 1		96	0 . 6 1 2	0 . 5 3 8	3. 2 4 E - 0 8	0. 1		1	1	1	20 13	2 0 1 3

Rheumatoid Arthritis	C0003873	KRT20	54474	P35900	keratin 20		559	0.388	0.846	9.08E-11	0.1	0.882	17	1	2001	2019
Rheumatoid Arthritis	C0003873	CCHC R1	54535	Q8TD31	coiled-coil alpha-helical rod protein 1		193	0.505	0.808	1.01E-16	0.1	1	2	2	2007	2009
Rheumatoid Arthritis	C0003873	NECAB2	54550	Q7Z6G3	N-terminal EF-hand calcium binding protein 2		1	1	0.15	2.24E-13	0.1	1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	POU5F1	5460	Q01860	POU class 5 homeobox 1		328	0.441	0.846	0.9371	0.1	1	1	1	2007	2007
Rheumatoid Arthritis	C0003873	RSBN1	54665	Q5VWQ0	round spermatid basic protein 1		3	0.89	0.15	0.09107	0.1	1	1	2	2009	2009
Rheumatoid Arthritis	C0003873	RBFOX1	54715	Q9NWB1	RNA binding fox-1 homolog 1	Nucleic acid binding	103	0.584	0.6923	0.9563	0.1	1	1	1	2019	2019
Rheumatoid Ar	C0003873	PPIAP9	5491		peptidylprolyl isomerase A pseudogene 9		1	1	0.15		0.1	1	1	1	2011	2011

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	VP S37 C	5 5 0 4 8	A5D8 V6	VPS37C subunit of ESCRT-I		5	0 . 8 6 1	0 . 1 1 5	0. 0 3 8 2 3 6	0. 1		1	1	1	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EN OX 1	5 5 0 6 8	Q8TC 92	ecto- NOX disulfide -thiol exchang er 1	En zy me	15	0 . 7 6	0 . 5 3 8	2. 3 3 E - 0 6	0. 1		1	1	6	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KIF 26 B	5 5 0 8 3	Q2KJ Y2	kinesin family member 26B	Ce llul ar str uct ure	38	0 . 6 7	0 . 5 9	0. 9 9 9 9	0. 1		1	1	1	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PP P1 R1 0	5 5 1 4	Q96Q C0	protein phosphatase 1 regulatory subunit 10		22	0 . 7 5 1	0 . 4 2 3	1	0. 1		1	1	1	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC OX L	5 5 2 8 9	Q9N UZ1	acyl- CoA oxidase like	En zy me	46	0 . 6 7 4	0 . 5 7 7	5. 2 5 E - 1 5	0. 1		1	1	1	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TC P11 L1	5 5 3 4 6	Q9N UJ3	t- complex 11 like 1	Re ce pto r	1	1	0 . 1 1 5	0. 0 0 4 3 7	0. 1		1	1	1	20 13	2 0 1 3
Rh eu ma toi	C 00 03	CD K5 RA P2	5 5 7	Q96S N8	CDK5 regulatory subunit		42	0 . 6	0 . 5	4. 6 2 E	0. 1		1	1	1	20 14	2 0 1 4

d Ar thr itis	87 3		5 5		associated protein 2			8 2	7 7	- 2 3							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZN F30 2	5 5 9 0 0	Q9NR 11	zinc finger protein 302		1	1	0 . 1 1 5	0. 0 0 1 9 4	0. 1		1	1	1	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA PK 1	5 5 9 4	P2848 2	mitogen - activate d protein kinase 1	Ki nas e	10 59	0 . 3 3	0 . 9 2 3	0. 9 9 6 9 8	0. 1		0. 9 7 6	42	0	20 00	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA PK 8	5 5 9 9	P4598 3	mitogen - activate d protein kinase 8	Ki nas e	52 0	0 . 3 9 7	0 . 8 8 5	0. 9 9 8 2 3	0. 1		1	14	0	20 04	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR L	5 6 1 7	P0123 6	prolactin	Sig nal ing	50 6	0 . 4 0 6	0 . 8 8 5	2. 9 E - 0 7	0. 1		1	13	1	19 96	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR TN 3	5 6 5 7	P2415 8	proteina se 3	En zy me	21 5	0 . 5 0 3	0 . 8 0 8	3. 8 E - 0 5	0. 1		0. 9 4 7	38	0	19 99	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TRI M3 9	5 6 6 5 8	Q9HC M9	tripartite motif containing 39		9	0 . 7 9 2	0 . 4 6 2	0. 9 9 4 7 4	0. 1		1	1	1	20 09	2 0 0 9
Rh eu	C 00	RE TN	5 6	Q9H D89	resistin		30 2	0 .	0 .	0. 0	0. 1		0. 8	12	3	20 05	2 0

matoid Arthritis	03873		729					454	808	36545			33				19
Rheumatoid Arthritis	C0003873	PSMA4	5685	P25789	proteasome 20S subunit alpha 4		30	0716	0385	0.5959	0.1		1	1	1	2013	2013
Rheumatoid Arthritis	C0003873	PRDM10	56980	Q9NQV6	PR/SET domain 10	Transcription factor	19	076	0385	0.13304	0.1		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	VAR2	57176	Q5ST30	valyl-tRNA synthetase 2, mitochondrial		37	0666	0577	5.83E-17	0.1		1	2	4	2007	2009
Rheumatoid Arthritis	C0003873	MIR499A	574501		microRNA 499a		156	059	0846		0.1		0.9	10	1	2011	2019
Rheumatoid Arthritis	C0003873	PRR12	57479	Q9UL5	proline rich 12		35	0716	0385	1	0.1		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	DENND1A	57706	Q8TEH3	DENN domain containing 1A		21	0736	0538	0.9976	0.1		1	1	1	2019	2019

Rheumatoid Arthritis	C0003873	ANO8	57719	Q9HCE9	anoctamin 8		3	0.89	0.152	0.9634	0.1		1	1	1	2014	2014
Rheumatoid Arthritis	C0003873	NCOA5	57727	Q9HCD5	nuclear receptor coactivator 5	Receptor	53	0.631	0.692	0.9926	0.1		1	11	0	2002	2020
Rheumatoid Arthritis	C0003873	C6orf47	57827	O95873	chromosome 6 open reading frame 47		21	0.722	0.423	0.66412	0.1		1	3	2	2007	2011
Rheumatoid Arthritis	C0003873	LY6G5B	58496	Q8NDX9	lymphocyte antigen family member G5B	6	3	0.931	0.12	8.18E-06	0.1		1	1	2	2011	2011
Rheumatoid Arthritis	C0003873	LY6G6D	58530	O95868	lymphocyte antigen family member G6D	6	11	0.805	0.385	0.3254	0.1		1	3	2	2007	2011
Rheumatoid Arthritis	C0003873	IL21	59067	Q9HBE4	interleukin 21		321	0.441	0.769	0.6254	0.1		0.912	34	2	2004	2020
Rheumatoid Ar	C0003873	RARA	5914	P10276	retinoic acid receptor alpha	Nuclear receptor	274	0.47	0.846	0.9605	0.1		1	10	0	1994	2019

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BC L2	5 9 6	P1041 5	BCL2 apoptosi s regulato r	Sig nal ing	14 56	0 . 2 9 1	0 . 8 8 5	0. 5 9 0 3	0. 1		1	22	1	19 94	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RE LA	5 9 7 0	Q042 06	RELA proto- oncogen e, NF- kB subunit	Tr ans cri pti on fac tor	48 3	0 . 4 0 6	0 . 8 8 5	0. 9 9 4 8	0. 1		1	13	0	20 02	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC TB	6 0	P6070 9	actin beta	Ce llul ar str uct ure	11 10	0 . 3 2 5	0 . 9 2 3	0. 9 8 5 6 4	0. 1		1	11	0	19 91	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RIT 2	6 0 1 4	Q995 78	Ras like without CAAX 2	En zy me mo dul ato r	46	0 . 6 4 7	0 . 5 3 8	0. 0 0 6 3 2	0. 1		1	1	1	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RN F5	6 0 4 8	Q999 42	ring finger protein 5	En zy me	28	0 . 7 1 6	0 . 5 3 8	3. 7 E - 0 5	0. 1		1	3	7	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RP L37 A	6 1 6 8	P6151 3	ribosomal protein L37a		8	0 . 8 3 9	0 . 3 4 6	0. 0 5 1 2 6	0. 1		1	1	1	20 16	2 0 1 6
Rh eu ma toi	C 00 03	RP S18	6 2 2 2	P6226 9	ribosom al protein S18	Nu cle ic aci	7	0 . 8	0 . 1	0. 9 7	0. 1		1	1	1	20 09	2 0 0 9

d Ar thr itis	87 3					d bin din g		6 1	9 2	5 9							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RP S19	6 2 2 3	P3901 9	ribosom al protein S19	Nu cle ic aci d bin din g	25 6	0 . 4 8	0 . 8 4 6	0. 9 2 1 1	0. 1		1	11	0	20 06	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	S10 0A 8	6 2 7 9	P0510 9	S100 calcium binding protein A8	Ca lci um - bin din g pro tei n	36 9	0 . 4 3	0 . 9 6 2	0. 1 3 7 6 1	0. 1		0. 9 3 8	16	0	20 05	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SA A1	6 2 8 8	P0DJ1 8	serum amyloid A1	Tr ans por ter	18 8	0 . 5 1 3	0 . 8 0 8	0. 0 1 4 9 3	0. 1		0. 9 4 1	17	0	19 86	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	VP S52	6 2 9 3	Q8N1 B4	VPS52 subunit of GARP complex	Tr ans por ter	11	0 . 7 8	0 . 2 3 1	0. 0 0 0 3 8 9	0. 1		1	2	2	20 07	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC L2	6 3 4 7	P1350 0	C-C motif chemoki ne ligand 2	Sig nal ing	11 57	0 . 3 2 1	0 . 9 6 2	0. 6 0 7 8 6	0. 1		0. 9 4 2	52	0	19 92	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC L5	6 3 5 2	P1350 1	C-C motif chemoki ne ligand 5	Sig nal ing	51 4	0 . 4 0 3	0 . 8 8 5	0. 0 1 7 5 2	0. 1		0. 9 6 2	26	0	19 93	2 0 1 9

Rheumatoid Arthritis	C0003873	CC L20	6364	P78556	C-C motif chemokine ligand 20	Signaling	242	0.474	0.846	0.0242	0.1		1	15	0	2001	2020
Rheumatoid Arthritis	C0003873	CXCL12	6387	P48061	C-X-C motif chemokine ligand 12		626	0.379	0.846	0.11851	0.1		0.913	23	0	2000	2019
Rheumatoid Arthritis	C0003873	PRDM16	63976	Q9HAZ2	PR/SET domain 16		200	0.522	0.899	0.9999	0.1		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	SELE	6401	P16581	selectin E		327	0.447	0.808	7.91E-10	0.1		0.917	12	0	1991	2020
Rheumatoid Arthritis	C0003873	CLSTN2	64084	Q9HD0	calsynectin 2	Calcium-binding protein	25	0.716	0.423	3.52E-06	0.1		1	1	1	2009	2009
Rheumatoid Arthritis	C0003873	NO D2	64127	Q9HC29	nucleotide binding oligomerization domain containing 2	Enzyme	434	0.423	0.923	1.98E-30	0.1		0.818	11	1	2003	2019
Rheumatoid	C0003	LI NC 00452	64333		long intergenic non-protein		2	1	0.1		0.1		1	1	3	2013	2013

d Ar thr itis	87 3		6 5		coding RNA 452				1 5								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DP A2	6 4 6 7 0 2		major histocompatib ility complex, class II, DP alpha 2 (pseudogene)		10	0 . 7 8	0 . 5 3 8	0. 1		1	3	7	20 07	2 0 1 1	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GO RA SP1	6 4 6 8 9	Q9BQ Q3	golgi reassembly stacking protein 1		36 9	0 . 4 2 8	0 . 8 4 6	0. 0 1 9 5 4 3	0. 1		1	12	0	20 02	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SKI V2 L	6 4 9 9	Q154 77	Ski2 like RNA helicase		96	0 . 6 1 5	0 . 6 5 4	1. 2 9 E - 2 2	0. 1		1	3	6	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	W NK 1	6 5 1 2 5	Q9H4 A3	WNK lysine deficient protein kinase 1	Ki nas e	46 0	0 . 4 1 6	0 . 8 4 6	1 0. 1		1	12	0	20 02	2 0 1 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PC DH 15	6 5 2 1 7	Q96Q U1	protocadherin related 15		94	0 . 6 0 1	0 . 5 7 7	8. 0 3 E - 2 5	0. 1		1	1	1	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA ST OR 1	6 5 2 9 6 8	Q8W TX7	cytosolic arginine sensor for mTORC1 subunit 1		10	0 . 8 2 1	0 . 2 3 1	0. 0 2 7 5 3 3	0. 1		1	1	1	20 14	2 0 1 4
Rh eu	C 00	SL C6	6 5	P4806 6	solute carrier	Tr ans	21	0 .	0 .	4. 8	0. 1		1	1	1	20 13	2 0

matoid Arthritis	03873	A11	38		family 6 member 11	porter		716	462	3E-05							13
Rheumatoid Arthritis	C0003873	SLC19A1	6573	P41440	solute carrier family 19 member 1	Transporter	155	0.523	0.62	6.47E-06	0.1		1	16	7	2004	2019
Rheumatoid Arthritis	C0003873	SOAT1	6646	P35610	sterol O-acyltransferase 1	Enzyme	389	0.424	0.846	7.36E-10	0.1		1	10	0	2011	2019
Rheumatoid Arthritis	C0003873	SPPI	6696	P10451	secreted phosphoprotein 1		824	0.353	0.85	2.15E-06	0.1		0.923	26	2	2000	2019
Rheumatoid Arthritis	C0003873	STAT3	6774	P40763	signal transducer and activator of transcription 3	Nuclear acid binding	1193	0.32	0.923	1	0.1		0.978	45	0	2001	2020
Rheumatoid Arthritis	C0003873	SNORA38	677820		small nucleolar RNA, H/ACA box 38		6	0.89	0.154		0.1		1	1	2	2011	2011
Rheumatoid Arthritis	C0003873	BSG	682	P35613	basigin (Ok blood group)		287	0.458	0.769	2.59E-05	0.1		1	13	0	2000	2019

Rheumatoid Arthritis	C0003873	SUOX	6821	P51687	sulfite oxidase		67	0.638	0.615	9.4E-07	0.1		1	2	1	2014	2019
Rheumatoid Arthritis	C0003873	SYT1	6857	P21579	synaptotagmin 1	Transporter	460	0.412	0.846	0.6038	0.1		1	12	0	2002	2019
Rheumatoid Arthritis	C0003873	TAPP	6892	O15533	TAP binding protein	Receptor	86	0.576	0.769	6.6E-09	0.1		1	1	6	2011	2011
Rheumatoid Arthritis	C0003873	BT F3P11	690		basic transcription factor 3 pseudogene 11		154	0.519	0.731		0.1		0.941	17	0	2004	2019
Rheumatoid Arthritis	C0003873	TCF19	6941	Q9Y242	transcription factor 19		33	0.674	0.692	0.00938	0.1		1	1	1	2009	2009
Rheumatoid Arthritis	C0003873	BT K	695	Q06187	Bruton tyrosine kinase	Kinase	290	0.464	0.808	0.9996	0.1		1	23	0	2009	2019
Rheumatoid Ar	C0003873	TRBV20OR9-2	6962		T cell receptor beta variable 20/OR9-2 (non-functional)		456	0.403	0.923		0.1		0.88	25	0	1989	2019

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TE C	7 0 0 6	P4268 0	tec protein tyrosine kinase	Ki nas e	1	1	0 . 1 1 5		0. 1		1	1	1	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TG FB 1	7 0 4 0	P0113 7	transfor ming growth factor beta 1	Sig nal ing	15 58	0 . 2 8 7	0 . 9 6 2	0. 0 3 6 8 5	0. 1		0. 9 4 6	37	3	19 90	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TI MP 1	7 0 7 6	P0103 3	TIMP metallo peptidase inhibitor 1	En zy me mo dul ato r	60 3	0 . 3 8	0 . 8 8 5	0. 4 9 9 3	0. 1		1	13	0	19 94	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TL R3	7 0 9 8	O154 55	toll like receptor 3	Re ce pto r	39 3	0 . 4 2 7	0 . 8 8 5	1. 6 3 E - 0 7	0. 1		1	10	0	20 05	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TL R4	7 0 9 9	O002 06	toll like receptor 4		11 74	0 . 3 2 1	0 . 9 6 2	4. 6 1 E - 0 9	0. 1		0. 9 1 8	61	5	20 03	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FR SF1 A	7 1 3 2	P1943 8	TNF receptor superfamily member 1A		48 7	0 . 4 0 9	0 . 9 2 3	0. 9 9 4 9	0. 1		0. 8 8 5	26	7	19 92	2 0 2 0
Rh eu ma toi	C 00 03	TN FR SF1 B	7 1 3 3	P2033 3	TNF receptor superfamily member 1B		41 7	0 . 4	0 . 8	0. 5 0 2	0. 1		0. 8 1 2	32	1	19 92	2 0 2 0

d Ar thr itis	87 3						2 5	8 5	0 1								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TP 53	7 1 5 7	P0463 7	tumor protein p53	Tr ans cri pti on fac tor	24 94	0 . 2 3 6	0 . 9 6 2	0. 5 3 2 3 5	0. 1		0. 8 9 1	46	5	19 96	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TR PS1	7 2 2 7	Q9U HF7	transcriptional repressor GATA binding 1		24 8	0 . 5 3 7	0 . 7 6 9	1	0. 1		1	1	1	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DC DC 2C	7 2 8 5 9 7	A8M YV0	doublecortin domain containing 2C		2	0 . 9 3 1	0 . 1 9 2	0. 0 0 7 1 7	0. 1		1	1	1	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TY MS	7 2 9 8	P0481 8	thymidy late synthetase	En zy me	40 6	0 . 4 2 5	0 . 8 4 6	0. 7 2 4 7	0. 1		1	10	1	20 03	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	VA RS 1	7 4 0 7	P2664 0	valyl-tRNA synthetase 1		36	0 . 7 1 1	0 . 5	1. 8 E - 0 8	0. 1		1	1	1	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	VC AM 1	7 4 1 2	P1932 0	vascular cell adhesion molecule 1		40 6	0 . 4 2 2	0 . 8 0 8	0. 7 9 7 9 1	0. 1		1	27	1	19 95	2 0 2 0

Rheumatoid Arthritis	C0003873	VD R	7421	P11473	vitamin D receptor	Nuclear receptor	852	0.352	0.885	1.68E-05	0.1		0.96	25	6	1998	2019
Rheumatoid Arthritis	C0003873	VIM	7431	P08670	vimentin		644	0.372	0.846	0.71255	0.1		0.973	37	0	2004	2020
Rheumatoid Arthritis	C0003873	VIP	7432	P01282	vasoactive intestinal peptide	Signaling	376	0.437	0.846	0.0042	0.1		1	16	0	1998	2019
Rheumatoid Arthritis	C0003873	TRIM26	7766	Q12899	tripartite motif containing 26		31	0.705	0.577	0.1836	0.1		1	2	1	2007	2009
Rheumatoid Arthritis	C0003873	ZNF175	7728	Q9Y473	zinc finger protein 175		7	0.821	0.231	1.27E-07	0.1		1	1	1	2013	2013
Rheumatoid Arthritis	C0003873	ZSCAN26	7741	Q16670	zinc finger and SCAN domain containing 26		2	0.931	0.115		0.1		1	1	1	2009	2009
Rheumatoid Ar	C0003873	DDR1	780	Q08345	discoidin domain receptor tyrosine kinase 1	Kinase	195	0.497	0.808	4.63E-	0.1		1	2	1	2007	2009

thr itis									0 6								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DD A1	7 9 0 1 6	Q9B W61	DET1 and DDB1 associated 1		17	0 . 7 3 6	0 . 3 0 8	0. 9 3 7 1 8	0. 1		1	1	1	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FT O	7 9 0 6 8	Q9C0 B1	FTO alpha- ketoglutarate dependent dioxygenase		28 6	0 . 4 8 6	0 . 8 8 5	8. 3 6 E - 0 8	0. 1		1	1	1	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BA G6	7 9 1 7	P4637 9	BAG cochape rone 6	En zy me mo dul ato r	40	0 . 6 7 4	0 . 6 1 5	1	0. 1		1	3	12	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GP AN K1	7 9 1 8	O958 72	G-patch domain and ankyrin repeats 1		12	0 . 7 6 9	0 . 3 8 5	3. 2 4 E - 0 7	0. 1		1	3	3	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HS D1 7B 8	7 9 2 3	Q925 06	hydroxy steroid 17-beta dehydro genase 8	En zy me	9	0 . 8 0 5	0 . 3 4 6	3. 6 9 E - 0 5	0. 1		1	2	2	20 07	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	OR 2H 2	7 9 3 2	O959 18	olfactor y receptor family 2 subfamil y H member 2	G- pro tei n co upl ed rec ept or	1	1	0 . 1 1 5	1. 9 1 E - 0 5	0. 1		1	1	2	20 09	2 0 0 9
Rh eu	C 00	RN AS	7 9	Q5TB B1	ribonuclease H2 subunit B		11 5	0 . .	0 . .	3. 2	0. 1		1	1	1	20 15	2 0

ma toi d Ar thr itis	03 87 3	EH 2B	6 2 1				5 9 5	6 1 5	6 E - 0 9							1 5	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AI MP 2	7 9 6 5	Q131 55	aminoacyl tRNA synthetase complex interacting multifunctiona l protein 2		55 5	0 . 3 9 3	0 . 9 2 3	0. 0 8 0 2 4	0. 1		1	23	0	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AG BL 2	7 9 8 4 1	Q5U5 Z8	ATP/GT P binding protein like 2	En zy me	55	0 . 6 4 4	0 . 6 5 4	3. 9 6 E - 1 6	0. 1		0. 8 8 5	26	1	20 07	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RP P21	7 9 8 9 7	Q9H6 33	ribonucl ease P/MRP subunit p21	En zy me	5	0 . 8 3 9	0 . 2 6 9	4. 9 E - 0 5	0. 1		1	1	1	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AT AT 1	7 9 9 6 9	Q5SQ I0	alpha tubulin acetyltransfera se 1		31	0 . 7	0 . 5	1. 3 2 E - 0 7	0. 1		1	2	1	20 07	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SP SB 1	8 0 1 7 6	Q96B D6	splA/ryanodin e receptor domain and SOCS box containing 1		26	0 . 7 2 2	0 . 5 7 7	0. 5 1 9 8 2	0. 1		1	1	1	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AL PK 1	8 0 2 1 6	Q96Q P1	alpha kinase 1	Ki nas e	54	0 . 6 4 4	0 . 6 1 5	1. 0 2 E - 1 9	0. 1		1	1	1	20 19	2 0 1 9

Rheumatoid Arthritis	C0003873	CUL5	8065	Q93034	cullin 5	Enzyme	32	0.691	0.577	1	0.1		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	SLC4A4	80736	Q53GD3	solute carrier family 44 member 4	Transporter	39	0.678	0.615	1E-14	0.1		1	3	9	2007	2011
Rheumatoid Arthritis	C0003873	VWFA7	80737	Q9Y334	von Willebrand factor domain containing 7	A	6	0.839	0.308	2E-11	0.1		1	1	3	2011	2011
Rheumatoid Arthritis	C0003873	LY6G6C	80740	O95867	lymphocyte antigen family member G6C	6	7	0.821	0.385	0.0493	0.1		1	1	1	2011	2011
Rheumatoid Arthritis	C0003873	LY6G5C	80741	Q5SR4	lymphocyte antigen family member G5C	6	3	0.931	0.192	0.0456	0.1		1	2	1	2007	2009
Rheumatoid Arthritis	C0003873	ZNRD1ASP	80862		zinc ribbon domain containing 1 antisense, pseudogene	1	34	0.691	0.538		0.1		1	2	2	2007	2009
Rheumatoid Ar	C0003873	PRRT1	80863	Q99946	proline rich transmembrane protein 1		6	0.821	0.269	0.02845	0.1		1	1	1	2011	2011

thritis																	
Rheumatoid Arthritis	C0003873	EGFL8	80864	Q99944	EGF like domain multiple 8	Calcium-binding protein	12	0.792	0.269	1.13E-07	0.1		1	3	2	2007	2011
Rheumatoid Arthritis	C0003873	CDR3	8163		Cerebellar degeneration-related autoantigen-3		233	0.472	0.808		0.1		0.875	16	0	1992	2019
Rheumatoid Arthritis	C0003873	OR5V1	81696	Q9UGF6	olfactory receptor family 5 subfamily V member 1	G-protein coupled receptor	23	0.769	0.385	0.013	0.1		1	1	2	2009	2009
Rheumatoid Arthritis	C0003873	OR12D3	81797	Q9UGF7	olfactory receptor family 12 subfamily D member 3	G-protein coupled receptor	27	0.743	0.875	0.0083	0.1		1	1	1	2009	2009
Rheumatoid Arthritis	C0003873	CASP3	836	P42574	caspase 3	Enzyme	819	0.351	0.923	0.0117	0.1		1	10	0	2006	2018
Rheumatoid Ar	C0003873	UQC2	8430	Q9BR T2	ubiquinol-cytochrome c reductase complex assembly factor 2		30	0.705	0.462	0.0186	0.1		1	3	10	2007	2011

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DH X1 6	8 4 4 9	O602 31	DEAH- box helicase 16	En zy me	24	0 . 7 1 6	0 . 5	1. 6 E - 1 2	0. 1		1	2	3	20 07	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PG BD 1	8 4 5 4 7	Q96J S3	piggyBac transposable element derived 1		7	0 . 8 2 1	0 . 2 6 9	4. 7 3 E - 1 0	0. 1		1	1	1	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HA VC R2	8 4 8 6 8	Q8TD Q0	hepatitis A virus cellular receptor 2		29 9	0 . 4 5	0 . 8 0 8	0. 0 3 8 6 6	0. 1		0. 8 5 7	14	2	20 04	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AIF M2	8 4 8 8 3	Q9BR Q8	apoptosi s inducing factor mitocho ndria associat ed 2	En zy me	9	0 . 8 3 9	0 . 1 9 2	1. 1 1 E - 0 5	0. 1		1	1	1	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CE P89	8 4 9 0 2	Q96S T8	centrosomal protein 89		9	0 . 9 3 1	0 . 1 9 2	8. 3 5 E - 2 6	0. 1		1	1	1	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PPI L4	8 5 3 1 3	Q8W UA2	peptidylprolyl isomerase like 4		6	0 . 8 6 1	0 . 1 5 4	1. 6 9 E - 0 9	0. 1		1	2	1	20 14	2 0 1 9
Rh eu ma toi	C 00 03	TN FS F11	8 6 0 0	O147 88	TNF superfa mily	Sig nal ing	32 7	0 . 4	0 . 8	0. 0 0 4	0. 1		1	58	3	19 99	2 0 2 0

d Ar thr itis	87 3				member 11			5 3	4 6	9 1 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FR SF1 1A	8 7 9 2	Q9Y6 Q6	TNF receptor superfamily member 11a		27 0	0 . 4 8	0 . 8 4 6	0. 0 0 8 7 6 7	0. 1		0. 8 6 7	15	2	20 01	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SY NG AP 1	8 8 3 1	Q96P V0	synaptic Ras GTPase activatin g protein 1	En zy me mo dul ato r	14 5	0 . 5 8 4	0 . 5 7 7	1	0. 1		1	1	2	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ST K1 9	8 8 5 9	P4984 2	serine/threoni ne kinase 19		28	0 . 6 9 1	0 . 5	6. 7 4 E - 0 9	0. 1		1	3	5	20 07	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NA V2	8 9 7 9 7	Q8IV L1	neuron navigator 2		27	0 . 7 2 2	0 . 3 8 5	0. 9 9 9 5	0. 1		1	1	1	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TRI M1 5	8 9 8 7 0	Q9C0 19	tripartite motif containing 15		17	0 . 7 4 3	0 . 3 0 8	7. 7 6 E - 0 9	0. 1		1	2	1	20 07	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC NG 2	9 0 1	Q165 89	cyclin G2	En zy me mo dul ato r	59	0 . 6 1 5	0 . 5 7 7	0. 0 0 9 6 8 6	0. 1		1	1	1	20 13	2 0 1 3

Rheumatoid Arthritis	C0003873	SOC3	9021	O14543	suppressor of cytokine signaling 3	Enzyme modulator	375	0.434	0.808	0.74613	0.1		0.9	10	0	2001	2019
Rheumatoid Arthritis	C0003873	IL33	90865	O95760	interleukin 33		487	0.409	0.885	8.29E-10	0.1		1	23	2	2007	2019
Rheumatoid Arthritis	C0003873	RABEP1	9135	Q15276	rabaptin, RAB GTPase binding effector protein 1		15	0.792	0.423	0.99851	0.1		1	2	1	2014	2019
Rheumatoid Arthritis	C0003873	IL32	9235	P24001	interleukin 32		200	0.495	0.731	3.75E-09	0.1		1	19	1	2005	2018
Rheumatoid Arthritis	C0003873	CD14	929	P08571	CD14 molecule		551	0.392	0.885	4.88E-05	0.1		0.943	35	0	1992	2019
Rheumatoid Arthritis	C0003873	MS4A1	931	P11836	membrane spanning 4-domains A1	Receptor	451	0.411	0.846	5.08E-05	0.1		0.882	17	0	2001	2019
Rheumatoid Ar	C0003873	PP2	9374	Q9UMR5	palmitoyl-protein thioesterase 2	Enzyme	27	0.751	0.5045	0.0045	0.1		1	3	6	2007	2011

thr itis									4 2								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GR AP 2	9 4 0 2	O757 91	GRB2 related adaptor protein 2		53 8	0 . 3 9 4	0 . 9 2 3	0. 0 0 1 5 3	0. 1		1	23	1	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FA DS 2	9 4 1 5	O958 64	fatty acid desaturase 2		14 0	0 . 5 7 5	0 . 6 9 2	0. 9 9 8 1 5	0. 1		1	3	1	20 09	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA BB R2	9 5 6 8	O758 99	gamma- aminobu tyric acid type B receptor subunit 2	G- pro tei n co upl ed rec ept or	81	0 . 6 5	0 . 5 3 8	0. 9 9 9 9	0. 1		1	1	1	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CL OC K	9 5 7 5	O155 16	clock circadian regulator		30 9	0 . 4 6 3	0 . 8 8 5	0. 9 9 9 5 7	0. 1		1	10	0	20 13	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 40L G	9 5 9	P2996 5	CD40 ligand	Sig nal ing	45 3	0 . 4 1 4	0 . 8 4 6	0. 7 2 0 7 9	0. 1		0. 9 1 7	24	0	19 95	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 44	9 6 0	P1607 0	CD44 molecule (Indian blood group)		71 1	0 . 3 6 3	0 . 9 6 2	2. 4 5 E - 0 7	0. 1		1	12	0	19 97	2 0 1 8

Rheumatoid Arthritis	C0003873	MD C1	9656	Q14676	mediator of DNA damage checkpoint 1		56	0.628	0.62	2.27E-08	0.1		1	1	1	2009	2009
Rheumatoid Arthritis	C0003873	CD68	968	P34810	CD68 molecule	Transporter	452	0.408	0.488	1.41E-06	0.1		1	14	0	1989	2015
Rheumatoid Arthritis	C0003873	N4BP1	9683	O75113	NEDD4 binding protein 1	Nucleic acid binding	12	0.78	0.38	0.6256	0.1		1	1	1	2013	2013
Rheumatoid Arthritis	C0003873	PRO P	9692	O15091	protein only RNase catalytic subunit	P	12	0.769	0.269	1.33E-13	0.1		1	1	1	2018	2018
Rheumatoid Arthritis	C0003873	RIPOR2	9750	Q9Y4F9	RHO family interacting cell polarization regulator 2		20	0.792	0.269	0.9284	0.1		1	1	1	2009	2009
Rheumatoid Arthritis	C0003873	CTIF	9811	O43310	cap binding complex dependent translation initiation factor	Nucleic acid binding	10	0.821	0.231	0.994	0.1		1	1	1	2009	2009
Rheumatoid Arthritis	C0003873	SMG7	9887	Q92540	SMG7 nonsense mediated mRNA decay factor		10	0.805	0.346	0.99	0.1		1	2	1	2016	2019

Ar thr itis									9 8								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FS F15	9 9 6 6	O951 50	TNF superfa mily member 15	Sig nal ing	14 3	0 . 5 3 1	0 . 6 9 2	0. 0 0 2 8 1 6	0. 1		1	12	3	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EBI 3	1 0 1 4 8	Q142 13	Epstein- Barr virus induced 3	Sig nal ing	23 3	0 . 4 7 4	0 . 8 0 8	0. 1 0 7 9 7	0. 09		1	9	0	20 04	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD KN 2A	1 0 2 9	P4277 1;Q8 N726	cyclin dependent kinase inhibitor 2A		13 14	0 . 3	0 . 8 8 5	0. 3 9 4 7 4	0. 09		1	9	1	19 89	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CN TR L	1 1 0 6 4	Q7Z7 A1	centriolin		29	0 . 7 1 1	0 . 4 2 3	1. 8 9 E - 5 4	0. 09		0. 8 8 9	9	0	20 11	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD C4 2E P1	1 1 1 3 5	Q005 87	CDC42 effector protein 1		17	0 . 7 5 1	0 . 3 4 6	2. 5 4 E - 0 5	0. 09		0. 8 8 9	9	0	20 11	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO MP	1 3 1 1	P4974 7	cartilage oligomeric matrix protein		23 0	0 . 5 0 3	0 . 8 0 8	1. 3 5 E - 0 9	0. 09		1	9	0	19 97	2 0 1 7
Rh eu ma	C 00 03	PA RP 1	1 4 2	P0987 4	poly(ADP- ribose) polymerase 1		56 5	0 . 3	0 . 9	0. 0 0	0. 09		0. 7	9	3	20 03	2 0

to id Ar thr itis	87 3							8 9	2 3	0 3 3 4			7 8				1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CX 3C R1	1 5 2 4	P4923 8	C-X3-C motif chemoki ne receptor 1	G- pro tei n co upl ed rec ept or	31 0	0 . 4 5 7	0 . 8 8 5	0. 0 6 1 3 7 1	0. 09		0. 8 8 9	9	0	20 01	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC E	1 6 3 6	P1282 1	angioten sin I converti ng enzyme	En zy me	10 82	0 . 3 2 8	0 . 9 2 3	1. 0 3 E - 3 7	0. 09		1	9	0	20 00	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FC GR 2B	2 2 1 3	P3199 4	Fc fragmen t of IgG receptor IIb	Ce ll ad hes ion	15 5	0 . 5 2 2	0 . 8 4 6 3 7	0. 4 5 6 3 7	0. 09		0. 7 7 8	9	2	20 02	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FO XO 3	2 3 0 9	O435 24	forkhead box O3		38 1	0 . 4 3 1	0 . 8 0 8	0. 9 8 8 0 6	0. 09		0. 8 8 9	9	1	20 08	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FO S	2 3 5 3	P0110 0	Fos proto- oncogen e, AP-1 transcrip tion factor subunit	Tr ans cri pti on fac tor	52 8	0 . 4 1 1	0 . 8 8 5	0. 2 6 1 7 6	0. 09		1	9	0	19 92	2 0 1 7
Rh eu ma toi d Ar	C 00 03 87 3	HA VC R1	2 6 7 6 2	Q96D 42	hepatitis A virus cellular receptor 1		21 7	0 . 4 8 9	0 . 8 8 5	8. 5 1 E - 0 7	0. 09		1	9	1	20 04	2 0 1 9

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DM A	3 1 0 8	P2806 7	major histoco mpatibil ity complex , class II, DM alpha	Im mu ne res po nse	63	0 . 6 0 8	0 . 6 5 4	0. 0 2 3 8 1	0. 09		0. 5 5 6	9	0	19 97	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL3	3 5 6 2	P0870 0	interleukin 3		21 1	0 . 4 8 9	0 . 7 3 1	2. 5 9 E - 0 9	0. 09		0. 8 8 9	9	2	19 88	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	JU N	3 7 2 5	P0541 2	Jun proto- oncogen e, AP-1 transcrip tion factor subunit	Tr ans cri pti on fac tor	34 4	0 . 4 4 2	0 . 8 8 5	0. 0 5 6 2	0. 09		1	9	0	19 96	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CX 3C L1	6 3 7 6	P7842 3	C-X3-C motif chemoki ne ligand 1	Sig nal ing	24 3	0 . 4 7 8	0 . 8 0 8	0. 6 0 8 3 7	0. 09		0. 8 8 9	9	0	19 99	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TH BS 1	7 0 5 7	P0799 6	thrombospond in 1		48 0	0 . 4 0 7	0 . 8 8 5	0. 9 9 8 5	0. 09		1	9	0	20 06	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC R2	7 2 9 2 3 0	P4159 7	C-C motif chemokine receptor 2		43 6	0 . 4 1 8	0 . 8 4 6	0. 0 2 3 4 1 2	0. 09		0. 8 8 9	9	0	20 03	2 0 1 9
Rh eu ma toi	C 00 03	LR PP RC	1 0 1	P4270 4	leucine rich pentatricopept ide repeat containing		22 0	0 . 4	0 . 7	2. 3 E -	0. 08		0. 8 7 5	8	0	20 00	2 0 2 0

d Ar thr itis	87 3		2 8				9 3	6 9	1 0							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FS TL 1	1 1 1 6 7	Q128 41	follistatin like 1	En zy me mo dul ato r	12 8	0 . 5 4 1	0 . 8 0 8	0. 08		0. 8 7 5	8	0	19 98	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI NC 026 05	1. 1 3 E + 0 8		long intergenic non-protein coding RNA 2605		20 3	0 . 4 9	0 . 7 6 9	0. 08		1	8	0	20 05	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CS F1	1 4 3 5	P0960 3	colony stimulating factor 1		25 9	0 . 4 7 3	0 . 8 0 8	0. 08		1	8	0	19 88	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA RD 8	2 2 9 0 0	Q9Y2 G2	caspase recruitment domain family member 8		78	0 . 5 9	0 . 7 3 1	1. 7 7 E - 0 6	0. 08	0. 7 5	8	1	20 07	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL4 R	3 5 6 6	P2439 4	interleukin 4 receptor	Re ce pto r	24 2	0 . 4 7 4	0 . 8 4 6	0. 08		1	8	4	20 06	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL7 R	3 5 7 5	P1687 1	interleukin 7 receptor	Re ce pto r	23 1	0 . 4 8 7	0 . 7 6 9	3. 7 6 E - 0 7	0. 08	1	8	2	20 09	2 0 1 9

Rheumatoid Arthritis	C0003873	MP8	4317	P22894	matrix metalloproteinase 8	Enzyme	213	0.488	0.88	1.07E-24	0.08		1	8	0	1999	2019
Rheumatoid Arthritis	C0003873	WG	474168		Wegener granulomatosis		61	0.595	0.808		0.08		1	8	0	2009	2019
Rheumatoid Arthritis	C0003873	PRKN	5071	O60260	parkin RBR E3 ubiquitin protein ligase	Enzyme	409	0.431	0.846	6.93E-07	0.08		1	8	0	2005	2019
Rheumatoid Arthritis	C0003873	SOST	50964	Q9BQB4	sclerostin		270	0.474	0.808	0.86731	0.08		0.875	8	0	2017	2020
Rheumatoid Arthritis	C0003873	TRIM1	54210	Q9NP99	triggering receptor expressed on myeloid cells 1		172	0.515	0.806	0.0278	0.08		0.875	8	0	2009	2019
Rheumatoid Arthritis	C0003873	MAPK3	5595	P27361	mitogen-activated protein kinase 3	Kinase	647	0.379	0.858	0.03684	0.08		1	8	0	2006	2019
Rheumatoid Ar	C0003873	MYDGF	56005	Q969H8	myeloid derived growth factor		295	0.451	0.846	3.49E-	0.08		1	8	0	2007	2019

thr itis									0 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PT X3	5 8 0 6	P2602 2	pentraxin 3		29 6	0 . 4 5 7	0 . 8 0 8	6. 9 8 E - 0 5	0. 08		0. 8 7 5	8	0	20 00 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RF C1	5 9 8 1	P3525 1	replication factor subunit 1	C	14 4	0 . 5 4 1	0 . 8 0 8	0. 9 7 3 0 5	0. 08		1	8	0	20 07 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CX CR 5	6 4 3	P3230 2	C-X-C motif chemoki ne receptor 5	G- pro tei n co upl ed rec ept or	14 6	0 . 5 2 4	0 . 7 6 9	0. 7 8 6 1	0. 08		1	8	0	20 05 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD AM 17	6 8 6 8	P7853 6	ADAM metallopeptid ase domain 17		31 6	0 . 4 5 3	0 . 8 0 8	0. 9 9 5 2 8	0. 08		1	8	0	20 01 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TP O	7 1 7 3	P0720 2	thyroid peroxida se	En zy me	30 6	0 . 4 5 5	0 . 8 4 6	1. 8 2 E - 2 1	0. 08		0. 8 7 5	8	0	20 17 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	C3	7 1 8	P0102 4	comple ment C3	En zy me mo dul ato r	34 3	0 . 4 5	0 . 8 5	0. 9 0 4 2 1	0. 08		1	8	0	19 86 1 8
Rh eu	C 00	AR HG	7 9	Q127 74	Rho guanine nucleotide		14 0	0 . .	0 . .	7. 5	0. 08		1	8	0	20 04 0

ma toi d Ar thr itis	03 87 3	EF 5	8 4		exchange factor 5			5 2 6	8 0 8	9 E - 1 4						1 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SY VN 1	8 4 4 4 7	Q86T M6	synoviolin 1		79	0 . 5 9 9	0 . 7 3 1	0. 9 9 7	0. 08		1	8	0	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FR SF6 B	8 7 7 1	O954 07	TNF receptor superfamily member 6b		14 5	0 . 5 2 8	0 . 7 3 1	3. 8 7 E - 0 6	0. 08		1	8	0	20 07	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 8R 1	8 8 0 9	Q134 78	interleuk in 18 receptor 1	Re ce pto r	23 4	0 . 4 7 3	0 . 8 0 8	8. 6 3 E - 0 6	0. 08		0. 8 7 5	8	0	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TI ME LE SS	8 9 1 4	Q9U NS1	timeless circadian regulator		14 0	0 . 5 3 3	0 . 8 0 8	9. 8 5 E - 3 5	0. 08		1	8	0	20 04	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PT GE S	9 5 3 6	O146 84	prostaglandin E synthase		15 0	0 . 5 4	0 . 7 6 9	0. 7 1 3 1 7	0. 08		1	8	0	20 03	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SE MA 3A	1 0 3 7 1	Q145 63	semapho rin 3A	Sig nal ing	20 2	0 . 5	0 . 8 0 8	0. 9 7 7 9	0. 07		1	7	0	20 13	2 0 2 0

Rheumatoid Arthritis	C0003873	ANP32B	10541	Q92688	acidic nuclear phosphoprotein 32 family member B	Enzyme modulator	120	0.541	0.731	0.95827	0.07		1	7	0	2005	2019
Rheumatoid Arthritis	C0003873	CDAN1	146059	Q8IWY9	codanin 1		77	0.611	0.731	1.1E-12	0.07		1	7	0	2017	2020
Rheumatoid Arthritis	C0003873	CTSK	1513	P43235	cathepsin K	Enzyme	221	0.497	0.808	3.1E-05	0.07		1	7	0	1997	2020
Rheumatoid Arthritis	C0003873	CBLL2	158506	Q8N7E2	Cbl proto-oncogene like 2	Enzyme	235	0.476	0.808		0.07		1	7	0	2005	2019
Rheumatoid Arthritis	C0003873	ETS1	2113	P14921	ETS proto-oncogene 1, transcription factor	Transcription factor	327	0.444	0.731	0.7816	0.07		1	7	2	2001	2017
Rheumatoid Arthritis	C0003873	F2RL1	2150	P55085	F2R like trypsin receptor 1	G-protein coupled receptor	256	0.489	0.760	0.00148	0.07		1	7	0	2007	2018
Rheumatoid	C0003	IFNL1	2826	Q8IU54	interferon lambda 1		73	0.5	0.6	0.000	0.07		0.714	7	0	2013	2020

d Ar thr itis	87 3		1 8					9 9	5 4	2 8 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AN GP T2	2 8 5	O151 23	angiopoi etin 2	Sig nal ing	45 7	0 . 4 1	0 . 8 4 6	0. 8 3 2 0 8	0. 07		1	7	5	20 02	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 274	2 9 1 2 6	Q9NZ Q7	CD274 molecul e	Re ce pto r	10 11	0 . 3 2 4	0 . 9 2 3	0. 0 1 9 1 6	0. 07		0. 8 5 7	7	0	20 07	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IC OS	2 9 8 5 1	Q9Y6 W8	inducible cell costimulator	T	19 3	0 . 5 0 2	0 . 7 3 1 2	0. 0 3 1 2 8 4	0. 07		1	7	0	20 03	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CF H	3 0 7 5	P0860 3	complement factor H		39 3	0 . 4 4 1	0 . 8 8 5	0. 8 6 0 6 1	0. 07		0. 8 5 7	7	2	19 90	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 2B	3 5 9 3	P2946 0	interleuk in 12B	Sig nal ing	24 9	0 . 4 8	0 . 8 8 5	0. 0 0 0 1 1 4	0. 07		0. 7 1 4	7	1	20 05	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KI R2 DS 1	3 8 0 6	Q149 54	killer cell immuno globulin like receptor, two Ig domains and short	Re ce pto r	12 3	0 . 5 3 7	0 . 7 6 9		0. 07		1	7	0	20 06	2 0 1 9

					cytoplas mic tail 1												
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LP A	4 0 1 8	P0851 9	lipoprot ein(a)	En zy me	34 0	0 . 4 4 4	0 . 7 6 9	6. 5 9 E - 8 9	0. 07		1	7	0	19 95	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 1	4 0 6 9 9 1		microRNA 21		72 6	0 . 3 6 3	0 . 8 4 6		0. 07		1	7	0	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NF E2 L2	4 7 8 0	Q162 36	nuclear factor, erythroi d 2 like 2	En zy me	82 3	0 . 3 5 7	0 . 8 8 5	0. 0 3 5 7 2	0. 07		1	7	0	20 16	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NO S2	4 8 4 3	P3522 8	nitric oxide synthase 2		78 3	0 . 3 6 4	0 . 9 2 3	4. 0 3 E - 1 5	0. 07		0. 7 1 4	7	1	20 02	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	OS M	5 0 0 8	P1372 5	oncostat in M	Sig nal ing	18 8	0 . 5 0 5	0 . 7 6 9	0. 5 8 9 1 6	0. 07		1	7	0	20 00	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	P2 RX 7	5 0 2 7	Q995 72	purinerg ic receptor P2X 7	Ion ch an nel	33 7	0 . 4 5	0 . 8 0 8	3. 3 3 E - 1 1	0. 07		0. 8 5 7	7	2	20 08	2 0 1 9
Rh eu ma	C 00 03	SE RPI	5 0	P0512 1	serpin family E	En zy me	77 0	0 . 3	0 . 8	0. 0 4	0. 07		1	7	0	20 05	2 0

to id Ar thr itis	87 3	NE 1	5 4		member 1	mo dul ato r		5 9	8 5	3 6 0 9							1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MB L3 P	5 0 6 3 9		mannose- binding lectin family member 3, pseudogene		15 2	0 . 5 1 8	0 . 7 6 9		0. 07		0. 8 5 7	7	0	20 00	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PM L	5 3 7 1	P2959 0	promyelocytic leukemia		27 4	0 . 4 7 7	0 . 8 4 6	0. 2 1 2 9 1	0. 07		1	7	0	19 98	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PP AR G	5 4 6 8	P3723 1	peroxiso me prolifera tor activate d receptor gamma	Nu cle ar rec ept or	87 7	0 . 3 5 8	0 . 8 8 5	0. 0 2 9 1 4	0. 07		1	7	2	20 02	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	S10 0A 9	6 2 8 0	P0670 2	S100 calcium binding protein A9	Ca lci um - bin din g pro tei n	36 3	0 . 4 3 3	0 . 8 8 5	0. 4 7 7	0. 07		0. 8 5 7	7	0	19 90	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SA A2	6 2 8 9	P0DJI 9	serum amyloid A2	Tr ans por ter	10 3	0 . 5 6 8	0 . 7 3 1	2. 7 E - 0 6	0. 07		1	7	0	19 98	2 0 0 4
Rh eu ma toi d Ar	C 00 03 87 3	CC L3	6 3 4 8	P1014 7	C-C motif chemoki ne ligand 3	Sig nal ing	28 2	0 . 4 6	0 . 8 8 5	0. 3 4 9 8 1	0. 07		1	7	0	19 99	2 0 1 9

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TRI M2 1	6 7 3 7	P1947 4	tripartite motif containing 21		22 9	0 . 4 8 5	0 . 8 0 8	3. 3 5 E - 0 9	0. 07		1	7	0	19 85	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TA C1	6 8 6 3	P2036 6	tachykinin precursor 1		47 8	0 . 4 2 4	0 . 9 2 3	0. 7 4 6 0 8	0. 07		1	7	0	19 98	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TL R5	7 1 0 0	O606 02	toll like receptor 5		16 3	0 . 5 1 8	0 . 8 8 5	2. 4 8 E - 1 3	0. 07		1	7	1	20 10	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	C4 B	7 2 1	P0C0 L4;P0 C0L5	comple ment C4B (Chido blood group)	En zy me mo dul ato r	66	0 . 6 0 3	0 . 8 0 8	0. 8 3 4 4	0. 07		1	7	0	19 89	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MU L1	7 9 5 9 4	Q969 V5	mitochondrial E3 ubiquitin protein ligase 1		24 1	0 . 4 7 3	0 . 8 0 8	1. 9 1 E - 0 6	0. 07		1	7	0	20 05	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA LR	8 1 1	P2779 7	calreticu lin	Ca lci um - bin din g pro tei n	48 7	0 . 4 1 3	0 . 9 2 3	0. 8 9 1 3 3	0. 07		1	7	0	19 85	2 0 1 9

Rheumatoid Arthritis	C0003873	CASP1	834	P29466	caspase 1	Enzyme	444	0.413	0.885	3.52E-05	0.07		1	7	0	2010	2019
Rheumatoid Arthritis	C0003873	TNFSF13	8741	O75888	TNF superfamily member 13		189	0.499	0.769	0.81724	0.07		1	7	0	2005	2019
Rheumatoid Arthritis	C0003873	CD19	930	P15391	CD19 molecule		365	0.43	0.885	0.90496	0.07		1	7	0	1996	2016
Rheumatoid Arthritis	C0003873	CD34	947	P28906	CD34 molecule		674	0.368	0.808	4.99E-06	0.07		0.857	7	0	2004	2019
Rheumatoid Arthritis	C0003873	CD69	969	Q07108	CD69 molecule		206	0.488	0.923	0.029691	0.07		1	7	0	2001	2019
Rheumatoid Arthritis	C0003873	C4B ₂ ⁻	1E+08	P0C0L4;P0C0L5	complement component 4B (Chido blood group), copy 2		31	0.671	0.731		0.06		1	6	0	1989	1992
Rheumatoid Ar	C0003873	KLRC4-KLRK1	1.01E+	P26718	KLRC4-KLRK1 readthrough		246	0.469	0.769		0.06		1	6	0	2007	2018

thr itis			0 8														
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD M	1 3 3	P3531 8	adrenom edullin	Sig nal ing	40 5	0 . 4 3 6	0 . 8 0 8	0. 0 4 0 8 3 1	0. 06		1	6	0	20 04	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HT	1 4 0 8 0 5		Hashimoto thyroiditis		17 0	0 . 5 0 5	0 . 7 3 1		0. 06		0. 8 3 3	6	0	20 04	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DM D	1 7 5 6	P1153 2	dystrophin		48 4	0 . 4 2 3	0 . 9 2 3	1	0. 06		1	6	0	20 02	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ES R2	2 1 0 0	Q927 31	estrogen receptor 2	Nu cle ar rec ept or	52 8	0 . 4	0 . 9 2 3	4. 4 5 E - 0 8	0. 06		1	6	1	20 09	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KL RK 1	2 2 9 1 4	P2671 8	killer lectin receptor K1	cell like	25 5	0 . 4 6 7	0 . 7 6 9	6. 9 8 E - 1 4	0. 06		1	6	0	20 07	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TB C1 D9	2 3 1 5 8	Q6ZT 07	TBC1 domain family member 9	En zy me	49 1	0 . 3 9 9	0 . 8 4 6	2. 8 E - 0 5	0. 06		1	6	0	19 95	2 0 1 5
Rh eu ma toi	C 00 03	FL T1	2 3 2 1	P1794 8	fms related receptor	Ki nas e	42 4	0 . 4	0 . 8	0. 9 9 9	0. 06		1	6	2	20 06	2 0 1 9

d Ar thr itis	87 3				tyrosine kinase 1			1 9	4 6	8 3							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FO LR 2	2 3 5 0	P1420 7	folate receptor beta		10 5	0 . 5 5 9	0 . 6 5 4	5. 4 8 E - 0 6	0. 06		1	6	0	19 99	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 7R A	2 3 7 6 5	Q96F 46	interleukin 17 receptor A		15 9	0 . 5 2 9	0 . 8 0 8	0. 0 0 3 5 6	0. 06		1	6	0	20 02	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA BP A	2 5 5 1	Q065 46	GA binding protein transcrip tion factor subunit alpha	Tr ans cri pti on fac tor	63 2	0 . 3 7 9	0 . 8 8 5	0. 9 9 8 1 2	0. 06		1	6	0	20 16	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GC G	2 6 4 1	P0127 5	glucago n		44 1	0 . 4 3 1	0 . 8 8 5	0. 0 3 4 8 1 4	0. 06		0. 8 3 3	6	0	20 13	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GL P1 R	2 7 4 0	P4322 0	glucago n like peptide 1 receptor	G- pro tei n co upl ed rec ept or	28 8	0 . 4 7 1	0 . 8 4 6	0. 2 9 3 4 7	0. 06		1	6	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AN GP T1	2 8 4	Q153 89	angiopoi etin 1	Sig nal ing	34 0	0 . 4 4 6	0 . 8 0 8	0. 9 5 2 0 8	0. 06		1	6	0	20 02	2 0 1 2

Rheumatoid Arthritis	C0003873	IGHV3-69-1	28402		immunoglobulin heavy variable 3-69-1 (pseudogene)		102	0561	06			160	1995	2007	
Rheumatoid Arthritis	C0003873	GZMB	3002	P10144	granzyme B	Enzyme	290	0453	0808	3.67E-14	0.06		161	2003	2018
Rheumatoid Arthritis	C0003873	HP	3240	P00738	haptoglobin	Enzyme	464	0412	0885	1.74E-05	0.06		160	1985	2017
Rheumatoid Arthritis	C0003873	AGBL3	340351	Q8NEM8	ATP/GTP binding protein like 3		5	0861	0115	4.18E-16	0.06		160	2017	2019
Rheumatoid Arthritis	C0003873	IL16	3603	Q14005	interleukin 16	Signaling	193	0501	0846	1.24E-10	0.06		160	2000	2010
Rheumatoid Arthritis	C0003873	IRF4	3662	Q15306	interferon regulatory factor 4	Transcription factor	203	0491	0769	0.85677	0.06		160	2014	2018
Rheumatoid Ar	C0003873	ITGAV	3685	P06756	integrin subunit alpha V		141	05266	07092	0.0002	0.06		164	2007	2017

thr itis									2 8								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KI R3 DL 2	3 8 1 2	P4363 0	killer cell immuno globulin like receptor, three Ig domains and long cytoplas mic tail 2	Re ce pto r	11 8	0 . 5 4 3	0 . 7 6 9	6. 0 8 E - 1 2	0. 06		0. 8 3 3	6	0	20 06	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LA IR1	3 9 0 3	Q6GT X8	leukocyt e associat ed immuno globulin like receptor 1	Re ce pto r	89	0 . 5 6 9	0 . 6 9 2	3. 2 6 E - 0 7	0. 06		1	6	0	19 95	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LG AL S9	3 9 6 5	O001 82	galectin 9	Sig nal ing	19 7	0 . 4 9 6	0 . 7 6 9	6. 5 5 E - 0 6	0. 06		1	6	2	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LIF	3 9 7 6	P1501 8	LIF interleuk in 6 family cytokine	Sig nal ing	23 6	0 . 4 8 3	0 . 7 6 9	0. 5 2 4 2	0. 06		1	6	0	19 92	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MD K	4 1 9 2	P2174 1	midkine	Sig nal ing	20 9	0 . 4 9 4	0 . 8 0 8	0. 2 3 0 0 5	0. 06		1	6	0	20 04	2 0 2 0
Rh eu ma toi d Ar	C 00 03 87 3	MY D8 8	4 6 1 5	Q998 36	MYD88 innate immune signal transduc tion adaptor	En zy me mo dul ato r	48 0	0 . 4 1 4	0 . 9 2 3	0. 1 2 4 4 3	0. 06		1	6	0	20 06	2 0 1 9

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NO TC H1	4 8 5 1	P4653 1	notch receptor 1		69 3	0 . 3 6 9	0 . 8 8 5	1	0. 06		1	6	0	20 01	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2 1R	5 0 6 1 5	Q9HB E5	interleuk in 21 receptor	Re ce pto r	11 0	0 . 5 5	0 . 7 3 1	0. 9 9 8 3 5	0. 06		1	6	0	20 04	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CL EC 4A	5 0 8 5 6	Q9U MR7	C-type lectin domain family 4 member A	Re ce pto r	14	0 . 7 9 2	0 . 2 6 9	4. 1 9 E - 0 5	0. 06		0. 8 3 3	6	4	20 07	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TL R7	5 1 2 8 4	Q9N YK1	toll like receptor 7		27 6	0 . 4 6 4	0 . 8 8 5	0. 9 7 9 1 2	0. 06		1	6	2	20 10	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GD E1	5 1 5 7 3	Q9NZ C3	glycerophosph odiester phosphodiester ase 1		22 8	0 . 4 8 1	0 . 8 0 8	6. 1 2 E - 0 6	0. 06		1	6	0	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TL R9	5 4 1 0 6	Q9NR 96	toll like receptor 9		45 7	0 . 4 1 1	0 . 8 8 5	9. 8 1 E - 0 6	0. 06		1	6	1	20 09	2 0 2 0
Rh eu ma toi	C 00 03	BA NK 1	5 5 0	Q8N DB2	B cell scaffold protein with ankyrin repeats 1		51	0 . 6	0 . 5	4. 7 9 E	0. 06		0. 5	6	3	20 09	2 0 1 8

d Ar thr itis	87 3		2 4					5 3	3 8	- 1 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA P2 K7	5 6 0 9	O147 33	mitogen - activate d protein kinase kinase 7	Ki nas e	40 8	0 . 4 1 9	0 . 8 0 8 5 2	0. 06		1	6	0	20 03	2 0 1 8	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HA MP	5 7 8 1 7	P8117 2	hepcidin antimicrobial peptide		37 7	0 . 4 3 3	0 . 8 4 6 1 8	0. 06		1	6	0	20 08	2 0 1 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BD NF	6 2 7	P2356 0	brain derived neurotro phic factor	Sig nal ing	99 2	0 . 3 4 5	0 . 9 2 3 6	0. 06		1	6	0	20 09	2 0 1 8	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC L7	6 3 5 4	P8009 8	C-C motif chemoki ne ligand 7	Sig nal ing	12 4	0 . 5 4 8	0 . 8 4 6 8 9 3	0. 06		1	6	0	20 05	2 0 1 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BR AF	6 7 3	P1505 6	B-Raf proto- oncogen e, serine/th reonine kinase	Ki nas e	12 28	0 . 3 1 9	0 . 8 4 9 6 9 5	0. 06		1	6	0	20 10	2 0 1 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TE K	7 0 1 0	Q027 63	TEK receptor tyrosine kinase	Ki nas e	30 0	0 . 4 6 2	0 . 6 9 2	1 0. 06		1	6	0	20 02	2 0 2 0	

Rheumatoid Arthritis	C0003873	C4A	720	P0C0L4;P0C0L5	complement C4A (Rodgers blood group)	Enzyme modulator	145	0.563	0.769	1.54E-11	0.06		1	6	0	1989	1992
Rheumatoid Arthritis	C0003873	SUMO1	7341	P63165	small ubiquitin like modifier 1		133	0.533	0.731	0.86128	0.06		1	6	0	2000	2019
Rheumatoid Arthritis	C0003873	BEST1	7439	O76090	bestrophin 1	Ion channel	292	0.465	0.885	1.82E-12	0.06		1	6	0	2002	2019
Rheumatoid Arthritis	C0003873	WNT5A	7474	P41221	Wnt family member 5A	Signaling	375	0.433	0.808	0.9732	0.06		1	6	0	2000	2019
Rheumatoid Arthritis	C0003873	XRCC1	7515	P18887	X-ray repair cross complementing 1		410	0.421	0.923	6.34E-09	0.06		0.667	6	3	2006	2018
Rheumatoid Arthritis	C0003873	ZBTB16	7704	Q05516	zinc finger and BTB domain containing 16	Transcription factor	154	0.545	0.808	0.9907	0.06		1	6	0	1997	2019
Rheumatoid Ar	C0003873	CAS	831	P20810	calpastatin		141	0.541	0.846	4.12E-	0.06		1	6	0	1995	2011

thr itis									1 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA SP8	8 4 1	Q147 90	caspase 8	En zy me	48 0	0 . 4 0 4	0 . 9 2 3	3. 7 2 E - 0 6	0. 06		1	6	0	20 00 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FR SF2 5	8 7 1 8	Q930 38	TNF receptor superfamily member 25		96	0 . 5 7 3	0 . 7 6 9	0. 0 0 8 6 4 8	0. 06		1	6	0	20 04 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD AM 15	8 7 5 1	Q134 44	ADAM metallopro teinase domain 15	En zy me	59	0 . 6 2 6	0 . 5 7 7	2. 4 4 E - 1 6	0. 06		1	6	0	20 01 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NR 112	8 8 5 6	O754 69	nuclear receptor subfamil y 1 group I member 2	Nu cle ar rec ept or	46 2	0 . 4 1 8	0 . 8 4 6	7. 2 7 E - 0 9	0. 06		1	6	0	20 04 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 86	9 4 2	P4208 1	CD86 molecule		21 9	0 . 4 8 3	0 . 7 6 9	0. 9 4 8 7 9	0. 06		0. 8 3 3	6	2	20 00 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD A	1 0 0	P0081 3	adenosin e deamina se	En zy me	37 9	0 . 4 4	0 . 8 8 5	2. 8 8 E - 1 2	0. 05		1	5	0	20 03 1 8
Rh eu ma toi	C 00 03	KI R2 DS 2	1 E +	P4363 1	killer cell immunoglobul in receptor, two		69	0 . 5	0 . 6		0. 05		1	5	0	20 01 1 6

d Ar thr itis	87 3		0 8		Ig domains and short cytoplasmic tail 2			9 9	1 5								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD KN 1A	1 0 2 6	P3893 6	cyclin dependent kinase inhibitor 1A		49 0	0 . 4 0 3	0 . 7 6 9	0. 0 0 1 8 5 8	0. 05		1	5	0	20 00	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NF AT 5	1 0 7 2 5	O949 16	nuclear factor of activate d T cells 5	Tr ans cri pti on fac tor	88	0 . 6 0 1	0 . 6 9 2	1	0. 05		1	5	0	20 11	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LIL RB 1	1 0 8 5 9	Q8N HL6	leukocyt e immuno globulin like receptor B1	Re ce pto r	16 8	0 . 5 1	0 . 7 6 9	5. 6 5 E - 1 4	0. 05		1	5	0	20 05	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BT G3	1 0 9 5 0	Q142 01	BTG anti- proliferation factor 3		14 1	0 . 5 2 8	0 . 8 0 8	0. 9 1 5 8 2	0. 05		1	5	0	19 83	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CIS H	1 1 5 4	Q9NS E2	cytokine inducibl e SH2 containi ng protein	En zy me mo dul ato r	19 5	0 . 5	0 . 8 0 8	0. 0 0 5 3 9	0. 05		1	5	0	20 07	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FR SF1 3C	1 1 5 6 5 0	Q96R J3	TNF receptor superfamily member 13C		12 7	0 . 5 4	0 . 7 3 1	0. 2 6 9 3	0. 05		1	5	1	20 07	2 0 1 7
Rh eu	C 00	CC R7	1 2	P3224 8	C-C motif	G- pro	32 0	0 . .	0 . .	0. 0 0	0. 05		1	5	0	20 17	2 0

matoid Arthritis	03873		36		chemokine receptor 7	tein coupled receptor		443	769	57623						19
Rheumatoid Arthritis	C0003873	CNR2	1269	P34972	cannabinoid receptor 2	G-protein coupled receptor	197	0509	0846	6.54E-06	0.05		153	2009	2019	
Rheumatoid Arthritis	C0003873	SLCO6A1	133482	Q86UG4	solute carrier organic anion transporter family member 6A1	Transporter	449	0412	0885	2.88E-11	0.05		0.85	0	1999	2011
Rheumatoid Arthritis	C0003873	CREB1	1385	P16220	cAMP responsive element binding protein 1		294	0463	0885	0.99673	0.05		150	2002	2017	
Rheumatoid Arthritis	C0003873	CTSL	1514	P07711	cathepsin L	Enzyme	225	0488	0846	0.00845	0.05		150	1990	2004	
Rheumatoid Arthritis	C0003873	ADRB2	154	P07550	adrenoc eptor beta 2	G-protein coupled receptor	387	0442	0923	0.5245	0.05		150	2004	2018	

Rheumatoid Arthritis	C0003873	CYP1A2	1544	P05177	cytochrome P450 family 1 subfamily A member 2	Enzyme	218	0.494	0.23	2.48E-10	0.05		0.8	5	0	2008	2018
Rheumatoid Arthritis	C0003873	OLIG3	167826	Q7RTU3	oligodendrocyte transcription factor 3	Enzyme	4	0.861	0.192	0.8391	0.05		1	5	1	2007	2018
Rheumatoid Arthritis	C0003873	DHODH	1723	Q02127	dihydroorotate dehydrogenase (quinone)	Enzyme	100	0.576	0.769	0.02988	0.05		1	5	0	2009	2019
Rheumatoid Arthritis	C0003873	DNMT1	1786	P26358	DNA methyltransferase 1	Epigenetic regulator	496	0.406	0.885	1	0.05		1	5	0	2013	2018
Rheumatoid Arthritis	C0003873	EGR1	1958	P18146	early growth response 1	Nucleic acid binding	378	0.433	0.939	0.3509	0.05		1	5	0	1992	2017
Rheumatoid Arthritis	C0003873	FCGR1A	2209	P12314	Fc fragment of IgG receptor 1a	Cell adhesion	141	0.532	0.731	0.0131	0.05		1	5	0	1997	2019
Rheumatoid Ar	C0003873	NLRP1	22861	Q9C000	NLR family pyrin domain containing 1		200	0.502	0.769	4.97E-	0.05		0.8	5	1	2008	2017

thr itis										1 9							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FO SB	2 3 5 4	P5353 9	FosB proto- oncogen e, AP-1 transcrip tion factor subunit	Tr ans cri pti on fac tor	27 8	0 . 4 6 3	0 . 8 4 6	0. 9 7 5 3	0. 05		1	5	0	19 96	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MT OR	2 4 7 5	P4234 5	mechani stic target of rapamyc in kinase	Ki nas e	96 0	0 . 3 4 3	0 . 8 8 5	1	0. 05		1	5	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC AD 8	2 7 0 3 4	Q9U KU7	acyl- CoA dehydro genase family member 8	En zy me	20 3	0 . 5 0 6	0 . 8 8 5	5. 6 4 E - 1 4	0. 05		0. 8	5	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	B3 GA T1	2 7 0 8 7	Q9P2 W7	beta-1,3- glucuron yltransfe rase 1	En zy me	19 9	0 . 4 9 4	0 . 7 6 9	0. 1 3 5 2 1	0. 05		1	5	0	19 90	1 9 9 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GS TM 2	2 9 4 6	P2816 1	glutathione S- transferase mu 2		19 5	0 . 4 8 8	0 . 8 0 8	3. 3 9 E - 0 7	0. 05		1	5	0	20 02	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GS TP 1	2 9 5 0	P0921 1	glutathione S- transferase pi 1		61 0	0 . 3 8 3	0 . 9 2 3	0. 0 1 4 1 5 5	0. 05		0. 8	5	0	19 99	2 0 1 2
Rh eu ma toi	C 00 03	TN C	3 3 7 1	P2482 1	tenascin C		36 9	0 . 4	0 . 8	1. 2 6 E	0. 05		1	5	0	20 05	2 0 1 8

d Ar thr itis	87 3							3 3	4 6	- 0 7							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AP OE	3 4 8	P0264 9	apolipoprotein E		10 49	0 . 3 3 8	0 . 9 6 2	0. 0 0 1 8 6 9	0. 05		1	5	0	19 96	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IGF 1R	3 4 8 0	P0806 9	insulin like growth factor 1 receptor	Ki nas e	55 6	0 . 3 9 9	0 . 8 8 5	0. 9 6 7 9 9	0. 05		1	5	0	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI NC 011 93	3 4 8 1 2 0		long intergenic non-protein coding RNA 1193		91	0 . 5 6 5	0 . 6 9 2		0. 05		1	5	0	20 04	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IG HG 3	3 5 0 2	P0186 0	immunoglobul in heavy constant gamma 3 (G3m marker)		16 1	0 . 5 1 3	0 . 7 6 9		0. 05		1	5	0	19 97	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 2A	3 5 9 2	P2945 9	interleukin 12A		26 1	0 . 4 9 1	0 . 8 0 8	0. 0 4 7 4 6	0. 05		1	5	1	20 12	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IT GA M	3 6 8 4	P1121 5	integrin subunit alpha M		34 3	0 . 4 4 3	0 . 8 0 8	3. 3 1 E - 1 1	0. 05		0. 8	5	1	20 09	2 0 1 9

Rheumatoid Arthritis	C0003873	ITGB1	3688	P05556	integrin subunit beta 1	Receptor	210	0.496	0.808	0.90208	0.05		1	5	0	1993	2019
Rheumatoid Arthritis	C0003873	JUNB	3726	P17275	JunB proto-oncogene, AP-1 transcription factor subunit	Transcription factor	264	0.467	0.769	0.86299	0.05		1	5	0	1996	2017
Rheumatoid Arthritis	C0003873	JUND	3727	P17535	JunD proto-oncogene, AP-1 transcription factor subunit	Transcription factor	242	0.475	0.808	0.70054	0.05		1	5	0	1996	2017
Rheumatoid Arthritis	C0003873	GSTK1	373156	Q9Y2Q3	glutathione S-transferase kappa 1		445	0.412	0.885	1.94E-06	0.05		0.8	5	0	1999	2011
Rheumatoid Arthritis	C0003873	KLRB1	3820	Q12918	killer cell lectin like receptor B1		71	0.601	0.615	2.41E-07	0.05		1	5	0	2010	2019
Rheumatoid Arthritis	C0003873	RPSA	3921	P08865	ribosomal protein SA	Nucleic acid binding	221	0.485	0.769	0.93037	0.05		1	5	0	2000	2019
Rheumatoid Ar	C0003873	LGALS1	3956	P09382	galectin 1	Signaling	362	0.435	0.846	0.0444	0.05		1	5	0	2003	2019

thr itis									8 8								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 26	4 0 6 9 1 3		microRNA 126		30 5	0 . 4 4 7	0 . 8 4 6		0. 05		1	5	0	20 15	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 2	4 0 7 0 0 4		microRNA 22		19 5	0 . 4 9 6	0 . 8 0 8		0. 05		1	5	0	20 14	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 21	4 0 7 0 0 6		microRNA 221		30 4	0 . 4 4 9	0 . 8 4 6		0. 05		1	5	0	20 12	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R3 4A	4 0 7 0 4 0		microRNA 34a		42 8	0 . 4 2 1	0 . 8 4 6		0. 05		1	5	0	20 12	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MC L1	4 1 7 0	Q078 20	MCL1 apoptosi s regulato r, BCL2 family member	Sig nal ing	37 5	0 . 4 3	0 . 8 0 8	0. 9 6 3 4 9	0. 05		1	5	0	20 05	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MD M2	4 1 9 3	Q009 87	MDM2 proto- oncogen e	Nu cle ic aci d bin din g	70 2	0 . 3 6 2	0 . 8 4 6	0. 9 9 9 8 1	0. 05		1	5	1	20 05	2 0 1 6
Rh eu ma toi	C 00 03	CX CL 9	4 2 8 3	Q073 25	C-X-C motif chemoki	Sig nal ing	26 9	0 . 4	0 . 8	0. 0 0 2	0. 05		1	5	1	20 03	2 0 1 5

d Ar thr itis	87 3				ne ligand 9			6 2	0 8	9 3							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NF AT C1	4 7 7 2	O956 44	nuclear factor of activate d T cells 1	Tr ans cri pti on fac tor	16 1	0 . 5 1 7	0 . 7 3 1	0. 1 5 6 5 2	0. 05		1	5	0	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NR 4A 2	4 9 2 9	P4335 4	nuclear receptor subfamil y 4 group A member 2	Nu cle ar rec ept or	16 6	0 . 5 2 9	0 . 8 4 6	0. 9 9 9 5 9	0. 05		1	5	0	20 01	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HS PA 14	5 1 1 8 2	Q0V DF9	heat shock protein family A (Hsp70) member 14		17 8	0 . 5 0 2	0 . 7 6 9	0. 6 7 3 5 9	0. 05		1	5	0	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PL A2 G1 B	5 3 1 9	P0405 4	phospho lipase A2 group IB	En zy me	26 8	0 . 4 6 8	0 . 8 4 6	1. 0 1 E - 1 0	0. 05		1	5	0	19 91	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PL AU	5 3 2 8	P0074 9	plasmin ogen activator , urokinas e	En zy me	43 9	0 . 4 2 5	0 . 9 2 3	2. 3 1 E - 0 6	0. 05		1	5	0	20 00	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PT EN	5 7 2 8	P6048 4	phospha tase and tensin homolog	En zy me	13 49	0 . 3 0 5	0 . 9 2 3	0. 2 5 6 5 1	0. 05		0. 6	5	0	19 86	2 0 1 7
Rh eu	C 00	PT H	5 7	P0127 0	parathyroid hormone		52 8	0 . .	0 . .	0. 0 0	0. 05		1	5	0	20 01	2 0

ma toi d Ar thr itis	03 87 3		4 1					3 9 7	8 4 6	1 2 0 9 3							1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CX CL 16	5 8 1 9 1	Q9H2 A7	C-X-C motif chemoki ne ligand 16	Sig nal ing	17 8	0 . 5 0 2	0 . 7 6 9	3. 4 5 E - 0 5	0. 05		1	5	0	20 05	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RA C1	5 8 7 9	P6300 0	Rac family small GTPase 1	En zy me mo dul ato r	41 5	0 . 4 2 9	0 . 9 6 2 2 8	0. 7 6 2 2 8	0. 05		1	5	0	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RA RR ES 2	5 9 1 9	Q999 69	retinoic acid receptor responder 2		18 0	0 . 5 1 9	0 . 7 3 1	2. 7 2 E - 0 5	0. 05		1	5	0	20 12	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FR SF1 7	6 0 8	Q022 23	TNF receptor superfa mily member 17	Re ce pto r	81	0 . 5 8 8	0 . 6 9 2	1. 3 7 E - 0 6	0. 05		1	5	0	20 01	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RO S1	6 0 9 8	P0892 2	ROS proto- oncogen e 1, receptor tyrosine kinase	Ki nas e	35 6	0 . 4 3 9	0 . 8 8 5	1. 6 2 E - 7 2	0. 05		0. 8	5	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	S10 0A 4	6 2 7 5	P2644 7	S100 calcium binding protein A4	Ca lci um - bin din g pro	30 8	0 . 4 4 8	0 . 7 6 9	0. 0 6 6 1 8 4	0. 05		1	5	0	20 06	2 0 1 9

						tein											
Rheumatoid Arthritis	C0003873	S100A12	6283	P80511	S100 calcium binding protein A12	Calcium-binding protein	221	0.4888	0.48234	0.05		1	5	0	2005	2019	
Rheumatoid Arthritis	C0003873	SP1	6667	P08047	Sp1 transcription factor	Nucleic acid binding	209	0.493	0.79997	0.05		1	5	0	2017	2019	
Rheumatoid Arthritis	C0003873	MAP3K7	6885	O43318	mitogen-activated protein kinase kinase kinase 7	Kinase	273	0.477	0.8971	0.05		1	5	0	2004	2020	
Rheumatoid Arthritis	C0003873	TREB	6957	P0DSE2	T cell receptor beta locus		49	0.636	0.538	0.05		0.8	5	0	1994	2003	
Rheumatoid Arthritis	C0003873	TSPO	706	P30536	translocator protein		341	0.444	0.80274	0.05		1	5	0	2017	2020	
Rheumatoid Arthritis	C0003873	TM7SF2	7108	O76062	transmembrane 7 superfamily member 2	Enzyme	217	0.486	0.807E-07	0.05		1	5	0	2002	2012	

Rheumatoid Arthritis	C0003873	VP S51	738	Q9UID3	VPS51 subunit of GARP complex		292	0.452	0.86	1.05E-08	0.05		1	5	0	2002	2016
Rheumatoid Arthritis	C0003873	VE GFC	7424	P49767	vascular endothelial growth factor C	Signaling	291	0.459	0.769	0.49565	0.05		1	5	0	2002	2019
Rheumatoid Arthritis	C0003873	DH X40	79665	Q8IX18	DEAH-box helicase 40	Enzyme	64	0.68	0.769	0.756	0.05		1	5	0	2007	2019
Rheumatoid Arthritis	C0003873	TS LP	85480	Q969D9	thymic stromal lymphopoietin		220	0.486	0.808	0.04036	0.05		1	5	0	2014	2018
Rheumatoid Arthritis	C0003873	SO CS1	8651	O15524	suppressor of cytokine signaling 1	Enzyme modulator	315	0.455	0.884	0.5844	0.05		1	5	0	2004	2012
Rheumatoid Arthritis	C0003873	TN FS F10	8743	P50591	TNF superfamily member 10	Signaling	445	0.4135	0.8495	0.13495	0.05		1	5	0	2009	2017
Rheumatoid Ar	C0003873	TN FR SF1 0A	8797	O00220	TNF receptor superfamily member 10a		155	0.521	0.731	5.77E-1	0.05		0.8	5	1	1989	2012

thr itis									1 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CF LA R	8 8 3 7	O155 19	CASP8 and FADD like apoptosi s regulato r	En zy me	21 5	0 . 4 8 5	0 . 8 4 6	0. 9 9 6 7	0. 05		1	5	0	20 00 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SQ ST M1	8 8 7 8	Q135 01	sequestosome 1		47 0	0 . 4 2 8	0 . 8 8 5	0. 0 0 0 8 6	0. 05		1	5	0	20 05 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 80	9 4 1	P3368 1	CD80 molecule		23 3	0 . 4 7 5	0 . 7 6 9	0. 0 1 0 8 9 8	0. 05		1	5	0	20 00 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD AM TS 4	9 5 0 7	O751 73	ADAM metallop eptidase with thrombo spondin type 1 motif 4	En zy me	84	0 . 5 8 2	0 . 6 9 2	1. 9 5 E - 0 6	0. 05		1	5	0	20 02 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GD F15	9 5 1 8	Q999 88	growth different iation factor 15	Sig nal ing	38 9	0 . 4 2 9	0 . 8 0 8	3. 0 1 E - 0 7	0. 05		1	5	1	20 07 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 38	9 5 2	P2890 7	CD38 molecul e	En zy me	47 3	0 . 4 0 7	0 . 8 8 5	2. 3 1 E - 0 6	0. 05		1	5	0	20 03 1 9
Rh eu ma toi	C 00 03	HO TA IR	1 E +		HOX transcript antisense RNA		23 4	0 . 4	0 . 7		0. 04		0. 7 5	4	0	20 17 1 9

d Ar thr itis	87 3		0 8					7 5	6 9								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZG LP 1	1 E + 0 8	P0C6 A0	zinc finger GATA like protein 1		18 6	0 . 5 1 2	0 . 8 0 8	0. 3 8 6 8	0. 04		1	4	0	20 17	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 8B P	1 0 0 6 8	O959 98	interleukin 18 binding protein		75	0 . 6 0 3	0 . 7 3 1	1. 4 8 E - 0 8	0. 04		1	4	0	20 03	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NA MP T	1 0 1 3 5	P4349 0	nicotina mide phospho ribosyltr ansferas e	Signal ing	19 9	0 . 5 0 2	0 . 8 0 8	0. 9 7 9 1 4	0. 04		1	4	2	20 11	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RA BE PK	1 0 2 4 4	Q7Z6 M1	Rab9 effector protein with kelch motifs		11 2	0 . 5 5 3	0 . 6 9 2	2. 8 4 E - 1 1	0. 04		1	4	0	20 00	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LA NC L1	1 0 3 1 4	O438 13	LanC like 1		11 3	0 . 5 5 2	0 . 6 9 2	1. 0 8 E - 1 1	0. 04		1	4	0	20 00	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD KN 2D	1 0 3 2	P5527 3	cyclin dependent kinase inhibitor 2D		11 0	0 . 5 4 7	0 . 7 6 9	0. 4 9 4 7 3	0. 04		1	4	0	19 89	2 0 0 9
Rh eu	C 00	NX F1	1 0	Q9UB U9	nuclear RNA	Nu cle	14 1	0 . .	0 . .	0. 9	0. 04		1	4	0	19 94	2 0

matoid Arthritis	03873		482		export factor 1	ic acid binding		531	885	763						00
Rheumatoid Arthritis	C0003873	LOC105379528	1.05E+08		uncharacterized LOC105379528		55	0.617	0.615		0.04		14	0	1995	2007
Rheumatoid Arthritis	C0003873	KHDRBS1	10657	Q07666	KH RNA binding domain containing, signal transduction associated 1	Nucleic acid binding	289	0.457	0.486	0.99423	0.04		14	0	2018	2019
Rheumatoid Arthritis	C0003873	CXCR6	10663	O00574	C-X-C motif chemokine receptor 6	G-protein coupled receptor	325	0.4488	0.485	5.72E-05	0.04		14	0	1999	2016
Rheumatoid Arthritis	C0003873	MALT1	10892	Q9UDY8	MALT1 paracaspase	Enzyme	148	0.532	0.769	0.98651	0.04		14	0	2014	2019
Rheumatoid Arthritis	C0003873	EBNA1BP2	10969	Q99848	EBNA1 binding protein 2		116	0.55	0.692	1.37E-09	0.04		14	0	2000	2018
Rheumatoid Arthritis	C0003873	H3P13	1.15		H3 histone pseudogene 13		78	0.5	0.7		0.04		14	0	1989	20

to id Ar thr itis	87 3		E + 0 8				8 4	6 9								0 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H3 P28	1. 1 5 E + 0 8		H3 histone pseudogene 28	11 1	0 . 5 5 3	0 . 6 9 2		0. 04		1	4	0	20 00	2 0 1 8	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LR G1	1 1 6 8 4 4	P0275 0	leucine rich alpha-2- glycoprotein 1	10 9	0 . 5 6 4	0 . 7 3 1	0. 0 9 5 1 4 3	0. 04		1	4	0	20 12	2 0 1 8	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CL U	1 1 9 1	P1090 9	clusterin		41 2	0 . 4 2 6	0 . 8 8 5	7. 8 1 E - 0 5	0. 04		1	4	0	20 06	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SE RPI NA 3	1 2	P0101 1	serpin family A member 3	En zy me mo dul ato r	22 9	0 . 4 8 6	0 . 8 4 6	8. 8 3 E - 1 4	0. 04		1	4	0	19 90	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC R4	1 2 3 3	P5167 9	C-C motif chemoki ne receptor 4	G- pro tei n co upl ed rec ept or	16 8	0 . 5 1	0 . 7 3 1	0. 0 6 8 6 3	0. 04		1	4	0	20 04	2 0 1 9
Rh eu ma toi d Ar	C 00 03 87 3	CR 2	1 3 8 0	P2002 3	complement C3d receptor 2		12 3	0 . 5 5 6	0 . 6 5 4	4. 7 4 E - 1 9	0. 04		1	4	0	20 10	2 0 1 3

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CR AB P2	1 3 8 2	P2937 3	cellular retinoic acid binding protein 2		79	0 . 5 9 3	0 . 6 1 5 1	0. 0 0 1 5 1	0. 04		1	4	0	19 96	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CS F1 R	1 4 3 6	P0733 3	colony stimulati ng factor 1 receptor	Ki nas e	35 6	0 . 4 4 8	0 . 8 0 8	0. 1 3 2 7 8	0. 04		1	4	0	20 16	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CT NN B1	1 4 9 9	P3522 2	catenin beta 1		13 68	0 . 3 0 3	0 . 8 8 5	0. 9 9 9 9	0. 04		1	4	0	20 11	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY BB	1 5 3 6	P0483 9	cytochro me b- 245 beta chain	Ion ch an nel	34 3	0 . 4 5 2	0 . 8 8 5	0. 9 9 9 0 4	0. 04		1	4	0	20 06	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DE CR 1	1 6 6 6	Q166 98	2,4- dienoyl- CoA reductas e 1	En zy me	39 9	0 . 4 2 6	0 . 8 8 5	4. 4 7 E - 1 4	0. 04		1	4	0	20 06	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AT N1	1 8 2 2	P5425 9	atrophin 1		49 9	0 . 4 0 9	0 . 8 8 5	0. 9 9 9 2	0. 04		1	4	1	20 02	2 0 1 6
Rh eu ma toi	C 00 03	S1P R1	1 9 0 1	P2145 3	sphingos ine-1- phospha te	G- pro tei n	12 6	0 . 5	0 . 7	0. 7 3 2	0. 04		1	4	0	20 08	2 0 1 9

d Ar thr itis	87 3				receptor 1	co upl ed rec ept or		4 6	6 9	6 9							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LP AR 1	1 9 0 2	Q926 33	lysophos phatidic acid receptor 1	G- pro tei n co upl ed rec ept or	14 5	0 . 5 3 4	0 . 8 0 8	0. 1 8 6 0 3	0. 04		1	4	0	20 08	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ED NR A	1 9 0 9	P2510 1	endothel in receptor type A	G- pro tei n co upl ed rec ept or	42 7	0 . 4 2 6	0 . 8 8 5	0. 9 9 1 5 8	0. 04		0. 7 5	4	0	19 99	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EG F	1 9 5 0	P0113 3	epidermal growth factor		77 4	0 . 3 5 7	0 . 9 2 3	8. 5 3 E - 1 7	0. 04		1	4	2	20 02	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	F3	2 1 5 2	P1372 6	coagulat ion factor III, tissue factor	Re ce pto r	45 6	0 . 4 1 5	0 . 8 4 6	0. 0 1 8 7 2	0. 04		1	4	0	20 03	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	F9	2 1 5 8	P0074 0	coagulat ion factor IX	En zy me	27 6	0 . 4 6 5	0 . 8 8 5	0. 9 9 7 7 6	0. 04		1	4	1	19 89	2 0 0 9
Rh eu ma toi	C 00 03	M MR N1	2 2 9	Q132 01	multimerin 1		27 2	0 . 4	0 . 8	2. 0 7 E	0. 04		1	4	0	19 93	2 0 1 9

d Ar thr itis	87 3		1 5					6 5	4 6	- 2 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FO XC 1	2 2 9 6	Q129 48	forkhead box C1	Tr ans cri pti on fac tor	24 2	0 . 4 8 3	0 . 8 4 6	0. 9 5 3 7	0. 04		1	4	0	19 88	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FL NB	2 3 1 7	O753 69	filamin B		37 4	0 . 4 5 8	0 . 9 2 3	6. 0 5 E - 1 0	0. 04		1	4	0	19 94	2 0 0 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SE C1 4L2	2 3 5 4 1	O760 54	SEC14 like lipid binding 2		19 8	0 . 4 9 4	0 . 8 8 5	2. 9 2 E - 0 8	0. 04		1	4	0	19 94	2 0 0 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FP R2	2 3 5 8	P2509 0	formyl peptide receptor 2	G- pro tei n co upl ed rec ept or	12 4	0 . 5 4 7	0 . 7 6 9	0. 4 0 1 3 7	0. 04		1	4	0	20 04	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BB C3	2 7 1 1 3	Q96P G8;Q 9BXH 1	BCL2 binding component 3		15 7	0 . 5 1 7	0 . 7 6 9	0. 0 0 3 9 7 6	0. 04		0. 7 5	4	0	20 06	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GL B1	2 7 2 0	P1627 8	galactosi dase beta 1	En zy me	38 5	0 . 4 4 8	0 . 8 0 8	7. 9 2 E - 1 0	0. 04		1	4	0	19 96	2 0 1 9

Rheumatoid Arthritis	C0003873	IGHV3O R16-7	28309		immunoglobulin heavy variable 3/OR16-7 (pseudogene)	98	0566	064		0.04		140	1995	2007	
Rheumatoid Arthritis	C0003873	IGHV3-52	28421		immunoglobulin heavy variable 3-52 (pseudogene)	37	067443	0643		0.04		140	1993	2010	
Rheumatoid Arthritis	C0003873	TRBV16	28571	A0A087WV62	T cell receptor beta variable 16 (gene/pseudogene)	29	0695	065		0.04		0.754	1994	1997	
Rheumatoid Arthritis	C0003873	TRBV7-9	28889	P04435	T cell receptor beta variable 7-9	29	0695	065		0.04		0.754	1994	1997	
Rheumatoid Arthritis	C0003873	TRBC1	28639	P01850	T cell receptor beta constant 1	29	0695	065		0.04		0.754	1994	1997	
Rheumatoid Arthritis	C0003873	GP T	2875	P24298	glutamic -- pyruvic transaminase	Enzyme	511	044033	0493	3.59E-19	0.04		140	2001	2019
Rheumatoid Ar	C0003873	GRN	2896	P28799	granulin precursor		412	04435	048466	0.0096	0.04		0.75	2015	2020

thr itis									6 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RM C1	2 9 9 1 9	Q96D M3	regulator of MON1-CCZ1	11 0	0 . 5 5 5	0 . 7 3 1	0. 9 8 8 2 3	0. 04		1	4	0	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 9	2 9 9 4 9	Q9U HD0	interleukin 19	10 3	0 . 5 5 8	0 . 7 6 9	4. 3 3 E - 0 5	0. 04		1	4	5	20 10	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AN XA 1	3 0 1	P0408 3	annexin A1	33 6	0 . 4 4 2	0 . 8 8 5	1. 2 E - 0 7	0. 04		1	4	0	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC AC A	3 1	Q130 85	acetyl-CoA carboxylase alpha	24 1	0 . 4 8	0 . 8 4 6	1	0. 04		0. 7 5	4	0	20 08	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DR B3	3 1 2 5	P7948 3	major histoco mpatibil ity complex , class II, DR beta 3	Im mu ne res po nse	85	0 . 5 7	0 . 8 8 5	0. 04		0. 5	4	0	19 92	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HO XD 9	3 2 3 5	P2835 6	homeobox D9	34	0 . 6 7	0 . 4 6 2	0. 0 1 7 0 0 4	0. 04		1	4	0	19 96	2 0 0 2
Rh eu ma toi	C 00 03	AP C	3 2 4	P2505 4	APC regulator of WNT signaling pathway	70 3	0 . 3	0 . 9	1	0. 04		1	4	0	19 99	2 0 1 1

d Arthritis	873						73	62									
Rheumatoid Arthritis	C0003873	HTR2A	3356	P28223	5-hydroxytryptamine receptor 2A	G-protein coupled receptor	289	0.473	0.846	0.5124	0.04		1	4	3	2006	2013
Rheumatoid Arthritis	C0003873	ARMH1	339541	Q6PIY5	armadillo like helical domain containing 1		111	0.553	0.692	1.65E-05	0.04		1	4	0	2000	2018
Rheumatoid Arthritis	C0003873	IFNB1	3456	P01574	interferon beta 1		426	0.421	0.846		0.04		1	4	0	2012	2018
Rheumatoid Arthritis	C0003873	IGFBP5	3488	P24593	insulin like growth factor binding protein 5	Enzyme modulator	126	0.544	0.692	0.9283	0.04		1	4	0	2002	2018
Rheumatoid Arthritis	C0003873	LCB3	353143	Q5TA77	late cornified envelope 3B		14	0.751	0.231	0.0032	0.04		0.75	4	0	2010	2012
Rheumatoid Arthritis	C0003873	LCB3	353144	Q5T5A8	late cornified envelope 3C		15	0.743	0.269	0.4753	0.04		0.75	4	0	2010	2012

Rheumatoid Arthritis	C0003873	IKKB	3551	O14920	inhibitor of nuclear factor kappa B kinase subunit beta	Kinase	191	0.506	0.846	0.9192	0.04		1	4	0	2001	2020
Rheumatoid Arthritis	C0003873	IL5	3567	P05113	interleukin 5		359	0.437	0.846	0.0563	0.04		0.75	4	0	1996	2019
Rheumatoid Arthritis	C0003873	CXCR2	3579	P25025	C-X-C motif chemokine receptor 2	G-protein coupled receptor	335	0.45	0.9336	0.01336	0.04		1	4	0	1997	2015
Rheumatoid Arthritis	C0003873	IL10RA	3587	Q13651	interleukin 10 receptor subunit alpha	Receptor	90	0.579	0.692	0.01788	0.04		1	4	3	1999	2017
Rheumatoid Arthritis	C0003873	ITGA1	3672	P56199	integrin subunit alpha 1		58	0.644	0.654	2.61E-16	0.04		1	4	0	1988	2019
Rheumatoid Arthritis	C0003873	KIR2DL2	3803	P43627	killer cell immunoglobulin like receptor, two Ig domains and long cytoplasmic tail 2	Receptor	65	0.612	0.654		0.04		1	4	0	2012	2019

Rheumatoid Arthritis	C0003873	KLRC1	3821	P26715	killer cell lectin like receptor C1	67	0.604	0.731	4.14E-05	0.04		1	4	1	2003	2017
Rheumatoid Arthritis	C0003873	SUMO4	387082	Q6EEV6	small ubiquitin like modifier 4	39	0.653	0.577		0.04		0.75	4	1	2005	2006
Rheumatoid Arthritis	C0003873	LOC390714	390714		immunoglobulin heavy chain variable region	55	0.617	0.615		0.04		1	4	0	1995	2007
Rheumatoid Arthritis	C0003873	LBIP	3929	P18428	lipopolysaccharide binding protein	156	0.525	0.808	4.19E-15	0.04		1	4	0	2018	2019
Rheumatoid Arthritis	C0003873	LOX	4015	P28300	lysyl oxidase	328	0.447	0.846	0.9769	0.04		1	4	0	1995	2018
Rheumatoid Arthritis	C0003873	MI R10A	406902		microRNA 10a	158	0.513	0.846		0.04		1	4	0	2016	2018
Rheumatoid Ar	C0003873	MI R145	406937		microRNA 145	366	0.431	0.846		0.04		1	4	0	2017	2019

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 46	4 1 7 9	P1552 9	CD46 molecule		25 8	0 . 4 7 7	0 . 8 0 8	4. 7 E - 0 7	0. 04		1	4	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI P	4 2 8 4	P3030 1	major intrinsic protein of lens fiber	Ion ch an nel	18 1	0 . 5 0 7	0 . 8 4 6	0. 0 3 0 9 5 6	0. 04		1	4	0	19 99	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	M MP 19	4 3 2 7	Q995 42	matrix metallop eptidase 19	En zy me	64	0 . 6 2 3	0 . 6 1 5	2 E - 2 0	0. 04		1	4	0	19 97	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PA EP	5 0 4 7	P0946 6	progesta gen associat ed endomet rial protein	En zy me	39 7	0 . 4 3	0 . 8 4 6	3. 1 1 E - 0 8	0. 04		1	4	0	20 03	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AN GP TL 4	5 1 1 2 9	Q9BY 76	angiopoi etin like 4	Sig nal ing	19 8	0 . 4 9 8	0 . 7 3 1	2. 3 1 E - 1 1	0. 04		1	4	0	20 14	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PE CA M1	5 1 7 5	P1628 4	platelet and endothel ial cell adhesion molecul e 1	Ce ll ad hes ion	39 6	0 . 4 2 6	0 . 8 4 6		0. 04		0. 7 5	4	3	20 04	2 0 1 4
Rh eu ma toi	C 00 03	PG F	5 2 2 8	P4976 3	placenta l growth factor	Sig nal ing	28 8	0 . 4 6	0 . 8	0. 1 2	0. 04		1	4	0	20 09	2 0 1 5

d Ar thr itis	87 3								4 6	8 8							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR KC A	5 5 7 8	P1725 2	protein kinase C alpha	Ki nas e	36 8	0 . 4 4 6	0 . 8 4 7 6	0. 3 6 7 7	0. 04		1	4	0	20 06	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2 6	5 5 8 0 1	Q9NP H9	interleukin 26		51	0 . 6 3 1	0 . 5 3 8	0. 0 0 0 5 3 5	0. 04		1	4	0	20 03	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PS MD 7	5 7 1 3	P5166 5	proteaso me 26S subunit, non- ATPase 7	En zy me	11 4	0 . 5 5 1	0 . 6 9 2	0. 2 6 3 6 7	0. 04		1	4	0	20 00	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R4 51 A	5 7 4 4 1 1		microRNA 451a		17 7	0 . 5 0 5	0 . 7 6 9		0. 04		1	4	0	20 14	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC ND 1	5 9 5	P2438 5	cyclin D1	En zy me mo dul ato r	85 9	0 . 3 4 4	0 . 9 2 3	0. 8 9 0 5 7	0. 04		1	4	0	20 01	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RE G1 A	5 9 6 7	P0545 1	regenerating family member alpha		26 4	0 . 4 6 7	0 . 8 4 6	1. 3 5 E - 0 5	0. 04		1	4	0	19 89	2 0 0 9

Rheumatoid Arthritis	C0003873	REN	5972	P00797	renin	Enzyme	721	0.37	0.923	2.43E-07	0.04		1	4	0	2017	2020
Rheumatoid Arthritis	C0003873	S100A1	6271	P23297	S100 calcium binding protein A1	Calcium-binding protein	396	0.421	0.846	0.004	0.04		1	4	0	2002	2019
Rheumatoid Arthritis	C0003873	S100B	6285	P04271	S100 calcium binding protein B	Calcium-binding protein	599	0.383	0.92387	0.04	0.04		1	4	0	2002	2019
Rheumatoid Arthritis	C0003873	CCLL3L1	6349	P16619	C-C motif chemokine ligand 3 like 1		40	0.65	0.654	0.01257	0.04		0.75	4	0	2008	2016
Rheumatoid Arthritis	C0003873	CXCL5	6374	P42830	C-X-C motif chemokine ligand 5	Signaling	160	0.519	0.769	5.04E-06	0.04		1	4	0	1997	2019
Rheumatoid Arthritis	C0003873	SELL	6402	P14151	selectin L		171	0.505	0.846	4.96E-07	0.04		1	4	0	2006	2015

Rheumatoid Arthritis	C0003873	SELP	6403	P16109	selectin P		293	0.46	0.79	5.04E-32	0.04		0.75	4	1	2007	2018
Rheumatoid Arthritis	C0003873	MAP2K4	6416	P45985	mitogen-activated protein kinase kinase 4	Kinase	100	0.599	0.697	0.9709	0.04		1	4	0	2003	2015
Rheumatoid Arthritis	C0003873	SFRP1	6422	Q8N474	secreted frizzled related protein 1		227	0.479	0.846	0.9657	0.04		0.75	4	0	1998	2011
Rheumatoid Arthritis	C0003873	SHBG	6462	P04278	sex hormone binding globulin		368	0.438	0.808	1.25E-06	0.04		1	4	0	1992	2019
Rheumatoid Arthritis	C0003873	SLC2A5	6584	O76082	solute carrier family 22 member 5	Transporter	103	0.608	0.731	5.27E-16	0.04		1	4	0	2005	2013
Rheumatoid Arthritis	C0003873	FSCN1	6624	Q16658	fascin actin-bundling protein 1	Cellular structure	175	0.544	0.731	0.8652	0.04		0.75	4	0	1992	2003
Rheumatoid Ar	C0003873	SOX5	6660	P35711	SRF-box transcription factor 5		150	0.545	0.799	0.995	0.04		1	4	0	2016	2018

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TA P1	6 8 9 0	Q035 18	transport er 1, ATP binding cassette subfamil y B member	Tr ans por ter	18 1	0 . 5	0 . 8 0 8	5. 3 4 E - 0 6	0. 04		1	4	2	19 97	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TB X5	6 9 1 0	Q995 93	T-box transcrip tion factor 5	Tr ans cri pti on fac tor	17 0	0 . 5 2 8	0 . 7 6 9	0. 9 9 5 4	0. 04		1	4	0	20 14	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TP MT	7 1 7 2	P5158 0	thiopurine S- methyltransfer ase		83	0 . 5 9 3	0 . 6 9 2	7. 1 1 E - 0 6	0. 04		1	4	0	20 03	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	C5 AR 1	7 2 8	P2173 0	comple ment C5a receptor 1	G- pro tei n co upl ed rec ept or	17 9	0 . 5 1 3	0 . 8 0 8	0. 4 0 2 4 9	0. 04		1	4	0	20 02	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TX N	7 2 9 5	P1059 9	thioredoxin		33 8	0 . 4 4 7	0 . 8 8 5	0. 2 0 1 1 9	0. 04		1	4	0	20 06	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	V WF	7 4 5 0	P0427 5	von Willebra nd factor	En zy me mo dul ato r	49 8	0 . 4 0 8	0 . 8 8 5	3. 2 2 E - 2 5	0. 04		1	4	0	19 84	2 0 1 9

Rheumatoid Arthritis	C0003873	STEA P4	79689	Q687X5	STEAP4 metalloredutase		34	0.686	0.462	1.2E-07	0.04		1	4	0	2009	2018
Rheumatoid Arthritis	C0003873	EHMT1	79813	Q9H9B1	euchromatic histone lysine methyltransferase 1	Epigenetic regulator	371	0.466	0.808	1	0.04		1	4	0	2017	2018
Rheumatoid Arthritis	C0003873	CD276	80381	Q5ZPR3	CD276 molecule	Enzyme modulator	169	0.505	0.731	2.47E-09	0.04		1	4	0	2008	2019
Rheumatoid Arthritis	C0003873	IL1F10	84639	Q8WZ1	interleukin family member 10	1	57	0.636	0.462	2.0E-06	0.04		1	4	0	2010	2019
Rheumatoid Arthritis	C0003873	USO1	8615	O60763	USO1 vesicle transport factor	Transporter	153	0.522	0.851	0.33417	0.04		1	4	0	1994	2000
Rheumatoid Arthritis	C0003873	TP63	8626	Q9H3D4	tumor protein p63	Transcription factor	816	0.362	0.769	0.9928	0.04		1	4	0	2000	2018
Rheumatoid Ar	C0003873	CD1C	911	P29017	CD1c molecule		49	0.633	0.692	1.6E-08	0.04		1	4	0	2017	2019

thr itis																
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AR HG EF 2	9 1 8 1	Q929 74	Rho/Rac guanine nucleotide exchange factor 2	20 5	0 . 5 0 2	0 . 7 6 9	1	0. 04		1	4	0	20 00	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TI MD 4	9 1 9 3 7	Q96H 15	T cell immunoglobul in and mucin domain containing 4	49	0 . 6 4 4	0 . 6 5 4	2. 6 4 E - 1 0	0. 04		0. 7 5	4	1	20 12	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MS C	9 2 4 2	O606 82	musculi n	24 1	0 . 4 7 5	0 . 8 4 6	0. 0 2 4 6 5 1	0. 04		1	4	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 27	9 3 9	P2684 2	CD27 molecule	15 4	0 . 5 1 7	0 . 6 9 2	0. 0 1 0 1 1	0. 04		0. 7 5	4	0	19 96	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD AM 10	1 0 2	O146 72	ADAM metallopeptid ase domain 10	22 4	0 . 4 8 9	0 . 8 4 6	1	0. 03		1	3	0	20 15	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DD X3 9A	1 0 2 1 2	O001 48	DExD-box helicase 39A	37	0 . 6 7 4	0 . 6 9 2	0. 6 0 1 5 1	0. 03		1	3	0	20 01	2 0 0 8
Rh eu ma toi	C 00 03	SP RY 2	1 0 2	O435 97	sprouty RTK signalin g	11 1	0 . 5	0 . 6	0. 9 7 1	0. 03		1	3	0	20 15	2 0 1 8

d Ar thr itis	87 3		5 3		antagoni st 2			5 4	5 4	2 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SIK 1B	1. 0 3 E + 0 8	A0A0 B4J2F 2;P57 059	salt inducible kinase 1B (putative)		48	0 . 6 5 3	0 . 3 8 5		0. 03		1	3	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KL F2	1 0 3 6 5	Q9Y5 W3	Kruppel like factor 2	Nu cle ic aci d bin din g	13 2	0 . 5 4 2	0 . 6 9 2	0. 5 6 0 4 4	0. 03		1	3	0	20 15	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NO D1	1 0 3 9 2	Q9Y2 39	nucleoti de binding oligome rization domain containi ng 1	En zy me	13 6	0 . 5 4 1	0 . 7 6 9	2. 4 6 E - 1 8	0. 03		1	3	0	20 08	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PD PN	1 0 6 3 0	Q86Y L7	podoplanin		25 6	0 . 4 7	0 . 7 6 9	0. 0 0 0 3 2	0. 03		1	3	0	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TR AF 3IP 2	1 0 7 5 8	O437 34	TRAF3 interacting protein 2		10 3	0 . 5 8 5	0 . 6 9 2	1. 6 2 E - 0 9	0. 03		1	3	0	20 13	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HP SE	1 0 8 5 5	Q9Y2 51	heparan ase	En zy me	39 3	0 . 4 2 5	0 . 8 0 8	2. 2 7 E - 1 4	0. 03		1	3	0	20 08	2 0 1 7

Rheumatoid Arthritis	C0003873	LILRA3	11026	Q8N6C8	leukocyte immunoglobulin like receptor A3	Receptor	19	0.722	0.5	1.45E-06	0.03		1	3	0	2010	2015
Rheumatoid Arthritis	C0003873	ADRM1	11047	Q16186	adhesion regulating molecule 1		51	0.633	0.538	0.99704	0.03		1	3	0	1989	2007
Rheumatoid Arthritis	C0003873	ADAMTS5	11096	Q9UNA0	ADAM metallopeptidase with thrombospondin type 1 motif 5	Enzyme	85	0.597	0.654	8.03E-07	0.03		1	3	0	2002	2012
Rheumatoid Arthritis	C0003873	CD160	11126	O95971	CD160 molecule		87	0.59	0.615	6.84E-05	0.03		1	3	1	1998	2012
Rheumatoid Arthritis	C0003873	SLC7A9	11136	P82251	solute carrier family 7 member 9	Transporter	48	0.666	0.692	9.06E-10	0.03		1	3	0	2001	2008
Rheumatoid Arthritis	C0003873	POLG2	11232	Q9UHN1	DNA polymerase gamma 2, accessory subunit	Enzyme	158	0.558	0.769	1.53E-10	0.03		1	3	0	1992	2002
Rheumatoid Ar	C0003873	PRRT2	112476	Q7Z6L0	proline rich transmembrane protein 2		353	0.448	0.808	0.579	0.03		1	3	0	2006	2012

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC OT 7	1 1 3 3 2	O001 54	acyl- CoA thioester ase 7	En zy me	14 6	0 . 5 3 1	0 . 7 6 9	0. 7 5 9 2 6	0. 03		1	3	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CT HR C1	1 1 5 9 0 8	Q96C G8	collagen triple helix repeat containi ng 1	En zy me	10 5	0 . 5 5 6	0 . 6 9 2	2. 6 7 E - 0 5	0. 03		1	3	0	20 12	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H4- 16	1 2 1 5 0 4	P6280 5	H4 histone 16	Nu cle ic aci d bin din g	12 2	0 . 5 4	0 . 6 9 2	0. 0 2 2 7 9	0. 03		1	3	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC R1	1 2 3 0	P3224 6	C-C motif chemoki ne receptor 1	G- pro tei n co upl ed rec ept or	19 2	0 . 5 3 1	0 . 7 6 9	0. 3 8 7 5	0. 03		1	3	0	20 05	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	OS CA R	1 2 6 0 1 4	Q8IY S5	osteoclast associated Ig- like receptor		17	0 . 7 4 3	0 . 4 6 2	0. 0 0 3 3 6	0. 03		1	3	0	20 11	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SIK 1	1 5 0 0 9 4	A0A0 B4J2F 2;P57 059	salt inducibl e kinase 1	Ki nas e	15 7	0 . 5 4 4	0 . 7 3 1	0. 9 3 7 1 6	0. 03		1	3	0	20 17	2 0 1 9
Rh eu	C 00	CD 55	1 6	P0817 4	CD55 molecule		18 7	0 . .	0 . .	5. 6	0. 03		1	3	0	20 10	2 0

ma toi d Ar thr itis	03 87 3		0 4		(Cromer blood group)			5 1	8 0 8	8 E - 1 2							1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DB P	1 6 2 8	Q105 86	D-box binding PAR bZIP transcrip tion factor	Nu cle ic aci d bin din g	10 5	0 . 5 5 6	0 . 7 3 1	0. 2 3 3 7 6	0. 03		1	3	0	20 14	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA DD 45 A	1 6 4 7	P2452 2	growth arrest and DNA damage inducible alpha		15 1	0 . 5 2 6	0 . 7 6 9	0. 0 4 4 0 7 5	0. 03		1	3	1	20 08	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DN MT 3B	1 7 8 9	Q9UB C3	DNA methyltransfer ase 3 beta		31 5	0 . 4 5 3	0 . 8 4 6	0. 1 9 9 6 4	0. 03		1	3	0	20 10	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DP EP 1	1 8 0 0	P1644 4	dipeptidase 1		10 0	0 . 5 7	0 . 6 5 4	3. 4 7 E - 1 0	0. 03		1	3	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	E2 F2	1 8 7 0	Q142 09	E2F transcrip tion factor 2	Nu cle ic aci d bin din g	75	0 . 5 9 9	0 . 6 9 2	0. 2 5 5 0 5	0. 03		1	3	0	20 14	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TY MP	1 8 9 0	P1997 1	thymidi ne phospho rylase	En zy me	24 6	0 . 4 9 5	0 . 7 6 9	0. 0 0 1 1 7	0. 03		1	3	0	20 14	2 0 1 9

Rheumatoid Arthritis	C0003873	ELAV L2	1993	Q12926	ELAV like RNA binding protein 2		199	0.486	0.9514	0.03		1	3	0	2019	2019
Rheumatoid Arthritis	C0003873	PRSS5	203074	Q6UWB4	serine protease 55	Enzyme	163	0.513	0.769	3.17E-11	0.03	1	3	0	2006	2017
Rheumatoid Arthritis	C0003873	EPHB1	2047	P54762	EPH receptor B1	Kinase	169	0.518	0.9465	0.03		1	3	0	2008	2020
Rheumatoid Arthritis	C0003873	ERBB2	2064	P04626	erb-b2 receptor tyrosine kinase 2	Kinase	995	0.328	0.9059	0.03		1	3	0	2005	2017
Rheumatoid Arthritis	C0003873	ERG	2078	P11308	ETS transcription factor ERG	Transcription factor	298	0.453	0.86413	0.03		1	3	0	1992	2002
Rheumatoid Arthritis	C0003873	EZH2	2146	Q15910	enhancer of zeste 2 polycomb repressive complex 2 subunit	Epigenetic regulator	653	0.376	0.885	1.03		1	3	0	2011	2019
Rheumatoid	C0003	FCGR1B	2210	Q92637	Fc fragment of IgG	Cell ad	57	0.6	0.64E	1.03		1	3	0	1997	2019

d Ar thr itis	87 3				receptor lb	hes ion		3 3	9 2	- 1 0							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FC N1	2 2 1 9	O006 02	ficolin 1	Sig nal ing	43	0 . 6 4 7	0 . 5 7 7	3. 9 7 E - 1 7	0. 03		0. 6 6 7	3	1	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FH L1	2 2 7 3	Q136 42	four and a half LIM domains 1		19 5	0 . 5 3 2	0 . 7 3 1	0. 9 6 9 7 9	0. 03		1	3	0	20 00	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FL G	2 3 1 2	P2093 0	filaggrin	Ce llul ar str uct ure	17 3	0 . 5 2 5	0 . 8 4 6	0. 0 0 2 8 8	0. 03		1	3	0	19 99	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC SB G1	2 3 2 0 5	Q96G R2	acyl- CoA synthetase bubblegum family member 1	En zy me	73	0 . 6 0 3	0 . 6 5 4	3. 9 6 E - 0 5	0. 03		1	3	0	20 07	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FL T3 LG	2 3 2 3	P4977 1	fms related receptor tyrosine kinase ligand 3		10 0	0 . 5 6 4	0 . 5 7 7	0. 9 4 0 4	0. 03		1	3	0	20 08	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CL EC 16 A	2 3 2 7 4	Q2K HT3	C-type lectin domain containing 16A		67	0 . 6 1 2	0 . 6 5 4	0. 2 7 5 9 5	0. 03		0. 6 6 7	3	4	20 10	2 0 1 0

Rheumatoid Arthritis	C0003873	DICER1	23405	Q9UPY3	dicer 1, ribonuclease III	Enzyme	302	0.446	0.846	1	0.03		1	3	0	2013	2018
Rheumatoid Arthritis	C0003873	SMUG1	23583	Q53HV7	single-strand-selective monofunctional uracil-DNA glycosylase 1		1034	0.322	0.90452	0	0.03		1	3	0	2017	2019
Rheumatoid Arthritis	C0003873	NUBP62	23636	P37198	nucleoporin 62	Transporter	273	0.47	0.8506	0	0.03		1	3	0	2018	2019
Rheumatoid Arthritis	C0003873	SH3BP4	23677	Q9P0V3	SH3 domain binding protein 4		74	0.593	0.60254	0	0.03		1	3	0	2017	2019
Rheumatoid Arthritis	C0003873	ALOX15	246	P16050	arachidonate 15-lipoxygenase	Enzyme	205	0.502	0.846-23	1	0.03		1	3	0	1999	2013
Rheumatoid Arthritis	C0003873	FRZB	2487	Q92765	frizzled related protein		89	0.573	0.601084	0	0.03		0.667	3	0	1998	2017
Rheumatoid Ar	C0003873	AOX1	26	P19801	amine oxidase copper containing 1		61	0.628	0.769	6	0.03		1	3	0	2018	2019

thr itis									0 8							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO PD	2 6 0 4 3 1		Pulmonary disease, chronic obstructive, severe early- onset		34 9	0 . 4 5 6	0 . 8 8 5		0. 03		1	3	0	20 17 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MS TN	2 6 6 0	O147 93	myostati n	Sig nal ing	15 9	0 . 5 2 8	0 . 7 3 1	0. 5 0 5 2	0. 03		1	3	0	20 17 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GD NF	2 6 6 8	P3990 5	glial cell derived neurotro phic factor	Sig nal ing	40 9	0 . 4 3 4	0 . 8 8 5	0. 2 0 3 5	0. 03		1	3	0	20 00 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SG SM 3	2 7 3 5 2	Q96H U1	small G protein signalin g modulat or 3	En zy me	25 9	0 . 4 6 9	0 . 8 0 8	3. 4 1 E - 1 5	0. 03		1	3	0	20 04 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GL S	2 7 4 4	O949 25	glutamin ase	En zy me	21 7	0 . 4 8 9	0 . 8 0 8	0. 9 6 1 5 4	0. 03		1	3	0	20 07 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PY CA RD	2 9 1 0 8	Q9UL Z3	PYD and CARD domain containi ng	En zy me	29 4	0 . 4 5 7	0 . 8 0 8	0. 0 0 1 9 8	0. 03		1	3	0	20 05 0 1 9
Rh eu ma toi	C 00 03	CX CL 1	2 9 1 9	P0934 1	C-X-C motif chemoki	Sig nal ing	31 5	0 . 4	0 . 9	0. 1 1 8	0. 03		1	3	0	19 99 0 1 7

d Ar thr itis	87 3				ne ligand 1			4 9	2 3	4 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GT F2 H1	2 9 6 5	P3278 0	general transcrip tion factor IIH subunit 1	Tr ans cri pti on fac tor	25 8	0 . 4 6 9	0 . 8 4 6	0. 9 8 9 8 2	0. 03		1	3	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GT F2I	2 9 6 9	P7834 7	general transcription factor Iii		24 9	0 . 5	0 . 8 0 8	0. 9 9 5 9 2	0. 03		1	3	1	20 16	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GU SB	2 9 9 0	P0823 6	glucuronidase beta		18 3	0 . 5 3	0 . 8 4 6	4. 0 4 E - 0 8	0. 03		1	3	0	20 03	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GZ MA	3 0 0 1	P1254 4	granzym e A	En zy me	65	0 . 5 9 7	0 . 7 3 1	2. 0 5 E - 0 6	0. 03		1	3	0	19 92	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HF E	3 0 7 7	Q302 01	homeostatic iron regulator		41 5	0 . 4 3 6	0 . 8 4 6	2. 5 6 E - 0 8	0. 03		1	3	2	20 00	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DR B5	3 1 2 7	Q301 54	major histoco mpatibil ity complex , class II, DR beta 5	Im mu ne res po nse	62	0 . 6 0 8	0 . 7 3 1	3. 6 4 E - 0 7	0. 03		1	3	0	19 90	2 0 1 9

Rheumatoid Arthritis	C0003873	HMOX1	3162	P09601	heme oxygenase 1		666	0.381	0.923	0.09682	0.03		1	3	0	2007	2010
Rheumatoid Arthritis	C0003873	HOXC6	3223	P09630	homeobox C6	Transcription factor	80	0.595	0.692	0.5165	0.03		1	3	1	2019	2019
Rheumatoid Arthritis	C0003873	HSPP90AA1	3320	P07900	heat shock protein 90 alpha family class A member 1	Chaperone	455	0.411	0.923	0.8625	0.03		1	3	0	2018	2019
Rheumatoid Arthritis	C0003873	APOB	338	P04114	apolipoprotein B		339	0.453	0.808	1.92E-16	0.03		1	3	0	2012	2019
Rheumatoid Arthritis	C0003873	IDDM8	3407		insulin dependent diabetes mellitus 8		7	0.821	0.192		0.03		0.667	3	0	2000	2010
Rheumatoid Arthritis	C0003873	ACTB	34551	Q562R1	actin beta like 2		134	0.539	0.769	5.82E-16	0.03		1	3	0	2017	2019
Rheumatoid Ar	C0003873	H3P44	347376		H3 histone pseudogene 44		40	0.636	0.462		0.03		1	3	0	1992	2002

thritis																	
Rheumatoid Arthritis	C0003873	IGF2	3481	P01344	insulin like growth factor 2		604	039	0885	0.044127	0.03		1	3	0	1995	2010
Rheumatoid Arthritis	C0003873	IL1R1	3554	P14778	interleukin 1 receptor type 1	Receptor	184	059	0769	0.15126	0.03		1	3	0	1997	2015
Rheumatoid Arthritis	C0003873	CXCR1	3577	P25024	C-X-C motif chemokine receptor 1	G-protein coupled receptor	167	058	079	3.03E-07	0.03		1	3	0	2003	2019
Rheumatoid Arthritis	C0003873	AQP1	358	P29972	aquaporin 1 (Colton blood group)	Ion channel	268	047	085	2.57E-07	0.03		1	3	0	2013	2018
Rheumatoid Arthritis	C0003873	TNFRSF9	3604	Q07011	TNF receptor superfamily member 9		177	052	079	0.32153	0.03		1	3	0	1998	2008
Rheumatoid Arthritis	C0003873	IRF1	3659	P10914	interferon regulatory factor 1	Transcription factor	257	048	0769	0.9909	0.03		1	3	0	2012	2016

Rheumatoid Arthritis	C0003873	IRS1	3667	P35568	insulin receptor substrate 1		233	0.488	0.769	0.023645	0.03		1	3	1	2015	2018
Rheumatoid Arthritis	C0003873	ITGA4	3676	P13612	integrin subunit alpha 4		123	0.558	0.769	0.00101	0.03		1	3	0	2000	2017
Rheumatoid Arthritis	C0003873	ABCC6	3688	O95255	ATP binding cassette subfamily C member 6	Transporter	181	0.544	0.654	5.62E-35	0.03		1	3	0	1988	2017
Rheumatoid Arthritis	C0003873	ITGAL	3683	P20701	integrin subunit alpha L		169	0.511	0.815	0.004321	0.03		1	3	0	1988	2016
Rheumatoid Arthritis	C0003873	ITGB2	3689	P05107	integrin subunit beta 2	Receptor	340	0.444	0.923	5.08E-15	0.03		1	3	0	1988	2009
Rheumatoid Arthritis	C0003873	KIR2DL1	3802	P43626	killer cell immunoglobulin like receptor, two Ig domains and long cytoplasmic tail 1	Receptor	49	0.631	0.615	3.57E-15	0.03		1	3	0	2007	2015

Rheumatoid Arthritis	C0003873	KLRC2	3822	P26717	killer cell lectin like receptor C2		50	0.636	0.731	4.87E-10	0.03		1	3	0	2003	2008
Rheumatoid Arthritis	C0003873	KLRD1	3824	Q13241	killer cell lectin like receptor D1		53	0.636	0.692	0.00875	0.03		1	3	1	2003	2016
Rheumatoid Arthritis	C0003873	NP SR1	387129	Q6W5P4	neuropeptide S receptor 1		69	0.608	0.615	2.05E-09	0.03		1	3	3	2010	2019
Rheumatoid Arthritis	C0003873	LRP5	4041	O75197	LDL receptor related protein 5		283	0.485	0.8492	0.00592	0.03		1	3	3	2009	2018
Rheumatoid Arthritis	C0003873	LTB	4050	Q06643	lymphot oxin beta	Signaling	110	0.555	0.769	9.61E-11	0.03		1	3	0	1999	2015
Rheumatoid Arthritis	C0003873	ARNTL	406	O00327	aryl hydrocarbon receptor nuclear translocator like	Transcription factor	200	0.51	0.885	0.9944	0.03		1	3	0	2013	2015
Rheumatoid Ar	C0003873	MIR140	406932		microRNA 140		144	0.522	0.769		0.03		1	3	0	2016	2018

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 43	4 0 6 9 3 5		microRNA 143		26 7	0 . 4 6 2	0 . 8 8 5		0. 03		1	3	0	20 17	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 0A	4 0 6 9 8 2		microRNA 20a		18 0	0 . 4 9 8	0 . 7 6 9		0. 03		1	3	0	20 16	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 3B	4 0 7 0 1 1		microRNA 23b		13 7	0 . 5 2 3	0 . 8 0 8		0. 03		1	3	0	20 12	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 7A	4 0 7 0 1 8		microRNA 27a		24 8	0 . 4 6 6	0 . 8 4 6		0. 03		1	3	0	20 16	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 7H G	4 0 7 9 7 5	Q75N E6	miR-17-92a-1 cluster host gene		22 4	0 . 4 8 3	0 . 8 0 8		0. 03		1	3	0	20 13	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SM AD 3	4 0 8 8	P8402 2	SMAD family member 3	Tr ans cri pti on fac tor	47 0	0 . 4 1 5	0 . 9 2 3	0. 7 9 7 9 6	0. 03		0. 3 3 3	3	3	20 13	2 0 1 9
Rh eu ma toi	C 00 03	MA P3 K5	4 2 1 7	Q996 83	mitogen - activate d protein	Ki nas e	17 0	0 . 5	0 . 8	0. 5 1 9	0. 03		1	3	0	20 05	2 0 1 8

d Ar thr itis	87 3				kinase kinase kinase 5			1 3	0 8	6 4							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FO XO 4	4 3 0 3	P9817 7	forkhead O4	box	84	0 . 5 8 8	0 . 7 6 9	0. 8 1 3 3 2	0. 03		1	3	0	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MP G	4 3 5 0	P2937 2	N- methyln urine DNA glycosyl ase	En zy me	74	0 . 5 9 7	0 . 7 3 1	1. 9 5 E - 1 2	0. 03		1	3	4	20 10	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MP P1	4 3 5 4	Q000 13	membra ne palmitoy lated protein 1	En zy me	54	0 . 6 1 7	0 . 5 7 7	0. 9 8 7 7	0. 03		1	3	0	19 92	2 0 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PO TE KP	4 4 0 9 1 5	Q9BY X7	POTE ankyrin domain family member K, pseudogene		13 1	0 . 5 4 2	0 . 7 6 9		0. 03		1	3	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R3 23 A	4 4 2 8 9 7		microRNA 323a		46	0 . 6 4 1	0 . 5 7 7		0. 03		1	3	0	20 12	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R3 38	4 4 2 9 0 6		microRNA 338		12 8	0 . 5 3 5	0 . 8 0 8		0. 03		1	3	0	20 17	2 0 1 8

Rheumatoid Arthritis	C0003873	MSRA	4482	Q9UJ68	methionine sulfoxide reductase A	Enzyme	89	0.608	0.615	1.53E-15	0.03		1	3	1	2010	2013
Rheumatoid Arthritis	C0003873	MT R	4548	Q99707	5-methyltetrahydrofolate-homocysteine methyltransferase		245	0.482	0.808	2.43E-12	0.03		1	3	1	2007	2018
Rheumatoid Arthritis	C0003873	MT RR	4552	Q9UBK8	5-methyltetrahydrofolate-homocysteine methyltransferase reductase		207	0.502	0.808	2.18E-14	0.03		0.667	3	1	2007	2018
Rheumatoid Arthritis	C0003873	MUC1	4582	P15941	mucin 1, cell surface associated		594	0.384	0.885	0.01774	0.03		1	3	0	2008	2018
Rheumatoid Arthritis	C0003873	MYC	4609	P01106	MYC proto-oncogene, bHLH transcription factor	Transcription factor	821	0.344	0.92301	0.99801	0.03		1	3	0	1990	2004
Rheumatoid Arthritis	C0003873	GADD45B	4616	O75293	growth arrest and DNA damage inducible beta		76	0.585	0.769	0.21058	0.03		1	3	1	2009	2019
Rheumatoid Ar	C0003873	NCAM1	4684	P13591	neural cell adhesion molecule 1		445	0.415	0.885	0.9999	0.03		1	3	0	1996	2014

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NF KB IA	4 7 9 2	P2596 3	NFKB inhibitor alpha		22 6	0 . 4 8 7	0 . 8 8 5	0. 9 9 4 5 2	0. 03		1	3	0	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DD R2	4 9 2 1	Q168 32	discoidi n domain receptor tyrosine kinase 2	Ki nas e	14 7	0 . 5 4 1	0 . 7 6 9	0. 5 5 0 3	0. 03		1	3	0	20 06	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	OG G1	4 9 6 8	O155 27	8-oxoguanine DNA glycosylase		31 3	0 . 4 5 3	0 . 8 0 8	3. 9 3 E - 1 2	0. 03		0. 3 3 3	3	4	20 12	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	OL R1	4 9 7 3	P7838 0	oxidized low density lipoprotein receptor 1		13 3	0 . 5 4 4	0 . 7 6 9	0. 0 7 1 9 9	0. 03		1	3	0	20 04	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	P4 HB	5 0 3 4	P0723 7	prolyl 4- hydroxylase subunit beta		22 2	0 . 4 8 8	0 . 8 0 8	0. 9 9 6 6 2	0. 03		1	3	0	19 92	2 0 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PC SK 6	5 0 4 6	P2912 2	proprote in converta se subtilisi n/kexin type 6	En zy me	65	0 . 6 2 6	0 . 5 3 8	5. 3 1 E - 1 3	0. 03		1	3	1	20 15	2 0 1 7
Rh eu ma toi	C 00 03	PA K3	5 0 6 3	O759 14	p21 (RAC1) activate	Ki nas e	13 4	0 . 5	0 . 7	0. 9 8 7	0. 03		1	3	0	19 88	2 0 1 7

d Ar thr itis	87 3				d kinase 3			6 9	3 1	1 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DC TN 4	5 1 1 6 4	Q9UJ W0	dynactin subunit 4		25 3	0 . 4 7 2	0 . 8 4 6	0. 7 3 2 2 1	0. 03		1	3	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GP 6	5 1 2 0 6	Q9HC N6	glycopro tein VI platelet	Re ce pto r	89	0 . 5 9 7	0 . 6 1 5	1. 6 4 E - 1 1	0. 03		0. 6 6 7	3	0	20 13	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TL R8	5 1 3 1 1	Q9NR 97	toll receptor 8	like	12 2	0 . 5 4 3	0 . 7 6 9	0. 3 2 4 0 1	0. 03		1	3	0	20 08	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PD E3 A	5 1 3 9	Q144 32	phosphodieste rase 3A		58	0 . 6 7	0 . 5 7 7	0. 0 0 1 9 3	0. 03		0. 6 6 7	3	0	20 13	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NC KIP SD	5 1 5 1 7	Q9NZ Q3	NCK interacting protein with SH3 domain		62	0 . 6 1 2	0 . 5 7 7	0. 0 0 2 2 3	0. 03		1	3	0	20 00	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SIR T6	5 1 5 4 8	Q8N6 T7	sirtuin 6	Ep ige net ic reg ula tor	19 5	0 . 4 9 6	0 . 8 4 6	0. 0 3 9 1 9	0. 03		1	3	0	20 13	2 0 1 8

Rheumatoid Arthritis	C0003873	PADI3	51702	Q9ULW8	peptidyl arginine deiminase 3		21	0.78	0.12	2.36E-10	0.03		0.667	3	0	2007	2018
Rheumatoid Arthritis	C0003873	SERPIN1	5176	P36955	serpin family F member 1	Enzyme modulator	294	0.46	0.846	7.8E-08	0.03		1	3	0	2016	2018
Rheumatoid Arthritis	C0003873	PF4	5196	P02776	platelet factor 4	Signaling	158	0.522	0.846	0.043062	0.03		1	3	0	2007	2019
Rheumatoid Arthritis	C0003873	PFKFB3	5209	Q16875	6-phospho fructo-2-kinase/fructose-2,6-biphosphatase 3	Kinase	104	0.561	0.808	0.024579	0.03		1	3	0	2013	2017
Rheumatoid Arthritis	C0003873	PIK3R2	5296	O00459	phosphoinositide -3-kinase regulatory subunit 2	Enzyme modulator	120	0.551	0.806823	0.01673	0.03		1	3	0	2016	2019
Rheumatoid Arthritis	C0003873	SLC1C1	5399	Q9NYB5	solute carrier organic anion transporter family member 1C1	Transporter	20	0.751	0.423	3.99E-12	0.03		0.667	3	1	2013	2016
Rheumatoid Ar	C0003873	ACP5	54	P13686	acid phosphatase 5, tartrate resistant		130	0.561	0.731	0.0786	0.03		1	3	0	2002	2017

thr itis										5 1							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PPI A	5 4 7 8	P6293 7	peptidylprolyl isomerase A		18 0	0 . 5 1	0 . 7 6 9	0. 5 5 7 3 4	0. 03		1	3	0	20 08	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AS PN	5 4 8 2 9	Q9BX N1	asporin		51	0 . 6 3 6	0 . 5	1. 0 4 E - 0 7	0. 03		0. 6 6 7	3	0	20 07	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C5 2A 1	5 5 0 6 5	Q9N WF4	solute carrier family 52 member 1	Tr ans por ter	16 0	0 . 5 2 6	0 . 7 6 9	3. 5 2 E - 0 6	0. 03		1	3	0	20 07	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD I1	5 5 2 5 6	Q9BV 57	acireduc tone dioxyge nase 1	En zy me	36	0 . 6 7 4	0 . 6 5 4	3. 1 5 E - 0 5	0. 03		1	3	0	20 13	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ME G3	5 5 3 8 4		maternally expressed 3		23 9	0 . 4 7 1	0 . 8 4 6		0. 03		1	3	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H4 C1 5	5 5 4 3 1 3	P6280 5	H4 clustered histone 15		12 1	0 . 5 4 1	0 . 6 9 2		0. 03		1	3	0	20 18	2 0 1 9
Rh eu ma toi	C 00 03	PR KC B	5 5 7 9	P0577 1	protein kinase C beta	Ki nas e	31 7	0 . 4	0 . 8	1	0. 03		1	3	0	20 06	2 0 1 2

d Ar thr itis	87 3							5 3	8 5								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR OC	5 6 2 4	P0407 0	protein C, inactivat or of coagulat ion factors Va and VIIIa	En zy me	20 0	0 . 5 0 4	0 . 8 0 8	1. 9 1 E - 0 5	0. 03		1	3	0	20 04	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HT RA 1	5 6 5 4	Q927 43	HtrA serine peptidas e 1	En zy me	16 4	0 . 5 3 2	0 . 6 9 0 2	0. 0 0 4 9 2	0. 03		1	3	0	20 13	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PS MD 12	5 7 1 8	O002 32	proteaso me 26S subunit, non- ATPase 12	En zy me mo dul ato r	10 5	0 . 5 7 8	0 . 8 0 8	0. 9 9 8 4	0. 03		1	3	0	19 92	2 0 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PT CH 1	5 7 2 7	Q136 35	patched 1		60 4	0 . 3 9 8	0 . 8 8 5	1	0. 03		1	3	0	20 14	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PT HL H	5 7 4 4	P1227 2	parathyroid hormone like hormone		32 1	0 . 4 5 3	0 . 8 4 6	0. 8 1 1 4 6	0. 03		1	3	0	19 98	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SE MA 6A	5 7 5 6	Q9H2 E6	semapho rin 6A	Sig nal ing	21 1	0 . 4 8 6	0 . 8 0 8	0. 9 9 7 6	0. 03		1	3	0	20 17	2 0 1 9

Rheumatoid Arthritis	C0003873	SIGIRR	59307	Q6IA17	single Ig and TIR domain containing	Receptor	36	0.67	0.615	5.93E-06	0.03		1	3	0	2010	2020
Rheumatoid Arthritis	C0003873	HRH4	59340	Q9H3N8	histamine receptor H4	G-protein coupled receptor	48	0.659	0.462	5.22E-08	0.03		1	3	0	2005	2017
Rheumatoid Arthritis	C0003873	RHO	6010	P08100	rhodopsin	G-protein coupled receptor	178	0.525	0.769	0.00131	0.03		1	3	0	1999	2019
Rheumatoid Arthritis	C0003873	BCR	613	P11274	BCR activator of RhoGEF and GTPase	Enzyme modulator	392	0.431	0.885	0.98761	0.03		1	3	0	2017	2020
Rheumatoid Arthritis	C0003873	RPS6KA3	6197	P51812	ribosomal protein S6 kinase A3	Kinase	315	0.491	0.846	0.9999	0.03		1	3	0	2015	2019
Rheumatoid Arthritis	C0003873	BGLAP	632	P02818	bone gamma-carboxyglutamate protein		274	0.462	0.846	4.62E-08	0.03		1	3	0	2007	2019

Rheumatoid Arthritis	C0003873	CC L13	6357	Q99616	C-C motif chemokine ligand 13	Signaling	50	0.628	0.62	0.04987	0.03		1	3	0	2006	2010
Rheumatoid Arthritis	C0003873	CC L18	6362	P55774	C-C motif chemokine ligand 18	Signaling	200	0.489	0.846	0.09174	0.03		1	3	0	2007	2015
Rheumatoid Arthritis	C0003873	CX CL11	6373	O14625	C-X-C motif chemokine ligand 11	Signaling	164	0.519	0.808	0.31408	0.03		1	3	0	2005	2018
Rheumatoid Arthritis	C0003873	SD C1	6382	P18827	syndecan 1	Extracellular structure	323	0.445	0.769	0.08412	0.03		1	3	0	2001	2019
Rheumatoid Arthritis	C0003873	IFI H1	64135	Q9BYX4	interferon induced with helicase domain 1		319	0.471	0.808	6.98E-44	0.03		0.333	3	1	2007	2013
Rheumatoid Arthritis	C0003873	PO TEM	641455	A6NI47	POTE ankyrin domain family member M		133	0.541	0.769	0.030316	0.03		1	3	0	2017	2019
Rheumatoid Ar	C0003873	ST 6G AL1	6480	P15907	ST6 beta-galactoside alpha-2,6-sialyltransferase 1		101	0.569	0.731	0.2341	0.03		1	3	0	2018	2019

thritis																	
Rheumatoid Arthritis	C0003873	BM P2	650	P12643	bone morphogenetic protein 2	Signaling	428	0432	0846	0.9879	0.03		1	3	0	2003	2019
Rheumatoid Arthritis	C0003873	RA PH1	65059	Q70E73	Ras association (RalGDS/AF-6) and pleckstrin homolog y domains 1	Receptor	80	0593	0654	0.9985	0.03		1	3	0	2007	2017
Rheumatoid Arthritis	C0003873	SL C22A1	6580	O15245	solute carrier family 22 member 1	Transporter	119	056	0731	1.46E-22	0.03		1	3	0	1998	2017
Rheumatoid Arthritis	C0003873	SL PI	6590	P03973	secretory leukocyte peptidase inhibitor	Enzyme modulator	310	049	0846	0.00897	0.03		1	3	0	2003	2019
Rheumatoid Arthritis	C0003873	SS T	6750	P61278	somatostatin	Signaling	535	0399	0885	0.34128	0.03		1	3	0	1997	2018
Rheumatoid Arthritis	C0003873	ST AT5B	6777	P51692	signal transducer and activator of transcription 5B	Nucleic acid binding	357	042	0888	0.9988	0.03		1	3	0	2000	2019

Rheumatoid Arthritis	C0003873	SULTA1	6822	Q06520	sulfotransferase family 2A member 1		126	0.545	0.769	1.25E-15	0.03		1	3	0	1999	2018
Rheumatoid Arthritis	C0003873	ABCC8	6833	Q09428	ATP binding cassette subfamily C member 8	Transporter	317	0.474	0.846	7.96E-24	0.03		1	3	0	2005	2019
Rheumatoid Arthritis	C0003873	TACR1	6869	P25103	tachykinin receptor 1	G-protein coupled receptor	217	0.502	0.805	0.00384	0.03		1	3	0	1998	2019
Rheumatoid Arthritis	C0003873	TRA	6955	P0DS E1	T cell receptor alpha locus		51	0.628	0.577		0.03		0.667	3	0	1997	2019
Rheumatoid Arthritis	C0003873	TF F3	7033	Q07654	trefoil factor 3	Signaling	163	0.518	0.859	0.001	0.03		1	3	0	2017	2019
Rheumatoid Arthritis	C0003873	TIE1	7075	P35590	tyrosine kinase with immunoglobulin like and EGF like domains 1	Kinase	66	0.61	0.654	1.24E-19	0.03		1	3	0	2002	2011
Rheumatoid Arthritis	C0003873	TIMP2	70	P16035	TIMP metallopeptidase	Enzyme	404	0.4	0.88	0.78	0.03		1	3	0	1998	20

to id Ar thr itis	87 3		7 7		inhibitor 2	mo dul ato r		2 5	4 6	8 9 3							0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TI MP 3	7 0 7 8	P3562 5	TIMP metallo ptidase inhibitor 3	En zy me mo dul ato r	32 5	0 . 4 4 5	0 . 9 2 3	0. 6 3 3 7	0. 03		1	3	0	20 03	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC TG 1	7 1	P6326 1	actin gamma 1	Ce llul ar str uct ure	29 1	0 . 4 7 7	0 . 8 4 6	0. 0 4 7 8 4	0. 03		1	3	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TPI 1	7 1 6 7	P6017 4	trioseph osphate isomeras e 1	En zy me	18 4	0 . 5 1 7	0 . 8 4 6	0. 0 3 1 9 3	0. 03		1	3	0	20 04	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CR ISP 2	7 1 8 0	P1656 2	cysteine rich secretor y protein 2	Im mu ne res po nse	16 8	0 . 5 1 2	0 . 7 6 9	1. 4 4 E - 1 2	0. 03		1	3	0	20 06	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC TG 2	7 2	P6326 7	actin gamma 2, smooth muscle	Ce llul ar str uct ure	20 5	0 . 5 0 5	0 . 8 0 8	0. 0 7 1 0 3 6	0. 03		1	3	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MU C5 B	7 2 7 8 9 7	Q9HC 84	mucin oligomeric mucus/gel- forming	5B,	14 1	0 . 5 3 2	0 . 8 0 8	0. 9 9 9 9	0. 03		1	3	0	20 18	2 0 1 9

Rheumatoid Arthritis	C0003873	TNFSF4	7292	P23510	TNF superfamily member 4	Signaling	129	0.54	0.808	0.049378	0.03		1	3	4	2015	2019
Rheumatoid Arthritis	C0003873	TXNRD1	7296	Q16881	thioredoxin reductase 1	Enzyme	136	0.529	0.692	1.61E-06	0.03		0.667	3	0	2008	2019
Rheumatoid Arthritis	C0003873	VILL1	7429	P09327	villin 1	Cellular structure	32	0.691	0.423	2.64E-14	0.03		1	3	0	1996	1997
Rheumatoid Arthritis	C0003873	VTN	7448	P04004	vitronectin		178	0.509	0.769	1.5E-10	0.03		1	3	0	1999	2014
Rheumatoid Arthritis	C0003873	YY1	7528	P25490	YY1 transcription factor	Transcription factor	245	0.481	0.808	0.938	0.03		1	3	0	1990	2019
Rheumatoid Arthritis	C0003873	VTGN1	79679	Q7Z7D3	V-set domain containing T cell activation inhibitor 1	Enzyme modulator	139	0.529	0.692	1.37E-12	0.03		1	3	0	2012	2017
Rheumatoid Ar	C0003873	SCD5	79966	Q86SK9	stearoyl-CoA desaturase 5		40	0.682	0.654	0.0104	0.03		1	3	0	2002	2014

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PD CD 1L G2	8 0 3 8 0	Q9BQ 51	programmed cell death 1 ligand 2		19 1	0 . 4 9 6	0 . 7 6 9	1. 2 E - 0 5	0. 03		0. 6 6 7	3	0	20 07	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C7 A5	8 1 4 0	Q016 50	solute carrier family 7 member 5	Tr ans por ter	17 3	0 . 5 1 3	0 . 8 0 8	0. 2 3 5 0 5	0. 03		1	3	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD AM TS 12	8 1 7 9 2	P5839 7	ADAM metallo peptidase with thrombo spondin type 1 motif 12	En zy me	26	0 . 7	0 . 4 6 2	2. 4 8 E - 1 7	0. 03		1	3	3	20 12	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TL R1 0	8 1 7 9 3	Q9BX R5	toll like receptor 10		71	0 . 5 9 2	0 . 6 5 4	3. 4 8 E - 0 9	0. 03		1	3	1	20 16	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA MP	8 2 0	P4991 3	cathelicidin antimicrobial peptide		26 2	0 . 4 6 6	0 . 8 4 6	0. 0 4 3 9	0. 03		1	3	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H4 C9	8 2 9 4	P6280 5	H4 clustered histone 9		12 1	0 . 5 4 1	0 . 6 9 2	0. 0 1 5 8 0 9	0. 03		1	3	0	20 18	2 0 1 9
Rh eu ma toi	C 00 03	H4 C1	8 3 5 9	P6280 5	H4 clustered histone 1		12 1	0 . 5	0 . 6	0. 0 0 0	0. 03		1	3	0	20 18	2 0 1 9

d Ar thr itis	87 3						4 1	9 2	2 0 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H4 C4	8 3 6 0	P6280 5	H4 clustered histone 4	12 5	0 . 5 3 7	0 . 6 9 2	0. 0 1 9 8 5	0. 03		1	3	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H4 C6	8 3 6 1	P6280 5	H4 clustered histone 6	12 1	0 . 5 4 1	0 . 6 9 2	0. 1 3 0 7 2	0. 03		1	3	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H4 C1 2	8 3 6 2	P6280 5	H4 clustered histone 12	12 1	0 . 5 4 1	0 . 6 9 2	0. 0 0 1 5 7 4	0. 03		1	3	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H4 C1 1	8 3 6 3	P6280 5	H4 clustered histone 11	12 1	0 . 5 4 1	0 . 6 9 2	0. 3 8 6 8 3	0. 03		1	3	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H4 C3	8 3 6 4	P6280 5	H4 clustered histone 3	13 2	0 . 5 3 4	0 . 7 3 1	0. 0 0 3 6	0. 03		1	3	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H4 C8	8 3 6 5	P6280 5	H4 clustered histone 8	12 2	0 . 5 4 1	0 . 6 9 2	7. 1 5 E - 0 6	0. 03		1	3	0	20 18	2 0 1 9
Rh eu	C 00	H4 C2	8 3	P6280 5	H4 clustered histone 2	12 8	0 .	0 .	0. 0	0. 03		1	3	0	20 18	2 0

ma toi d Ar thr itis	03 87 3		6 6				5 3 7	7 3 1	0 2 9 1 5							1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H4 C5	8 3 6 7	P6280 5	H4 clustered histone 5	12 1	0 . 5 4 1	0 . 6 9 2	0. 0 1 3 4 5 3	0. 03		1	3	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H4 C1 3	8 3 6 8	P6280 5	H4 clustered histone 13	12 1	0 . 5 4 1	0 . 6 9 2	0. 0 0 0 3 5	0. 03		1	3	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H4 C1 4	8 3 7 0	P6280 5	H4 clustered histone 14	12 1	0 . 5 4 1	0 . 6 9 2		0. 03		1	3	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR AM 1	8 4 1 0 6	Q96Q H2	PML-RARA regulated adaptor molecule 1	27	0 . 7	0 . 4 6 2	0. 0 0 0 3	0. 03		1	3	0	19 95	2 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SP Z1	8 4 6 5 4	Q9BX G8	spermatogenic leucine zipper 1	17 3	0 . 5 0 7	0 . 7 6 9		0. 03		1	3	0	20 06	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FC RL A	8 4 8 2 4	Q7L5 13	Fc receptor like A	15	0 . 8 0 5	0 . 3 4 6	2. 4 4 E - 0 9	0. 03		1	3	0	20 03	2 0 1 7

Rheumatoid Arthritis	C0003873	ORA1	84876	Q96D31	ORAI calcium release-activated calcium modulator 1	Ion channel	195	0.52	0.88	1.91E-05	0.03		1	3	1	2014	2019
Rheumatoid Arthritis	C0003873	PIK3R3	8503	Q92569	phosphoinositide 3-kinase regulatory subunit 3	Enzyme modulator	101	0.556	0.692	3.36E-10	0.03		1	3	0	1992	2002
Rheumatoid Arthritis	C0003873	ABCC11	85320	Q96J66	ATP binding cassette subfamily C member 11	Transporter	91	0.565	0.769	3.99E-46	0.03		1	3	0	2005	2019
Rheumatoid Arthritis	C0003873	BECN1	8678	Q14457	beclin 1	Enzyme modulator	373	0.432	0.846	0.9377	0.03		1	3	0	2013	2019
Rheumatoid Arthritis	C0003873	FADD	8772	Q13158	Fas associated via death domain		137	0.537	0.846	0.5295	0.03		1	3	0	2000	2006
Rheumatoid Arthritis	C0003873	CD84	8832	Q9UIB8	CD84 molecule		22	0.76	0.308	6.91E-09	0.03		1	3	0	2013	2019
Rheumatoid Ar	C0003873	HDAC3	8841	O15379	histone deacetylase 3	Epigenetic reg	179	0.511	0.731	0.56737	0.03		1	3	0	2012	2018

thritis						ulator											
Rheumatoid Arthritis	C0003873	CCCK	885	P06307	cholecystokinin		326	0.453	0.846	3.3E-05	0.03		1	3	0	2015	2019
Rheumatoid Arthritis	C0003873	APLN	8862	Q9ULZ1	apelin		226	0.497	0.769	0.45897	0.03		1	3	0	2017	2019
Rheumatoid Arthritis	C0003873	PER2	8864	O15055	period circadian regulator 2	Transcription factor	238	0.488	0.846	0.7148	0.03		1	3	3	2013	2017
Rheumatoid Arthritis	C0003873	CCRL2	9034	O00421	C-C motif chemokine receptor like 2	G-protein coupled receptor	59	0.621	0.654	0.3681	0.03		1	3	0	2004	2010
Rheumatoid Arthritis	C0003873	FCGR2C	9103	P31995	Fc fragment of IgG receptor IIc (gene/pseudogene)	Cell adhesion	71	0.61	0.654		0.03		1	3	0	2004	2017
Rheumatoid Arthritis	C0003873	LPAR2	9170	Q9HBW0	lysophosphatidic acid receptor 2	G-protein coupled receptor	285	0.463	0.846	0.03658	0.03		1	3	0	1999	2012

Rheumatoid Arthritis	C0003873	XP R1	9213	Q9UBH6	xenotropic and polytropic retrovirus receptor 1	Transporter	217	0.488	0.731	0.999	0.03		1	3	0	2012	2018
Rheumatoid Arthritis	C0003873	CD6	923	P30203	CD6 molecule	Enzyme	216	0.489	0.808	9.27E-05	0.03		1	3	0	2009	2016
Rheumatoid Arthritis	C0003873	ASIC3	9311	Q9UHC3	acid sensing ion channel subunit 3	Ion channel	51	0.663	0.538	3.41E-07	0.03		1	3	0	2014	2018
Rheumatoid Arthritis	C0003873	CD163	9332	Q86VB7	CD163 molecule	Enzyme	369	0.427	0.846	0.00834	0.03		1	3	0	2012	2019
Rheumatoid Arthritis	C0003873	KL	9365	Q9UEF7	klotho	Enzyme	332	0.448	0.769	0.00224	0.03		1	3	0	2007	2020
Rheumatoid Arthritis	C0003873	FHL5	9457	Q5TD97	four and a half LIM domains 5	Transcription factor	153	0.53	0.769	4.85E-10	0.03		1	3	0	2017	2019
Rheumatoid Ar	C0003873	ENTPD1	953	P49961	ectonucleoside triphosphate diphosph	Enzyme	206	0.499	0.769	0.0080	0.03		1	3	0	2018	2019

thr itis					hohydro lase 1					7 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BM S1	9 7 9 0	Q146 92	BMS1 ribosome biogenesis factor		19 2	0 . 4 9 9	0 . 8 4 6	0. 0 0 0 1 7 5	0. 03		0. 6 6 7	3	0	20 08	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD C4 2	9 9 8	P6095 3	cell division cycle 42	En zy me mo dul ato r	32 7	0 . 4 5 8	0 . 8 4 6	0. 7 8 7 2 8	0. 03		1	3	0	19 89	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SC O2	9 9 9 7	O438 19	synthesi s of cytochro me C oxidase 2	En zy me	29 4	0 . 4 7 9	0 . 8 4 6	7. 5 5 E - 0 7	0. 03		1	3	0	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R7 60	1 E + 0 8		microRNA 760		37	0 . 6 7 4	0 . 3 8 5		0. 02		1	2	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SH 2B 3	1 0 0 1 9	Q9U QQ2	SH2B adaptor protein 3		21 2	0 . 5 2 7	0 . 6 9 2	0. 0 0 0 1 0 3	0. 02		1	2	0	20 09	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI NC 016 72	1. 0 1 E + 0 8		long intergenic non-protein coding RNA 1672		26 8	0 . 4 6 2	0 . 8 4 6		0. 02		1	2	0	20 17	2 0 1 8
Rh eu ma toi	C 00 03	RP L17 - C1	1. 0 1 E		RPL17- C18orf32 readthrough		93	0 . 5	0 . 6	0. 5 7 5	0. 02		1	2	0	20 04	2 0 1 7

d Ar thr itis	87 3	8or f32	+ 0 8					7 2	1 5	0 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI NC - RO R	1. 0 1 E + 0 8		long intergenic non-protein coding RNA, regulator of reprogrammin g		10 8	0 . 5 4 8	0 . 7 6 9		0. 02		0. 5	2	0	20 01	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD AM 8	1 0 1	P7832 5	ADAM metallop eptidase domain 8	En zy me	81	0 . 5 9	0 . 7 3 1	2. 2 E - 1 4	0. 02		1	2	0	20 09	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD K2	1 0 1 7	P2494 1	cyclin depende nt kinase 2	Ki nas e	27 0	0 . 4 5 6	0 . 6 9 2	0. 6 1 0 5 4	0. 02		1	2	0	19 97	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA LC RL	1 0 2 0 3	Q166 02	calcitoni n receptor like receptor	G- pro tei n co upl ed rec ept or	47	0 . 6 5 3	0 . 6 9 2	0. 9 8 5 3	0. 02		0. 5	2	0	20 06	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR G4	1 0 2 1 6	Q929 54	proteoglycan 4		73	0 . 6 0 1	0 . 6 1 5	1. 7 E - 0 8	0. 02		1	2	0	20 15	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SP RY 1	1 0 2 5 2	O436 09	sprouty RTK signalin g antagoni st 1	Sig nal ing	63	0 . 6 0 3	0 . 5 7 7	0. 0 3 0 4	0. 02		1	2	0	20 17	2 0 1 9

Rheumatoid Arthritis	C0003873	RAMP2	10266	O60895	receptor activity modifying protein 2	Receptor	60	0.626	0.654	0.051127	0.02		0.5	2	0	2006	2009
Rheumatoid Arthritis	C0003873	CC L26	10344	Q9Y258	C-C motif chemokine ligand 26	Signaling	60	0.617	0.654	0.010114	0.02		0.5	2	0	2005	2009
Rheumatoid Arthritis	C0003873	WARS2	10352	Q9UGM6	tryptophanyl tRNA synthetase 2, mitochondrial		110	0.617	0.657	0.050885	0.02		1	2	0	2015	2019
Rheumatoid Arthritis	C0003873	LINC02210-CRHR1	1005E+08	P34998	LINC02210-CRHR1 readthrough		123	0.57	0.692		0.02		1	2	0	2001	2011
Rheumatoid Arthritis	C0003873	SEMA4D	10507	Q92854	semaphorin 4D	Signaling	109	0.564	0.769	0.9742	0.02		1	2	0	2015	2018
Rheumatoid Arthritis	C0003873	CEBP D	1052	P49716	CCAAT enhancer binding protein delta	Transcription factor	97	0.579	0.7619	0.61219	0.02		1	2	0	2012	2017
Rheumatoid Ar	C0003873	KAT5	10524	Q92993	lysine acetyltransferase 5		138	0.534	0.769	0.0882	0.02		1	2	0	2010	2019

thr itis									3 4							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IV NS 1A BP	1 0 6 2 5	Q9Y6 Y0	influenza virus NS1A binding protein		67	0 . 6 0 8	0 . 7 6 9	0. 9 9 4 4 2	0. 02		1	2	0	20 03 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EB P	1 0 6 8 2	Q151 25	EBP choleste nol delta- isomeras e	En zy me	24 3	0 . 4 9 4	0 . 8 4 6	0. 9 3 6 4 5	0. 02		1	2	0	20 00 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CT SC	1 0 7 5	P5363 4	cathepsi n C	En zy me	13 9	0 . 5 4 1	0 . 7 3 1	1. 1 5 E - 0 7	0. 02		1	2	0	20 17 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CF TR	1 0 8 0	P1356 9	CF transme mbrane conduct ance regulato r	Ion ch an nel	47 6	0 . 4 2 4	0 . 8 8 5	2. 1 7 E - 5 8	0. 02		1	2	0	19 99 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC R9	1 0 8 0 3	P5168 6	C-C motif chemoki ne receptor 9	G- pro tei n co upl ed rec ept or	90	0 . 5 7 3	0 . 6 9 2	0. 0 0 4 1 9 9	0. 02		1	2	0	20 10 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CH AT	1 1 0 3	P2832 9	choline O- acetyltra nsferase	En zy me	23 0	0 . 5 2	0 . 8 0 8	5. 6 3 E - 1 1	0. 02		1	2	0	20 08 0 1 2

Rheumatoid Arthritis	C0003873	PSI P1	11168	O75475	PC4 and SFRS1 interacting protein 1	Signaling	210	0.49	0.846	0.968	0.02		1	2	0	1992	2019
Rheumatoid Arthritis	C0003873	IRAK3	11213	Q9Y616	interleukin 1 receptor associated kinase 3	Kinase	59	0.615	0.615	5.31E-21	0.02		1	2	0	2017	2018
Rheumatoid Arthritis	C0003873	KL F12	11278	Q9Y4X4	Kruppel like factor 12	Nucleic acid binding	58	0.647	0.654	0.9867	0.02		0.5	2	2	2008	2011
Rheumatoid Arthritis	C0003873	SAA1	113174	Q96ER3	serum amyloid A like 1		4	0.89	0.115	4.32E-09	0.02		1	2	0	2011	2018
Rheumatoid Arthritis	C0003873	TIRAP	114609	P58753	TIR domain containing adaptor protein		74	0.604	0.709	0.00761	0.02		1	2	1	2008	2011
Rheumatoid Arthritis	C0003873	MIR155 HG	114614		MIR155 host gene		56	0.617	0.615		0.02		1	2	1	2008	2017
Rheumatoid Ar	C0003873	CHUK	1147	O15111	component of inhibitor of nuclear factor	Kinase	125	0.556	0.731	0.9403	0.02		1	2	0	2003	2017

thr itis					kappa B kinase complex												
Rh eu ma toi d Ar thr itis	C 00 03 87 3	C1 QT NF 3	1 1 4 8 9 9	Q9BX J4	C1q and TNF related 3		26	0 . 6 9 5	0 . 5 7 7	1. 8 1 E - 0 7	0. 02		1	2	0	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	C1 QT NF 6	1 1 4 9 0 4	Q9BX I9	C1q and TNF related 6		33	0 . 6 8 2	0 . 5 7 7	9. 0 1 E - 0 6	0. 02		1	2	0	20 10	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TA DA 1	1 1 7 1 4 3	Q96B N2	transcriptional adaptor 1		23	0 . 7 0 5	0 . 6 5 4	0. 0 9 0 7 0 8	0. 02		1	2	0	20 03	2 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LT B4 R	1 2 4 1	Q157 22	leukotrie ne B4 receptor	G-pro tei n co upl ed rec ept or	10 7	0 . 5 7 6	0 . 6 9 2	0. 1 1 9 9 4	0. 02		1	2	0	20 03	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CN R1	1 2 6 8	P2155 4	cannabi noid receptor 1	G-pro tei n co upl ed rec ept or	39 3	0 . 4 4 6	0 . 8 0 8	0. 5 0 6 5 2	0. 02		1	2	0	20 09	2 0 1 9
Rh eu ma toi d Ar	C 00 03 87 3	PP AR GC 1B	1 3 3 5 2 2	Q86Y N6	PPARG coactiva tor 1 beta	Tr ans cri pti on fac tor	10 2	0 . 5 6 9	0 . 7 3 1	0. 5 0 3 2 1	0. 02		1	2	0	20 14	2 0 1 9

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO X8 A	1 3 5 1	P1017 6	cytochrome c oxidase subunit 8A	En zy me	52 6	0 . 4	0 . 8 4 6	0. 1 6 0 6	0. 02		1	2	0	20 00	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CP B1	1 3 6 0	P1508 6	carboxy peptidas e B1	En zy me	57	0 . 6 2 6	0 . 6 5 4	2. 6 1 E - 2 2	0. 02		1	2	0	20 11	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CR 1	1 3 7 8	P1792 7	complement C3b/C4b receptor 1 (Knops blood group)		12 9	0 . 5 3 3	0 . 8 0 8	1. 6 5 E - 3 5	0. 02		1	2	0	20 13	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AT F2	1 3 8 6	P1533 6	activatin g transcrip tion factor 2	Tr ans cri pti on fac tor	12 2	0 . 5 5 1	0 . 8 0 8	0. 9 9 1 3 1	0. 02		1	2	0	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CR EB BP	1 3 8 7	Q927 93	CREB binding protein		43 8	0 . 4 2 8	0 . 8 0 8	1	0. 02		1	2	0	20 03	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CR HR 1	1 3 9 4	P3499 8	corticotropin releasing hormone receptor 1		18 3	0 . 5 1 7	0 . 7 6 9	3. 7 9 E - 0 5	0. 02		1	2	0	20 01	2 0 1 1
Rh eu ma toi	C 00 03	CS F3	1 4 4 0	P0991 9	colony stimulating factor 3		68 7	0 . 3	0 . 8	0. 3 8 0	0. 02		1	2	0	20 17	2 0 1 7

d Ar thr itis	87 3							7 7	8 5	4 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CS K	1 4 4 5	P4124 0	C- terminal Src kinase	Ki nas e	91	0 . 6 0 6	0 . 6 9 2	0. 9 9 7 7	0. 02		1	2	2	19 99	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CS T3	1 4 7 1	P0103 4	cystatin C		37 0	0 . 4 3 6	0 . 8 0 8	0. 0 3 9 0 1	0. 02		1	2	0	20 07	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD RA 1A	1 4 8	P3534 8	adrenoc eptor alpha 1A	G- pro tei n co upl ed rec ept or	29 4	0 . 4 6 2	0 . 8 4 6	3. 3 7 E - 0 7	0. 02		1	2	0	19 99	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CT SB	1 5 0 8	P0785 8	cathepsi n B	En zy me	30 4	0 . 4 5 7	0 . 8 4 6	5. 8 8 E - 1 1	0. 02		1	2	0	19 91	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD RA 2B	1 5 1	P1808 9	adrenoc eptor alpha 2B	G- pro tei n co upl ed rec ept or	29 6	0 . 4 6 5	0 . 8 4 6	4. 4 5 E - 0 6	0. 02		1	2	0	19 99	2 0 0 4
Rh eu ma toi d Ar	C 00 03 87 3	BT LA	1 5 1 8 8 8	Q7Z6 A9	B and T lymphocyte associated		74	0 . 5 9 3	0 . 5 7 7	0. 0 2 0 9	0. 02		1	2	0	20 06	2 0 1 7

thr itis										8 7							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY P2 D6	1 5 6 5	P1063 5	cytochrome P450 family 2 subfamily D member 6		43 2	0 . 4 3 7	0 . 8 8 5	1. 0 8 E - 2 5	0. 02		0. 5	2	0	19 94	1 9 9 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY P3 A5	1 5 7 7	P2081 5	cytochro me P450 family 3 subfamil y A member 5	En zy me	17 9	0 . 5 1 1	0 . 8 4 6	6. 2 9 E - 1 7	0. 02		1	2	0	20 15	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY P17 A1	1 5 8 6	P0509 3	cytochrome P450 family 17 subfamily A member 1		32 6	0 . 4 6 2	0 . 7 6 9	0. 0 0 2 6 3	0. 02		1	2	0	20 00	2 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY P19 A1	1 5 8 8	P1151 1	cytochro me P450 family 19 subfamil y A member 1	En zy me	51 9	0 . 4 1	0 . 8 8 5	1. 7 E - 0 5	0. 02		1	2	0	19 99	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY P26 A1	1 5 9 2	O431 74	cytochro me P450 family 26 subfamil y A member 1	En zy me	59	0 . 6 1 9	0 . 5 7 7	8. 4 3 E - 1 1	0. 02		1	2	0	20 02	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DN AJ B1 P1	1 7 1 2 2 1		DnaJ heat shock protein family (Hsp40) member B1 pseudogene 1		51	0 . 6 5	0 . 6 5 4		0. 02		1	2	0	20 19	2 0 1 9
Rh eu ma toi	C 00 03	NL RP 6	1 7 1 3	P5904 4	NLR family pyrin domain containing 6		58	0 . 6	0 . 7	0. 0 0 0	0. 02		1	2	0	20 17	2 0 1 7

d Ar thr itis	87 3		8 9					2 8	6 9	2 7 4							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DH CR 7	1 7 1 7	Q9UB M7	7- dehydro choleste rol reductas e	En zy me	26 6	0 . 5	0 . 8 4 6	3. 9 5 E - 1 3	0. 02		1	2	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AF P	1 7 4	P0277 1	alpha fetoprot ein	Tr ans por ter	39 2	0 . 4 2 9	0 . 8 8 5	1. 1 4 E - 1 1	0. 02		1	2	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DN AS E1	1 7 7 3	P2485 5	deoxyribonuclease 1		18 0	0 . 5 0 5	0 . 8 4 6	6. 9 8 E - 2 1	0. 02		1	2	0	20 09	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DN TT	1 7 9 1	P0405 3	DNA nucleoti dylexotr ansferas e	En zy me	70	0 . 6 0 6	0 . 6 9 2	2. 9 5 E - 1 0	0. 02		0. 5	2	0	19 99	2 0 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DR 1	1 8 1 0	Q016 58	down-regulator of transcription 1		10	0 . 8 3 9	0 . 2 3 1 1 7	0. 9 2 1 1 7	0. 02		1	2	0	19 98	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DR D2	1 8 1 3	P1441 6	dopamin e receptor D2	G-pro tei n co upl ed rec ept or	43 7	0 . 4 3 6	0 . 8 4 6	0. 7 4 7 0 9	0. 02		1	2	0	20 11	2 0 1 5

Rheumatoid Arthritis	C0003873	JAG1	182	P78504	jagged canonical Notch ligand 1	420	0.429	0.808	1	0.02		1	2	0	2005	2009
Rheumatoid Arthritis	C0003873	TSC2D3	1831	Q99576	TSC22 domain family member 3	64	0.619	0.639	0.4339	0.02		1	2	0	2010	2014
Rheumatoid Arthritis	C0003873	DUSP1	1843	P28562	dual specificity phosphatase 1	214	0.491	0.808	0.0151	0.02		1	2	0	2010	2019
Rheumatoid Arthritis	C0003873	EDN1	1906	P05305	endothelin 1	679	0.388	0.846	0.4504	0.02		1	2	0	1999	2008
Rheumatoid Arthritis	C0003873	EFNB1	1947	P98172	ephrin B1	134	0.561	0.769	0.9351	0.02		1	2	0	2008	2015
Rheumatoid Arthritis	C0003873	EIF4EBP1	1978	Q13541	eukaryotic translation initiation factor 4E binding protein 1	201	0.494	0.8756	0.2062	0.02		1	2	0	2018	2019
Rheumatoid Arthritis	C0003873	ELAVL1	1994	Q15717	ELAV like RNA binding protein 1	103	0.561	0.738	0.988	0.02		1	2	0	2006	2007

Ar thr itis									4 9								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EL F3	1 9 9 9	P7854 5	E74 like ETS transcrip tion factor 3	Tr ans cri pti on fac tor	11 2	0 . 5 5 1	0 . 8 0 8	0. 9 8 3 2 3	0. 02		1	2	0	20 03	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EL K3	2 0 0 4	P4197 0	ETS transcrip tion factor ELK3	Tr ans cri pti on fac tor	22 0	0 . 4 9	0 . 8 4 6	0. 0 8 3 5 0 8	0. 02		1	2	0	20 19	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EP AS 1	2 0 3 4	Q998 14	endothel ial PAS domain protein 1	Tr ans cri pti on fac tor	29 3	0 . 4 5 4	0 . 7 3 1	0. 5 9 6 1	0. 02		1	2	0	20 03	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FB L	2 0 9 1	P2208 7	fibrillari n	En zy me	94	0 . 5 7 2	0 . 6 5 4	0. 9 9 3 1 9	0. 02		1	2	0	20 19	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ET S2	2 1 1 4	P1503 6	ETS proto- oncogen e 2, transcrip tion factor	Tr ans cri pti on fac tor	11 5	0 . 5 4 8	0 . 8 0 8 8	0. 9 8 8 8	0. 02		1	2	0	19 96	2 0 0 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	F2 R	2 1 4 9	P2511 6	coagulat ion factor II thrombi n receptor	G- pro tei n co upl ed rec ept or	34 7	0 . 4 4 4	0 . 8 4 6	0. 0 8 4 6 8	0. 02		1	2	0	19 95	2 0 1 2

Rheumatoid Arthritis	C0003873	ALDH1A1	216	P00352	aldehyde dehydrogenase 1 family member A1	Enzyme	270	0.46	0.846	0.9448	0.02		1	2	0	2015	2019
Rheumatoid Arthritis	C0003873	PTK2B	2185	Q14289	protein tyrosine kinase 2 beta	Kinase	319	0.488	0.808	0.93536	0.02		1	2	0	2007	2007
Rheumatoid Arthritis	C0003873	FCER2	2208	P06734	Fc fragment of IgE receptor II	Receptor	104	0.566	0.654	7.61E-12	0.02		0.5	2	0	1994	2011
Rheumatoid Arthritis	C0003873	FCN2	2220	Q15485	ficolin 2	Signaling	159	0.517	0.846	3.56E-11	0.02		0.5	2	1	2015	2016
Rheumatoid Arthritis	C0003873	FGFB	2244	P02675	fibrinogen beta chain	Signaling	95	0.584	0.692	0.56616	0.02		1	2	1	2012	2017
Rheumatoid Arthritis	C0003873	FGF1	2246	P05230	fibroblast growth factor 1	Signaling	184	0.507	0.846	0.4406	0.02		1	2	0	1990	2001
Rheumatoid Ar	C0003873	FGF13	2258	Q92913	fibroblast growth factor 13	Signaling	167	0.514	0.808	0.89489	0.02		1	2	0	2002	2003

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA SC 3	2 2 7 9 4	O152 34	CASC3 junction complex subunit	exon	10	0 . 7 9 2	0 . 2 3 1	0. 6 1 3 3 8	0. 02		1	2	0	20 06	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO G2	2 2 7 9 6	Q147 46	component of oligomeric golgi complex 2		30	0 . 7 2 9	0 . 4 2 3	9. 3 7 E - 0 6	0. 02		1	2	0	20 17	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FO XO 1	2 3 0 8	Q127 78	forkhead O1	box	38 0	0 . 4 3 3	0 . 8 4 6	0. 9 9 7 2 5	0. 02		1	2	0	20 08	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KD M6 B	2 3 1 3 5	O150 54	lysine demethy lase 6B	Ep ige net ic reg ula tor	17 3	0 . 5 1 4	0 . 8 0 8	1	0. 02		1	2	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FL T4	2 3 2 4	P3591 6	fms related receptor tyrosine kinase 4	Ki nas e	30 6	0 . 4 5 7	0 . 8 0 8	1	0. 02		1	2	0	20 02	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BR D4	2 3 4 7 6	O608 85	bromod omain containi ng 4	Ep ige net ic reg ula tor	33 5	0 . 4 4 6	0 . 8 8 5	1	0. 02		1	2	0	20 15	2 0 1 6
Rh eu ma toi	C 00 03	AL PP	2 5 0	P0518 7	alkaline phospha tase,	En zy me	20 9	0 . 4	0 . 8	1. 8 1 E	0. 02		1	2	0	20 03	2 0 1 9

d Ar thr itis	87 3				placenta l			8 7	0 8	- 1 3							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TM EM 158	2 5 9 0 7	Q8W Z71	transmembran e protein 158 (gene/pseudog ene)	22	0 . 7 3 6	0 . 3 8 5	0. 1 4 8 6 2	0. 02		1	2	0	19 94	1 9 9 6	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AS PM	2 5 9 2 6 6	Q8IZ T6	abnormal spindle microtubule assembly	15 9	0 . 5 2 6	0 . 7 6 9	3. 3 5 E - 4 9	0. 02		1	2	0	20 04	2 0 1 8	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA PD H	2 5 9 7	P0440 6	glyceral dehyde- 3- phospha te dehydro genase	En zy me	30 5	0 . 4 4 7	0 . 8 0 8	0. 1 1 3 8 8	0. 02		1	2	0	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AT RN L1	2 6 0 3 3	Q5V V63	attractin like 1	En zy me mo dul ato r	11 7	0 . 5 4 6	0 . 7 6 9	0. 9 9 1 5	0. 02		1	2	0	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA S6	2 6 2 1	Q143 93	growth arrest specific 6	Ex tra cel lul ar str uct ure	19 0	0 . 5	0 . 7 6 9	0. 0 3 4 7 7	0. 02		1	2	0	19 99	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HS PB 8	2 6 3 5 3	Q9UJ Y1	heat shock protein family B (small) member 8	12 2	0 . 5 7	0 . 5 7 7	0. 0 4 3 1 2 8	0. 02		1	2	0	20 06	2 0 0 8	

Rheumatoid Arthritis	C0003873	GH1	2688	P01241	growth hormone 1	Signaling	686	0373	033	0.03057	0.02		1	2	0	2006	2010
Rheumatoid Arthritis	C0003873	CB LIF	2694	P27352	cobalamin binding intrinsic factor		185	057	088	0.000249	0.02		1	2	0	2017	2019
Rheumatoid Arthritis	C0003873	LA MP3	27074	Q9UQV4	lysosomal associated membrane protein 3	Transporter	104	056	062	0.000267	0.02		0.5	2	0	2003	2008
Rheumatoid Arthritis	C0003873	HP LH1	27259		hemophagocytic lymphohistiocytosis 1		22	0655	0538		0.02		1	2	0	2000	2003
Rheumatoid Arthritis	C0003873	PD LIM3	27295	Q53GG5	PDZ and LIM domain 3	Cellular structure	118	0547	0739	3.03E-07	0.02		1	2	0	2003	2019
Rheumatoid Arthritis	C0003873	ABO	28	P16442	ABO, alpha 1-3-N-acetylglactosaminyltransferase and alpha 1-3-galactosyltransferase	Enzyme	443	0427	0885		0.02		1	2	0	1982	1987

Rheumatoid Arthritis	C0003873	CCR10	2826	P46092	C-C motif chemokine receptor 10	G-protein coupled receptor	57	0.626	0.645	0.005	0.02		1	2	0	2015	2018
Rheumatoid Arthritis	C0003873	GPRI5	2838	P49685	G protein-coupled receptor 15	G-protein coupled receptor	18	0.743	0.308	1.11E-06	0.02		1	2	0	2014	2018
Rheumatoid Arthritis	C0003873	VSTM1	284415	Q6UX27	V-set and transmembrane domain containing 1	Receptor	8	0.821	0.192	6.37E-08	0.02		1	2	0	2014	2016
Rheumatoid Arthritis	C0003873	DLL1	28514	O00548	delta like canonical Notch ligand 1		212	0.492	0.809	0.999	0.02		1	2	0	1990	2005
Rheumatoid Arthritis	C0003873	TRAV29DV5	28653	P04437	T cell receptor alpha variable 29/delta variable 5 (gene/pseudogene)		14	0.751	0.346		0.02		0.5	2	0	1997	1997
Rheumatoid Arthritis	C0003873	GPRI42	28666	O15529	G protein-coupled receptor 42 (gene/pseudogene)	G-protein coupled receptor	255	0.475	0.846	0.059	0.02		1	2	0	1999	2004

Rheumatoid Arthritis	C0003873	TRAJ60	28695		T cell receptor alpha joining 60 (pseudogene)		14	0.751	0.346		0.02		0.5	2	0	1997	1997
Rheumatoid Arthritis	C0003873	TRAC	28755	P01848	T cell receptor alpha constant	Receptor	28	0.691	0.615		0.02		0.5	2	0	1997	1997
Rheumatoid Arthritis	C0003873	GPX1	2876	P07203	glutathione peroxidase 1	Enzyme	290	0.458	0.923	3.85E-05	0.02		1	2	0	2019	2019
Rheumatoid Arthritis	C0003873	ANPEP	2990	P15144	alanyl aminopeptidase, membrane	Enzyme	280	0.462	0.769	3.75E-09	0.02		1	2	0	2002	2019
Rheumatoid Arthritis	C0003873	SETD2	29072	Q9BYW2	SET domain containing 2, histone lysine methyltransferase	Epigenetic regulator	447	0.424	0.846	1	0.02		1	2	0	2009	2018
Rheumatoid Arthritis	C0003873	GRP	29922	P07492	gastrin releasing peptide		172	0.524	0.769	0.02535	0.02		1	2	0	2008	2017
Rheumatoid Arthritis	C0003873	GSK3B	2932	P49841	glycogen synthase kinase 3 beta	Kinase	393	0.43	0.8456	0.95	0.02		1	2	0	2011	2018

Ar thr itis										7 1							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MS H6	2 9 5 6	P5270 1	mutS homolog 6	Nu cle ic aci d bin din g	29 6	0 . 4 6 2	0 . 7 3 1	3. 6 7 E - 0 5	0. 02		1	2	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SE NP 1	2 9 8 4 3	Q9P0 U3	SUMO specific peptidas e 1	En zy me	79	0 . 5 9 3	0 . 6 5 4	0. 9 9 3 5 8	0. 02		1	2	0	20 07	2 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	A1 CF	2 9 9 7 4	Q9N Q94	APOBEC1 complementat ion factor		71	0 . 6 0 4	0 . 6 9 2	5. 9 2 E - 1 0	0. 02		1	2	0	20 04	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TB X2 1	3 0 0 0 9	Q9UL 17	T-box transcrip tion factor 21	Tr ans cri pti on fac tor	12 4	0 . 5 4 1	0 . 8 0 8	0. 9 9 6 3 6	0. 02		1	2	1	20 09	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C4 0A 1	3 0 0 6 1	Q9NP 59	solute carrier family 40 member 1	Tr ans por ter	10 1	0 . 5 7	0 . 7 3 1	0. 9 8 8 3 5	0. 02		1	2	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HD AC 1	3 0 6 5	Q135 47	histone deacetyl ase 1	Ep ige net ic reg ula tor	27 7	0 . 4 6	0 . 8 4 6	0. 6 1 4 2 7	0. 02		1	2	0	20 10	2 0 1 5
Rh eu ma	C 00 03	HD GF	3 0	P5185 8	heparin binding	Sig nal ing	89	0 . 5	0 . 6	0. 2 7	0. 02		1	2	0	19 90	2 0

to id Ar thr itis	87 3		6 8		growth factor			7 5	5 4	2 7 2							0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD GR E2	3 0 8 1 7	Q9U HX3	adhesion G protein- coupled receptor E2	G- pro tei n co upl ed rec ept or	86	0 . 5 8 1	0 . 6 1 5	2. 7 6 E - 2 8	0. 02		1	2	0	20 00	2 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HG F	3 0 8 2	P1421 0	hepatoc yte growth factor	En zy me	67 1	0 . 3 7 4	0 . 8 8 5	0. 9 9 9 4 7	0. 02		1	2	0	19 97	2 0 0 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AN XA 6	3 0 9	P0813 3	annexin A6		15 6	0 . 5 1 4	0 . 8 4 6	1. 0 8 E - 0 8	0. 02		1	2	0	19 98	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HIP 1	3 0 9 2	O002 91	huntingt in interacti ng protein 1	Ce llul ar str uct ure	56	0 . 6 5 3	0 . 5 7 7	0. 7 6 1 7 3	0. 02		1	2	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NR 4A 1	3 1 6 4	P2273 6	nuclear receptor subfamil y 4 group A member 1	Nu cle ar rec ept or	21 6	0 . 4 9	0 . 7 3 1	0. 3 7 0 7 4	0. 02		1	2	0	20 02	2 0 1 9
Rh eu ma toi d Ar	C 00 03 87 3	HR AS	3 2 6 5	P0111 2	HRas proto- oncogen e, GTPase	En zy me mo dul ato r	69 8	0 . 3 7 8	0 . 8 8 5	0. 0 7 9 7 4	0. 02		0. 5	2	0	19 95	2 0 0 0

thritis																	
Rheumatoid Arthritis	C0003873	HS D11B2	3291	P80365	hydroxysteroid 11-beta dehydrogenase 2	Enzyme	163	0.532	0.808	0.1177	0.02		1	2	0	2006	2015
Rheumatoid Arthritis	C0003873	HS PA8	3312	P11142	heat shock protein family A (Hsp70) member 8		124	0.533	0.808	0.99863	0.02		0.5	2	0	2002	2018
Rheumatoid Arthritis	C0003873	BI RC5	332	O15392	baculoviral IAP repeat containing 5	Enzyme modulator	199	0.495	0.731	0.0584	0.02		1	2	0	2007	2016
Rheumatoid Arthritis	C0003873	DN AJ B1	3337	P25685	DnaJ heat shock protein family (Hsp40) member B1		82	0.597	0.692	0.0347	0.02		1	2	0	2019	2019
Rheumatoid Arthritis	C0003873	IC A1	3382	Q05084	islet cell autoantigen 1		34	0.686	0.5091	0.0091	0.02		1	2	0	1995	1999
Rheumatoid Arthritis	C0003873	ID1	3397	P41134	inhibitor of DNA binding 1, HLH protein	Transcription factor	125	0.544	0.692	0.0031	0.02		1	2	0	2001	2019
Rheumatoid	C0003	IFN GR1	3459	P15260	interferon gamma	Receptor	153	0.5	0.6	0.015	0.02		0.5	2	0	2006	2015

d Ar thr itis	87 3				receptor 1			2 9	9 2	5 0 3							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IGF BP 1	3 4 8 4	P0883 3	insulin like growth factor binding protein 1	En zy me mo dul ato r	19 1	0 . 5 0 2	0 . 8 0 8	0. 0 0 9 4 7	0. 02		1	2	0	20 17	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IG HA 1	3 4 9 3	P0187 6	immunoglobul in heavy constant alpha 1		64	0 . 6 1 7	0 . 6 9 2		0. 02		1	2	0	19 91	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AP P	3 5 1	P0506 7	amyloid beta precurs or protein	En zy me mo dul ato r	48 5	0 . 4 2 2	0 . 8 4 6 5 4 4	0. 0 4 6 5 4 4	0. 02		1	2	0	20 11	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AP RT	3 5 3	P0774 1	adenine phosphoribosy ltransferase		38 4	0 . 4 2 3	0 . 8 4 6	5. 4 5 E - 1 3	0. 02		1	2	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KL K3	3 5 4	P0728 8	kallikrei n related peptidas e 3	En zy me	35 8	0 . 4 4 3	0 . 8 8 5	4. 4 3 E - 0 6	0. 02		1	2	0	19 94	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 RA P	3 5 5 6	Q9NP H3	interleuk in 1 receptor accessor y protein	Re ce pto r	49	0 . 6 4 7	0 . 6 5 4	0. 2 5 8 4 6	0. 02		1	2	0	20 19	2 0 2 0

Rheumatoid Arthritis	C0003873	IL5RA	3568	Q01344	interleukin 5 receptor subunit alpha	Signaling	48	0.647	0.654	2.68E-08	0.02		0.5	2	0	1995	1998
Rheumatoid Arthritis	C0003873	IL9R	3581	Q01113	interleukin 9 receptor	Receptor	44	0.659	0.654	2.68E-22	0.02		1	2	1	2009	2018
Rheumatoid Arthritis	C0003873	IL10RB	3588	Q08334	interleukin 10 receptor subunit beta	Receptor	50	0.636	0.577	2.51E-06	0.02		1	2	0	2006	2013
Rheumatoid Arthritis	C0003873	IL11	3589	P20809	interleukin 11		244	0.481	0.808	0.00318	0.02		1	2	0	2000	2018
Rheumatoid Arthritis	C0003873	IDO1	3620	P14902	indoleamine 2,3-dioxygenase 1		295	0.454	0.846	3.3E-06	0.02		1	2	0	2011	2017
Rheumatoid Arthritis	C0003873	INHBA	3624	P08476	inhibin subunit beta A	Signaling	83	0.601	0.615	0.9799	0.02		0.5	2	0	1998	2006
Rheumatoid Ar	C0003873	INSR	3643	P06213	insulin receptor	Kinase	452	0.432	0.846	3.61E-	0.02		1	2	0	2016	2017

thr itis									0 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	INS RR	3 6 4 5	P1461 6	insulin receptor related receptor	Ki nas e	18 6	0 . 5 0 8	0 . 8 0 8	5. 4 E - 2 4	0. 02		1	2	0	20 17 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AQ P9	3 6 6	O433 15	aquapori n 9	Ion ch an nel	10 0	0 . 5 6 5	0 . 8 0 8	0. 2 4 0 0 2 7	0. 02		1	2	0	20 16 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IT GA 2	3 6 7 3	P1730 1	integrin subunit alpha 2		16 6	0 . 5 2 2	0 . 7 3 1	6. 2 8 E - 1 1	0. 02		0. 5	2	0	20 09 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IT GA E	3 6 8 2	P3857 0	integrin subunit alpha E		95	0 . 5 7 9	0 . 6 9 2	3. 9 2 E - 2 0	0. 02		1	2	0	20 17 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IT GA X	3 6 8 7	P2070 2	integrin subunit alpha X		17 0	0 . 5 0 4	0 . 7 6 9	1. 3 7 E - 1 5	0. 02		1	2	0	20 10 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AR EG	3 7 4	P1551 4	amphire gulin	Sig nal ing	22 1	0 . 4 8 7	0 . 7 6 9	0. 3 5 4 0 7	0. 02		1	2	0	20 06 0 1 0
Rh eu ma toi	C 00 03	KC NM A1	3 7 7 8	Q127 91	potassiu m calcium- activate	Ion ch an nel	20 5	0 . 5	0 . 8	0. 9 9 7	0. 02		1	2	0	20 17 0 1 8

d Ar thr itis	87 3				d channel subfamil y M alpha 1			1 8	4 6	3 1							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA LA T1	3 7 8 9 3 8		metastasis associated lung adenocarcino ma transcript 1		33 6	0 . 4 3 5	0 . 8 4 6		0. 02		1	2	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KI R2 DL 3	3 8 0 4	P4362 8	killer cell immuno globulin like receptor, two Ig domains and long cytoplas mic tail 3	Re ce pto r	57	0 . 6 1 2	0 . 6 5 4	2. 6 8 E - 0 9	0. 02		1	2	0	20 12	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KI R2 DS 5	3 8 1 0	Q149 53	killer cell immuno globulin like receptor, two Ig domains and short cytoplas mic tail 5	Re ce pto r	27	0 . 6 7 8	0 . 5		0. 02		1	2	0	20 10	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KL K1	3 8 1 6	P0687 0	kallikrei n 1	En zy me	13 2	0 . 5 3 3	0 . 7 6 9	0. 0 0 0 1 5 3	0. 02		1	2	0	20 07	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KN G1	3 8 2 7	P0104 2	kininoge n 1	En zy me mo dul ato r	27 9	0 . 4 8 1	0 . 8 8 5	3. 2 1 E - 1 0	0. 02		1	2	0	20 17	2 0 1 8

Rheumatoid Arthritis	C0003873	ARG1	383	P05089	arginase 1	Enzyme	273	0.476	0.846	0.0359	0.02		1	2	0	2013	2020
Rheumatoid Arthritis	C0003873	KPNA1	3836	P52294	karyopherin subunit alpha 1	Transporter	22	0.736	0.577	0.99818	0.02		1	2	0	2008	2008
Rheumatoid Arthritis	C0003873	CCCL4L1	388372	P13236;Q8NHW4	C-C motif chemokine ligand 4 like 1		135	0.534	0.835	0.3376	0.02		1	2	0	1994	1995
Rheumatoid Arthritis	C0003873	LDLR	3949	P01130	low density lipoprotein receptor		336	0.449	0.885	9.84E-24	0.02		1	2	0	2013	2017
Rheumatoid Arthritis	C0003873	LGALS2	3957	P05162	galectin 2	Signaling	27	0.7	0.385	0.02219	0.02		0.5	2	0	2008	2009
Rheumatoid Arthritis	C0003873	LGALS3BP	3959	Q08380	galectin binding protein	3	127	0.546	0.769	2.68E-07	0.02		1	2	0	2000	2003
Rheumatoid Ar	C0003873	LGALS8	3964	O00214	galectin 8	Signaling	51	0.628	0.615	3.88E-	0.02		1	2	1	2009	2012

thr itis									0 6								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LI G4	3 9 8 1	P4991 7	DNA ligase 4	29 3	0 . 4 7 8	0 . 8 4 6	4. 1 6 E - 0 6	0. 02		1	2	0	20 03	2 0 0 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LR PA P1	4 0 4 3	P3053 3	LDL receptor related protein associated protein 1	95	0 . 5 7 9	0 . 7 3 1	4. 5 E - 0 7	0. 02		1	2	0	20 03	2 0 0 3	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SH 2D 1A	4 0 6 8	O608 80	SH2 domain containing 1A	16 0	0 . 5 2 5	0 . 7 3 1	0. 3 8 9 3 5	0. 02		1	2	0	20 01	2 0 1 6	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 32	4 0 6 9 2 1		microRNA 132	22 2	0 . 4 8 5	0 . 8 4 6		0. 02		1	2	0	20 08	2 0 1 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 52	4 0 6 9 4 3		microRNA 152	13 6	0 . 5 2 1	0 . 7 6 9		0. 02		1	2	0	20 14	2 0 1 8	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 7	4 0 6 9 5 2		microRNA 17	27 0	0 . 4 5 9	0 . 8 4 6		0. 02		1	2	0	20 18	2 0 1 8	
Rh eu ma toi	C 00 03	MI R1 92	4 0 6 9		microRNA 192	17 3	0 . 5	0 . 8		0. 02		1	2	0	20 17	2 0 2 0	

d Ar thr itis	87 3		6 7				0 3	4 6								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 10	4 0 6 9 9 2		microRNA 210	27 7	0 . 4 6	0 . 8 4 6		0. 02		1	2	0	20 17	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 14	4 0 6 9 9 6		microRNA 214	22 1	0 . 4 8	0 . 8 0 8		0. 02		1	2	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 22	4 0 7 0 0 7		microRNA 222	21 0	0 . 4 8 6	0 . 8 0 8		0. 02		1	2	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 9A	4 0 7 0 2 1		microRNA 29a	27 8	0 . 4 5 9	0 . 8 0 8		0. 02		1	2	0	20 14	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R3 0A	4 0 7 0 2 9		microRNA 30a	21 8	0 . 4 7 8	0 . 8 0 8		0. 02		1	2	0	20 13	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R9 8	4 0 7 0 5 4		microRNA 98	10 4	0 . 5 6 5	0 . 7 3 1		0. 02		1	2	0	20 16	2 0 1 9

Rheumatoid Arthritis	C0003873	SMAD7	4092	O15105	SMAD family member 7	Transcription factor	269	0.479	0.54854	0.02		1	2	0	2016	2018
Rheumatoid Arthritis	C0003873	MCAM	4162	P43121	melanoma cell adhesion molecule	Cell adhesion	169	0.514	0.73116	0.02		1	2	0	1999	2015
Rheumatoid Arthritis	C0003873	MET	4233	P08581	MET proto-oncogene, receptor tyrosine kinase	Kinase	594	0.388	0.9698	0.02		1	2	0	2001	2019
Rheumatoid Arthritis	C0003873	MFAP1	4236	P55081	microfibril associated protein 1	Extracellular structure	357	0.431	0.84602	0.02		1	2	0	2018	2019
Rheumatoid Arthritis	C0003873	MFAP4	4239	P55083	microfibril associated protein 4	Signaling	31	0.691	0.46416	0.02		1	2	0	2019	2020
Rheumatoid Arthritis	C0003873	MKI67	4288	P46013	marker of proliferation Ki-67		351	0.431	0.86E-28	0.02		1	2	0	2001	2002
Rheumatoid Ar	C0003873	ASIP	434	P42127	agouti signaling protein	Signaling	89	0.584	0.6962	0.02		1	2	0	2004	2018

thr itis									9 8								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MO G	4 3 4 0	Q166 53	myelin oligoden drocyte glycopro tein	En zy me mo dul ato r	13 6	0 . 5 4 6	0 . 7 3 1	0. 1 3 7 4 8	0. 02		1	2	0	20 11	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MR C1	4 3 6 0	P2289 7	mannose receptor type 1	C-	43 1	0 . 4 1 3	0 . 8 4 6	0. 9 4 3 3 5	0. 02		1	2	0	20 03	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MR E11	4 3 6 1	P4995 9	MRE11 homolog, double strand break repair nuclease		17 1	0 . 5 2 7	0 . 8 0 8	1. 2 6 E - 1 2	0. 02		1	2	0	20 09	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZF AS 1	4 4 1 9 5 1		ZNFX1 antisense RNA 1		82	0 . 5 8 2	0 . 6 1 5		0. 02		0. 5	2	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R3 46	4 4 2 9 1 1		microRNA 346		52	0 . 6 3 1	0 . 6 1 5		0. 02		1	2	0	20 09	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AS PA	4 4 3	P4538 1	aspartoacylase		12 3	0 . 5 6 4	0 . 7 3 1	0. 0 0 4 1 1	0. 02		1	2	0	20 04	2 0 1 8
Rh eu ma toi	C 00 03	MS T1	4 4 8 5	P2692 7	macroph age stimulati ng 1	En zy me	28 1	0 . 4	0 . 8	4. 7 8 E	0. 02		1	2	0	20 15	2 0 1 7

d Ar thr itis	87 3							6 5	8 5	- 1 9							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO X1	4 5 1 2	P0039 5	cytochro me c oxidase subunit I	En zy me	42 1	0 . 4 4 1	0 . 8 8 5		0. 02		1	2	0	19 94	2 0 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MU TY H	4 5 9 5	Q9UI F7	mutY DNA glycosyl ase	En zy me	15 6	0 . 5 2 1	0 . 7 6 9	1. 2 6 E - 1 8	0. 02		1	2	2	20 15	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MY O9 B	4 6 5 0	Q134 59	myosin IXB		65	0 . 6 4 4	0 . 6 1 5	1	0. 02		1	2	2	20 07	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AT HS	4 7 0		atherosclerosi s susceptibility (lipoprotein associated)		11 2	0 . 5 5 1	0 . 7 6 9		0. 02		1	2	0	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AT M	4 7 2	Q133 15	ATM serine/th reonine kinase	Ki nas e	68 4	0 . 3 7 4	0 . 8 8 5	5. 5 9 E - 4 7	0. 02		1	2	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NG F	4 8 0 3	P0113 8	nerve growth factor	Sig nal ing	61 6	0 . 3 9 1	0 . 8 8 5	0. 8 2 0 2 6	0. 02		1	2	0	19 93	2 0 0 9

Rheumatoid Arthritis	C0003873	NHS	4810	Q6T4R5	NHS actin remodeling regulator		295	0.466	0.849	0.999	0.02		1	2	1	2017	2019
Rheumatoid Arthritis	C0003873	NME1	4830	P15531	NME/NM23 nucleoside diphosphate kinase 1	Kinase	329	0.443	0.808	0.03176	0.02		1	2	0	1996	2017
Rheumatoid Arthritis	C0003873	NOS1	4842	P29475	nitric oxide synthase 1		521	0.408	0.885	1	0.02		1	2	0	2009	2010
Rheumatoid Arthritis	C0003873	NOTCH3	4854	Q9UM47	notch receptor 3		418	0.435	0.808	0.4757	0.02		1	2	0	2001	2016
Rheumatoid Arthritis	C0003873	NPAP	4878	P01160	natriuretic peptide A		217	0.505	0.769	0.045	0.02		1	2	0	1993	2018
Rheumatoid Arthritis	C0003873	NT5E	4907	P21589	5'-nucleotidase ecto	Enzyme	376	0.436	0.885	2.29E-11	0.02		1	2	0	1999	2019
Rheumatoid Ar	C0003873	ODC1	4953	P11926	ornithine decarboxylase 1	Enzyme	184	0.511	0.731	0.166	0.02		1	2	0	2000	2018

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	OX A1 L	5 0 1 8	Q150 70	OXA1L mitocho ndrial inner membra ne protein	Tr ans por ter	75	0 . 5 9	0 . 7 3 1	1. 8 7 E - 1 0	0. 02		1	2	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	G0 S2	5 0 4 8 6	P2746 9	G0/G1 switch 2		47	0 . 6 5 6	0 . 4 2 3	0. 3 7 7 8 8	0. 02		1	2	0	20 08	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NO X4	5 0 5 0 7	Q9NP H5	NADPH oxidase 4	En zy me	26 0	0 . 4 7 1	0 . 8 8 5	5. 7 6 E - 2 0	0. 02		1	2	0	20 06	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PA K1	5 0 5 8	Q131 53	p21 (RAC1) activate d kinase 1	Ki nas e	22 1	0 . 4 9 4	0 . 8 0 8	0. 0 1 3 3 1	0. 02		1	2	0	20 12	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PA M	5 0 6 6	P1902 1	peptidyl glycine alpha- amidatin g monoox ygenase	En zy me	15 5	0 . 5 4 2	0 . 6 9 2	6. 9 3 E - 0 6	0. 02		1	2	0	20 02	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PA X5	5 0 7 9	Q025 48	paired box 5		19 9	0 . 4 8 7	0 . 6 5 4	0. 9 9 7 9 8	0. 02		1	2	0	20 13	2 0 1 4
Rh eu ma toi	C 00 03	AS CC 1	5 1 0	Q8N9 N2	activating signal cointegrator 1		20 9	0 . 4	0 . 8	2. 6 1 E	0. 02		1	2	1	20 02	2 0 1 5

d Ar thr itis	87 3		0 8		complex subunit 1			9 5	4 6	- 1 4							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD IPO R1	5 1 0 9 4	Q96A 54	adipone ctin receptor 1	Re ce pto r	14 8	0 . 5 2 9	0 . 8 0 8	0. 6 5 8 4	0. 02		1	2	1	20 09	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PC NA	5 1 1 1	P1200 4	prolifera ting cell nuclear antigen	Nu cle ic aci d bin din g	58 1	0 . 3 8 2	0 . 8 4 6	0. 9 7 6 0 6	0. 02		1	2	0	19 97	2 0 0 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PL EK HO 1	5 1 1 7 7	Q53G L0	pleckstrin homology domain containing O1		44	0 . 6 3 8	0 . 6 1 5	0. 4 8 3 4 1	0. 02		1	2	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PD C	5 1 3 2	P2094 1	phosducin		95	0 . 5 8 1	0 . 7 3 1	0. 0 0 1 0 1	0. 02		1	2	0	20 12	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FR SF1 2A	5 1 3 3 0	Q9NP 84	TNF receptor superfamily member 12A		17 3	0 . 5 0 9	0 . 6 9 2	0. 0 1 7 9 9 5	0. 02		1	2	0	20 07	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TR PV 2	5 1 3 9 3	Q9Y5 S1	transient receptor potential cation channel subfamil y V member 2	Ion ch an nel	90	0 . 5 8 1	0 . 6 1 5	7. 9 2 E - 1 3	0. 02		1	2	0	20 15	2 0 1 9

Rheumatoid Arthritis	C0003873	PD E4 A	5141	P27815	phosphodiesterase 4A		168	0.523	0.846	0.98167	0.02		1	2	0	2011	2019
Rheumatoid Arthritis	C0003873	PD E7 A	5150	Q13946	phosphodiesterase 7A		40	0.659	0.577	0.0455	0.02		1	2	0	2006	2018
Rheumatoid Arthritis	C0003873	PD GF RA	5156	P16234	platelet derived growth factor receptor alpha	Kinase	452	0.415	0.808	1.08	0.02		1	2	0	2007	2018
Rheumatoid Arthritis	C0003873	EN PP2	5168	Q13822	ectonucleotide pyrophosphatase/phosphodiesterase 2	Enzyme	95	0.582	0.769	0.02791	0.02		1	2	0	2001	2015
Rheumatoid Arthritis	C0003873	AD A2	51816	Q9NZK5	adenosine deaminase 2	Enzyme	165	0.545	0.846	8.14E-08	0.02		1	2	0	2003	2010
Rheumatoid Arthritis	C0003873	PG R	5241	P06401	progesterone receptor	Nuclear receptor	392	0.426	0.850	0.05142	0.02		1	2	0	2004	2009
Rheumatoid Ar	C0003873	PIT X2	5308	Q99697	paired like homeodomain 2		248	0.489	0.808	0.07618	0.02		1	2	0	2011	2020

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PL A2 G4 A	5 3 2 1	P4771 2	phospho lipase A2 group IVA	En zy me	20 2	0 . 4 9 6	0 . 8 4 6	5. 9 8 E - 0 5	0. 02		1	2	0	20 04	2 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TR EM 2	5 4 2 0 9	Q9NZ C2	triggering receptor expressed on myeloid cells 2		23 9	0 . 5 1 9	0 . 7 6 9	3. 2 9 E - 0 9	0. 02		1	2	0	20 12	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PO U2 AF 1	5 4 5 0	Q166 33	POU class 2 homeobox associating factor 1		70	0 . 6 0 8	0 . 6 1 5	0. 5 6 5 3	0. 02		1	2	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AR L15	5 4 6 2 2	Q9N XU5	ADP ribosylation factor like GTPase 15		34	0 . 7 6 9	0 . 3 4 6	0. 0 0 9 3 6	0. 02		1	2	1	20 13	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AH I1	5 4 8 0 6	Q8N1 57	Abelson helper integration site 1		22 1	0 . 5 1 3	0 . 8 4 6	1. 0 8 E - 2 5	0. 02		1	2	0	20 00	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AT G1 6L1	5 5 0 5 4	Q676 U5	autophagy related 16 like 1		12 0	0 . 5 4 3	0 . 7 6 9	0. 9 6 4 5 2	0. 02		1	2	0	20 12	2 0 1 9
Rh eu ma toi	C 00 03	NA T10	5 5 2	Q9H0 A0	N- acetyltransfera se 10		13 3	0 . 5	0 . 7	4. 1 2 E	0. 02		1	2	0	20 03	2 0 1 9

d Ar thr itis	87 3		2 6					3 6	6 9	- 2 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR EL P	5 5 4 9	P5188	proline and arginine rich end leucine rich repeat protein		26	0 . 6 9 5	0 . 5	4. 7 1 E - 0 5	0. 02		1	2	0	20 12	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CH D7	5 5 6 3 6	Q9P2 D1	chromodomai n helicase DNA binding protein 7		41 9	0 . 4 4 1	0 . 8 4 6	1	0. 02		1	2	0	20 14	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	W DR 11	5 5 7 1 7	Q9BZ H6	WD repeat domain 11		17 9	0 . 5 2 4	0 . 8 0 8	1. 3 7 E - 0 8	0. 02		1	2	0	20 01	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA P2 K1	5 6 0 4	Q027 50	mitogen - activate d protein kinase kinase 1	Ki nas e	38 9	0 . 4 3 9	0 . 8 4 6 6 9	0. 02	0. 02		1	2	0	20 10	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC L28	5 6 4 7 7	Q9NR J3	C-C motif chemokine ligand 28		85	0 . 5 8 7	0 . 7 6 9	0. 0 5 1 5 9 9	0. 02		1	2	0	20 15	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C1 2A 9	5 6 9 9 6	Q9BX P2	solute carrier family 12 member 9	Tr ans por ter	28 0	0 . 4 5 4	0 . 7 6 9	1. 1 8 E - 1 5	0. 02		1	2	0	20 00	2 0 0 3

Rheumatoid Arthritis	C0003873	CEMP	57214	Q8WUJ3	cell migration inducing hyaluronidase 1		64	0.617	0.615	4.4E-17	0.02		1	2	0	2013	2015
Rheumatoid Arthritis	C0003873	AICDA	57379	Q9GZX7	activation induced cytidine deaminase	Enzyme	265	0.463	0.885	9.21E-06	0.02		1	2	0	2009	2010
Rheumatoid Arthritis	C0003873	MI R410	574434		microRNA 410		87	0.575	0.692		0.02		1	2	0	2019	2019
Rheumatoid Arthritis	C0003873	KIDINS220	57498	Q9ULH0	kinase D interacting substrate 220		145	0.534	0.769	0.0073562	0.02		1	2	1	2009	2018
Rheumatoid Arthritis	C0003873	MI B1	57534	Q86YT6	mindbomba E3 ubiquitin protein ligase 1	Enzyme	329	0.438	0.769	3.36E-88	0.02		1	2	0	2001	2002
Rheumatoid Arthritis	C0003873	PTN	5764	P21246	pleiotrophin	Signaling	164	0.515	0.808	0.007507	0.02		1	2	0	2003	2017
Rheumatoid Ar	C0003873	CIP2A	57650	Q8TCG1	cellular inhibitor of PP2A		141	0.524	0.808	1.36E-	0.02		1	2	0	2012	2013

thr itis										1 3							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PH RF 1	5 7 6 6 1	Q9P1 Y6	PHD and ring finger domains 1		17	0 . 7 4 3	0 . 3 4 6	0. 0 5 6 5 2 1	0. 02		1	2	0	20 11	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BA K1	5 7 8	Q166 11	BCL2 antagoni st/killer 1	Sig nal ing	11 5	0 . 5 5 5	0 . 7 6 9	7. 4 E - 0 6	0. 02		1	2	0	20 07	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RA C2	5 8 8 0	P1515 3	Rac family small GTPase 2	En zy me mo dul ato r	11 9	0 . 5 5 6	0 . 7 3 1	0. 9 6 2 7	0. 02		1	2	0	20 07	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MO K	5 8 9 1	Q9U Q07	MOK protein kinase	Ki nas e	25 1	0 . 4 7 6	0 . 7 6 9	8. 8 4 E - 2 2	0. 02		1	2	0	20 09	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RA F1	5 8 9 4	P0404 9	Raf-1 proto- oncogen e, serine/th reonine kinase	Ki nas e	47 0	0 . 4 1 8	0 . 8 8 5	0. 8 5 2 9 5	0. 02		1	2	0	20 04	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BC HE	5 9 0	P0627 6	butyrylcholine sterase		39 2	0 . 4 4 7	0 . 9 2 3	1. 0 6 E - 1 3	0. 02		1	2	0	20 15	2 0 1 9
Rh eu ma toi	C 00 03	PL AA T4	5 9 2 0	Q9UL 19	phospholipase A and acyltransferas e 4		19 0	0 . 5	0 . 8	1. 2 2 E	0. 02		1	2	0	20 08	2 0 0 9

d Ar thr itis	87 3								0 8	- 0 7							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RB 1	5 9 2 5	P0640 0	RB transcrip tional corepres sor 1	Nu cle ic aci d bin din g	33 9	0 . 4 4 4	0 . 8 8 5	1	0. 02		1	2	0	20 04	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UB L5	5 9 2 8 6	Q9BZ L1	ubiquitin like 5		29	0 . 6 8 6	0 . 5	0. 0 1 6 3 2 1	0. 02		1	2	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RB P2	5 9 4 8	P5012 0	retinol binding protein 2		60	0 . 6 1 5	0 . 6 1 5	0. 2 2 0 8 9	0. 02		1	2	0	19 96	2 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RD X	5 9 6 2	P3524 1	radixin	Ce llul ar str uct ure	80	0 . 5 9 3	0 . 6 1 5	0. 8 5 2 4 5	0. 02		1	2	0	20 14	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RN AS E2	6 0 3 6	P1015 3	ribonuclease A family member 2		61	0 . 6 2 1	0 . 6 9 2		0. 02		1	2	1	20 15	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BC L6	6 0 4	P4118 2	BCL6 transcription repressor		30 9	0 . 4 4 4	0 . 8 0 8	0. 9 6 0 3 8	0. 02		0. 5	2	0	20 18	2 0 1 9
Rh eu	C 00	RN F2	6 0	Q994 96	ring finger protein 2		63	0 .	0 .	0. 9	0. 02		1	2	0	20 09	2 0

ma toi d Ar thr itis	03 87 3		4 5					6 0 8	6 1 5	9 7 4 3						1 8	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IG AN 1	6 0 4 9 8		IgA nephropathy		14 0	0 . 5 2 4	0 . 8 0 8		0. 02		1	2	0	19 94	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RO RC	6 0 9 7	P5144 9	RAR related orphan receptor C	Nu cle ar rec ept or	88	0 . 5 7 6 9	0 . 7 6 9 8 5	0. 02		1	2	0	20 16	2 0 1 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RP L17	6 1 3 9	P1862 1	ribosomal protein L17		10 4	0 . 5 5 9	0 . 7 3 1	0. 9 2 4 1 2	0. 02		1	2	0	20 04	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SA A3 P	6 2 9 0		serum amyloid A3, pseudogene		23	0 . 7 2 2	0 . 5		0. 02		1	2	0	20 01	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SA T1	6 3 0 3	P2167 3	spermidine/sp ermine N1- acetyltransfera se 1		13 5	0 . 5 3 9	0 . 8 0 8	0. 8 7 0 6	0. 02		1	2	0	20 00	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC L4	6 3 5 1	P1323 6;Q8 NHW 4	C-C motif chemoki ne ligand 4	Sig nal ing	27 6	0 . 4 6 6	0 . 9 2 3	0. 2 4 1 3 4	0. 02		1	2	1	19 94	1 9 9 5

Rheumatoid Arthritis	C0003873	CC L17	6361	Q92583	C-C motif chemokine ligand 17	Signaling	162	0.518	0.800	0.00139	0.02		1	2	0	2001	2017
Rheumatoid Arthritis	C0003873	CC L19	6363	Q99731	C-C motif chemokine ligand 19	Signaling	126	0.542	0.692	0.31691	0.02		1	2	0	2017	2017
Rheumatoid Arthritis	C0003873	CC L22	6367	O00626	C-C motif chemokine ligand 22	Signaling	182	0.5	0.846	0.08401	0.02		1	2	0	2010	2017
Rheumatoid Arthritis	C0003873	CC L25	6370	O15444	C-C motif chemokine ligand 25	Signaling	61	0.61	0.692	0.015241	0.02		1	2	0	2010	2014
Rheumatoid Arthritis	C0003873	SD C2	6383	P34741	syndecan 2	Extracellular structure	120	0.536	0.808	0.4049	0.02		1	2	0	2005	2012
Rheumatoid Arthritis	C0003873	TINAGL1	64129	Q9GZM7	tubulointerstitial nephritis antigen like 1	Enzyme	38	0.659	0.538	0.00329	0.02		1	2	0	2012	2013
Rheumatoid Ar	C0003873	SEMA4A	64218	Q9H3S1	semaphorin 4A	Signaling	141	0.569	0.692	1.84E-	0.02		1	2	0	2015	2015

thr itis										0 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CL EC 7A	6 4 5 8 1	Q9BX N2	C-type lectin domain containing 7A		12 6	0 . 5 5 3	0 . 7 6 9	5. 5 1 E - 1 2	0. 02		1	2	1	20 10	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AG XT 2	6 4 9 0 2	Q9BY V1	alanine-- glyoxylate aminotransfer ase 2		25	0 . 7 2 9	0 . 3 8 5	3. 7 1 E - 2 8	0. 02		1	2	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C2 A3	6 5 1 5	P1116 9	solute carrier family 2 member 3	Tr ans por ter	14 4	0 . 5 3 4	0 . 7 6 9	0. 0 1 0 3 3 3	0. 02		1	2	0	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C6 A2	6 5 3 0	P2397 5	solute carrier family 6 member 2	Tr ans por ter	23 8	0 . 4 9	0 . 8 4 6	0. 0 8 1 5 2 4	0. 02		1	2	0	20 19	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SU MO 3	6 6 1 2	P5585 4	small ubiquitin like modifier 3		30	0 . 6 8 6	0 . 5 3 8	0. 3 2 8 4 1	0. 02		1	2	0	20 13	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SU MO 2	6 6 1 3	P6195 6	small ubiquitin like modifier 2		42	0 . 6 6 6	0 . 6 1 5	0. 8 6 9 4 3	0. 02		1	2	0	20 13	2 0 1 9
Rh eu ma toi	C 00 03	SN CA	6 6 2 2	P3784 0	synuclei n alpha	Tr ans por ter	44 9	0 . 4	0 . 8	0. 8 8	0. 02		1	2	0	20 04	2 0 1 7

d Ar thr itis	87 3							2 7	8 5	2 9							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SO D1	6 6 4 7	P0044 1	superoxi de dismutas e 1	En zy me	68 9	0 . 3 7 9	0 . 9 6 2	0. 1 7 3	0. 02		1	2	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SO D3	6 6 4 9	P0829 4	superoxi de dismutas e 3	En zy me	13 8	0 . 5 3 1	0 . 8 0 8	0. 0 0 7 2 3	0. 02		1	2	0	20 01	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SP AR C	6 6 7 8	P0948 6	secreted protein acidic and cysteine rich	Sig nal ing	34 4	0 . 4 4 5	0 . 8 4 6	0. 8 9 1 4 8	0. 02		1	2	0	20 15	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SS RP 1	6 7 4 9	Q089 45	structure specific recognition protein 1		86	0 . 5 7 5	0 . 7 3 1	0. 9 9 5 8 5	0. 02		1	2	0	20 03	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SS TR 4	6 7 5 4	P3139 1	somatost atin receptor 4	G- pro tei n co upl ed rec ept or	27 3	0 . 4 6 9	0 . 8 4 6	3. 7 E - 1 3	0. 02		1	2	0	19 99	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ST AT 5A	6 7 7 6	P4222 9	signal transduc er and activator of transcrip tion 5A	Nu cle ic aci d bin din g	31 8	0 . 4 4 5	0 . 8 0 8	0. 9 9 9 4	0. 02		1	2	0	20 12	2 0 1 9

Rheumatoid Arthritis	C0003873	STAT6	6778	P42226	signal transducer and activator of transcription 6	Nucleic acid binding	281	0.45	0.88	0.949	0.02		1	2	0	2000	2010
Rheumatoid Arthritis	C0003873	BRIS3	6800	P32247	bombesin receptor subtype 3	G-protein coupled receptor	261	0.474	0.846	0.949	0.02		1	2	0	1999	2004
Rheumatoid Arthritis	C0003873	CNTN2	69000	Q02246	contactin 2	Receptor	99	0.581	0.692	0.711	0.02		1	2	0	1995	2003
Rheumatoid Arthritis	C0003873	TBCA	6902	O75347	tubulin folding cofactor A	Chaperone	43	0.682	0.538	0.604	0.02		1	2	0	2018	2019
Rheumatoid Arthritis	C0003873	GCFC2	6936	P16383	GC-rich sequence DNA-binding factor 2	Nucleic acid binding	21	0.722	0.462	2.56E-24	0.02		1	2	0	2019	2019
Rheumatoid Arthritis	C0003873	TGTG	7038	P01266	thyroglobulin	Enzyme modulator	240	0.488	0.808	2.88E-59	0.02		1	2	1	2018	2018
Rheumatoid	C0003	TGFA	7039	P01135	transforming growth	Signaling	376	0.4	0.8	0.719	0.02		1	2	0	1993	2005

d Ar thr itis	87 3				factor alpha			3 2	8 5	8 1							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TG M2	7 0 5 2	P2198 0	transglut aminase 2	En zy me	31 5	0 . 4 4 5	0 . 8 0 8	6. 8 1 E - 1 8	0. 02		1	2	0	20 07	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TH BD	7 0 5 6	P0720 4	thrombomod ulin		30 3	0 . 4 5 7	0 . 7 6 9	0. 0 5 3 7 6 9	0. 02		1	2	0	20 12	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TH OP 1	7 0 6 4	P5288 8	thimet oligopep tidase 1	En zy me	91	0 . 5 7 3	0 . 8 4 6	0. 0 0 1 2 1	0. 02		1	2	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TH Y1	7 0 7 0	P0421 6	Thy-1 surface antigen	cell	19 7	0 . 4 9 6	0 . 8 0 8	0. 0 4 8 9 5	0. 02		1	2	0	20 17	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TI A1	7 0 7 2	P3148 3	TIA1 cytotoxic granule associated RNA binding protein		96	0 . 5 9 5	0 . 5 7 3	0. 2 4 9 3	0. 02		1	2	0	20 06	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TL R1	7 0 9 6	Q153 99	toll receptor 1	like	19 8	0 . 4 9 6	0 . 8 0 8	5. 8 7 E - 2 3	0. 02		1	2	1	20 11	2 0 1 7
Rh eu	C 00	TT R	7 2	P0276 6	transthyr etin	Tr ans	46 1	0 . .	0 . .	0. 5	0. 02		1	2	0	20 15	2 0

matoid Arthritis	03 87 3		7 6			porter		4 2 3	8 8 5	1 5 6 6							1 9
Rheumatoid Arthritis	C 00 03 87 3	PO TE F	7 2 8 3 7 8	A5A3 E0	POTE ankyrin domain family member F		21 5	0 . 4 8 1	0 . 8 8 5	5. 4 5 E - 0 6	0. 02		1	2	0	20 18	2 0 1 9
Rheumatoid Arthritis	C 00 03 87 3	TN FR SF4	7 2 9 3	P4348 9	TNF receptor superfamily member 4		12 3	0 . 5 4 7	0 . 6 9 2	0. 0 0 0 1 5 1	0. 02		1	2	0	20 17	2 0 1 9
Rheumatoid Arthritis	C 00 03 87 3	TY RO BP	7 3 0 5	O439 14	transmembran e immune signaling adaptor TYROBP		13 5	0 . 5 7 3	0 . 7 6 9	0. 2 0 2 3 8	0. 02		0. 5	2	0	20 14	2 0 1 5
Rheumatoid Arthritis	C 00 03 87 3	UQ CR FS1	7 3 8 6	P4798 5	ubiquinol- cytochrome c reductase, Rieske iron- sulfur polypeptide 1		10 9	0 . 5 5 8	0 . 6 5 4	0. 1 8 9 2 3	0. 02		1	2	0	19 94	1 9 9 6
Rheumatoid Arthritis	C 00 03 87 3	VP RE B1	7 4 4 1	P1201 8	V-set pre-B cell surrogate light chain 1	Im mu ne res po nse	28	0 . 6 9 5	0 . 5 9	0. 0 9 6 4 9 1	0. 02		1	2	0	20 11	2 0 1 4
Rheumatoid Arthritis	C 00 03 87 3	W AR S1	7 4 5 3	P2338 1	tryptoph anyl- tRNA synthetase 1	En zy me	60	0 . 6 5	0 . 6 5 4	0. 3 0 2 8 8	0. 02		1	2	0	20 15	2 0 1 9

Rheumatoid Arthritis	C0003873	WNT3	7473	P56703	Wnt family member 3	Signaling	140	0.536	0.808	0.875	0.02		0.5	2	0	2009	2018
Rheumatoid Arthritis	C0003873	WNT10B	7480	O00744	Wnt family member 10B	Signaling	90	0.576	0.654	0.000362	0.02		1	2	0	2006	2014
Rheumatoid Arthritis	C0003873	YWHAZ	7534	P63104	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein zeta	Chaperone	247	0.475	0.846	0.9365	0.02		1	2	0	2004	2011
Rheumatoid Arthritis	C0003873	CA1	759	P00915	carbonic anhydrase 1		66	0.623	0.769	4.75E-11	0.02		1	2	1	2001	2018
Rheumatoid Arthritis	C0003873	IL1R2	7850	P27930	interleukin 1 receptor type 2	Receptor	76	0.593	0.846	6.5E-15	0.02		1	2	0	2012	2018
Rheumatoid Arthritis	C0003873	IRX1	79192	P78414	iroquois homeobox 1	Transcription factor	28	0.695	0.538	0.00477	0.02		1	2	0	2013	2016
Rheumatoid Arthritis	C0003873	ADIPOR2	796	Q86V24	adiponectin	Receptor	103	0.5	0.7	0.36	0.02		1	2	1	2009	2010

to id Ar thr itis	87 3		0 2		receptor 2	ptor		6 4	3 1	2 1 8							1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RH BD F2	7 9 6 5 1	Q6PJ F5	rhomboid 5 homolog 2	En zy me	90	0 . 5 9 5	0 . 5 3 8	0. 0 1 1 9 2	0. 02		1	2	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AS RG L1	8 0 1 5 0	Q7L2 66	asparaginase and isoaspartyl peptidase 1	En zy me	20 5	0 . 4 9 4	0 . 8 0 8	2. 7 6 E - 0 5	0. 02		1	2	0	20 03	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TA M	8 2 0 5		Myeloproliferative syndrome, transient (transient abnormal		14 1	0 . 5 2 8	0 . 7 3 1		0. 02		1	2	0	20 17	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA PG	8 2 2	P4012 1	capping actin protein, gelsolin like	Ce llul ar str uct ure	11 1	0 . 5 4 8	0 . 7 3 1	9. 3 6 E - 1 4	0. 02		1	2	0	20 18	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FC RL 4	8 3 4 1 7	Q96P J5	Fc receptor like 4	Ce ll ad hes ion	35	0 . 6 7	0 . 5	7. 9 1 E - 1 0	0. 02		1	2	0	20 15	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	JA M3	8 3 7 0 0	Q9BX 67	junctional adhesion molecule 3		66	0 . 6 1 9	0 . 6 5 4	0. 0 0 0 6 1 6	0. 02		1	2	0	20 07	2 0 0 8

Rheumatoid Arthritis	C0003873	LOH19CR1	8378		loss of heterozygosity, 19, chromosomal region 1		96	0.569	0.808		0.02		1	2	0	2017	2019
Rheumatoid Arthritis	C0003873	CASP5	838	P51878	caspase 5	Enzyme	47	0.653	0.55E-16	1.75E-16	0.02		0.5	2	2	2017	2018
Rheumatoid Arthritis	C0003873	ROPN1L	83853	Q96C74	rhophilin associated tail protein 1 like		62	0.617	0.692	2.75E-06	0.02		1	2	0	2004	2018
Rheumatoid Arthritis	C0003873	CASP7	8440	P55210	caspase 7	Enzyme	83	0.581	0.654	5.36E-05	0.02		0.5	2	1	2007	2008
Rheumatoid Arthritis	C0003873	NLRC5	84166	Q86WI3	NLR family CARD domain containing 5	Enzyme	47	0.653	0.52E-08	9.42E-08	0.02		1	2	0	2017	2019
Rheumatoid Arthritis	C0003873	MINDY4	84182	Q4G0A6	MINDY lysine 48 deubiquitinase		122	0.538	0.731	3.22E-19	0.02		1	2	0	2013	2018
Rheumatoid Ar	C0003873	CUL1	8454	Q13616	cullin 1	Enzyme	58	0.617	0.615	1	0.02		1	2	0	2005	2011

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 7R C	8 4 8 1 8	Q8N AC3	interleukin 17 receptor C		65	0 . 6 3 3	0 . 6 1 5	2. 3 E - 1 4	0. 02		0. 5	2	0	20 13	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SE MA 7A	8 4 8 2	O753 26	semapho rin 7A (John Milton Hagen blood group)	Sig nal ing	53	0 . 6 3 6	0 . 6 1 5	0. 1 7 9 7 6	0. 02		1	2	0	20 17	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UB AS H3 B	8 4 9 5 9	Q8TF 42	ubiquitin associated and SH3 domain containing B		10 4	0 . 5 6 1	0 . 7 6 9	4. 7 1 E - 0 5	0. 02		1	2	0	19 98	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA V1	8 5 7	Q031 35	caveolin 1	En zy me mo dul ato r	63 3	0 . 3 8 8	0 . 8 8 5	0. 0 0 8 2 7 4	0. 02		1	2	0	20 17	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SE RPI NH 1	8 7 1	P5045 4	serpin family H member 1	En zy me mo dul ato r	14 8	0 . 5 4 5	0 . 7 6 9	0. 0 2 7 5 5 3	0. 02		1	2	0	19 98	2 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FS F12	8 7 4 2	O435 08	TNF superfamily member 12		12 3	0 . 5 5 6	0 . 7 6 9 9 7	0. 7 6 9 9 7	0. 02		1	2	0	20 07	2 0 1 2
Rh eu ma toi	C 00 03	TN FR SF1 0B	8 7 9 5	O147 63	TNF receptor superfamily member 10b		17 9	0 . 5	0 . 7	0. 0 0 0	0. 02		1	2	0	20 03	2 0 0 5

d Ar thr itis	87 3							0 5	6 9	1 9 9							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 8R AP	8 8 0 7	O952 56	interleuk in 18 receptor accessor y protein	Re ce pto r	41	0 . 6 7 4	0 . 5 7 7	0. 0 2 1 8	0. 02		1	2	0	20 03	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NR P1	8 8 2 9	O147 86	neuropilin 1		24 6	0 . 4 7 6	0 . 8 0 8	0. 9 8 5 8 4	0. 02		1	2	0	20 06	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC N6	8 8 3 8	O953 89	cellular commun ication network factor 6	Sig nal ing	12 6	0 . 5 6 8	0 . 7 3 1	0. 0 0 6 1 9	0. 02		1	2	0	20 04	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SP HK 1	8 8 7 7	Q9N YA1	sphingos ine kinase 1	Ki nas e	23 6	0 . 4 8	0 . 8 0 8	3. 0 3 E - 0 7	0. 02		1	2	0	20 14	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MB D4	8 9 3 0	O952 43	methyl- CpG binding domain 4, DNA glycosyl ase	En zy me	62	0 . 6 1	0 . 6 1 5	1. 9 7 E - 1 4	0. 02		0. 5	2	2	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MB D2	8 9 3 2	Q9UB B5	methyl- CpG binding domain protein 2	Ep ige net ic reg ula tor	25 6	0 . 4 6 6	0 . 8 4 6	0. 3 4 9 5 7	0. 02		1	2	0	20 18	2 0 1 9

Rheumatoid Arthritis	C0003873	PGLYRP1	8993	O75594	peptidoglycan recognition protein 1	20	0.78	0.346	1.79E-05	0.02		1	2	1	2015	2019
Rheumatoid Arthritis	C0003873	PS TPI P1	9051	O43586	proline-serine-threonine phosphatase interacting protein 1	54	0.65	0.577	2.46E-06	0.02		1	2	0	2002	2016
Rheumatoid Arthritis	C0003873	CD1D	912	P15813	CD1d molecule	140	0.532	0.769	1.88E-06	0.02		1	2	0	2003	2009
Rheumatoid Arthritis	C0003873	PD CD5	9141	O14737	programmed cell death 5	67	0.61	0.538	0.0033642	0.02		1	2	0	2007	2013
Rheumatoid Arthritis	C0003873	INTS4	92105	Q96HW7	integrator complex subunit 4	23	0.705	0.538	1.13E-11	0.02		0.5	2	0	2009	2018
Rheumatoid Arthritis	C0003873	CD8A	925	P01732	CD8a molecule	87	0.587	0.769	1.68E-05	0.02		0.5	2	0	1992	1992
Rheumatoid Arthritis	C0003873	DN ER	92737	Q8NFT8	delta/notch like EGF repeat containing	203	0.493	0.769	0.18599	0.02		1	2	0	2016	2019

Ar thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KL F4	9 3 1 4	O434 74	Kruppel like factor 4	Nu cle ic aci d bin din g	30 7	0 . 4 4 9	0 . 7 6 9	0. 9 7 1 4	0. 02		1	2	0	20 16	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 22	9 3 3	P2027 3	CD22 molecule		10 6	0 . 5 5 6	0 . 6 1 5	0. 8 0 4 4	0. 02		1	2	0	19 99	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FR SF8	9 4 3	P2890 8	TNF receptor superfamily member 8		30 1	0 . 4 4 4	0 . 8 0 8	0. 8 6 4 0 7	0. 02		1	2	0	20 00	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD AM TS 3	9 5 0 8	O150 72	ADAM metallo peptidase with thrombo spondin type 1 motif 3	En zy me	11 6	0 . 5 8 1	0 . 8 0 8	1. 0 3 E - 1 0	0. 02		1	2	0	20 12	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TB PL 1	9 5 1 9	P6238 0	TATA- box binding protein like 1	Tr ans cri pti on fac tor	19 8	0 . 5 0 6	0 . 8 4 6	0. 3 7 9 0 2	0. 02		0. 5	2	0	20 00	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC L4 L2	9 5 6 0	P1323 6;Q8 NHW 4	C-C motif chemokine ligand 4 like 2		13 3	0 . 5 3 5	0 . 8 8 5	0. 0 8 8 5 8 6	0. 02		1	2	0	19 94	1 9 9 5
Rh eu ma	C 00 03	CD 48	9 6 2	P0932 6	CD48 molecule		74	0 . 5	0 . 6	1. 7 3	0. 02		1	2	0	19 90	1 9

to id Ar thr itis	87 3							9 2	9 2	E - 0 5							9 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IK BK E	9 6 4 1	Q141 64	inhibitor of nuclear factor kappa B kinase subunit epsilon	Ki nas e	79	0 . 5 9 7	0 . 7 3 1	0. 0 0 0 5	0. 02		1	2	0	20 05	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SD C3	9 6 7 2	O750 56	syndeca n 3	Ex tra cel lul ar str uct ure	30	0 . 7 1 1	0 . 6 5 4	0. 4 1 4 5 5	0. 02		1	2	0	20 05	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FA M5 3B	9 6 7 9	Q141 53	family sequence similarity member B	with 53	28	0 . 7 1 6	0 . 4 2 3	0. 8 5 5 2 3	0. 02		1	2	0	20 10	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 70	9 7 0	P3297 0	CD70 molecule		12 7	0 . 5 4 2	0 . 6 9 2	0. 0 1 0 3 9 4	0. 02		1	2	0	20 07	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HD AC 9	9 7 3 4	Q9U KV0	histone deacetyl ase 9	Ep ige net ic reg ula tor	34 0	0 . 4 3 9	0 . 8 4 6	0. 9 9 7 3	0. 02		1	2	0	20 12	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD GR E5	9 7 6	P4896 0	adhesion G protein- coupled receptor E5	G- pro tei n co upl ed rec	74	0 . 6 0 1	0 . 5 3 8	3. 0 8 E - 0 6	0. 02		1	2	0	20 00	2 0 1 0

						ept or											
Rheumatoid Arthritis	C0003873	PIEZO1	9780	Q92508	piezo type mechanosensitive ion channel component 1	Ion channel	130	0.552	0.769	3.94E-21	0.02		1	2	0	2001	2002
Rheumatoid Arthritis	C0003873	KEAP1	9817	Q14145	kelch like ECH associated protein 1	like	251	0.475	0.808	0.00388	0.02		1	2	0	2018	2019
Rheumatoid Arthritis	C0003873	SPATA2	9825	Q9UM82	spermatogenesis associated 2		107	0.556	0.615	0.9889	0.02		1	2	0	2004	2017
Rheumatoid Arthritis	C0003873	CDKN2B-AS1	1E+08		CDKN2B antisense RNA 1		213	0.491	0.769		0.01		1	1	3	2019	2019
Rheumatoid Arthritis	C0003873	TEC	1E+08		transient erythroblastopenia of childhood		40	0.659	0.577		0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	MIR708	1E+08		microRNA 708		86	0.572	0.692		0.01		1	1	0	2018	2018
Rheumatoid	C0003873	MIR887	1E+		microRNA 887		6	0.8	0.2		0.01		1	1	0	2017	2017

d Ar thr itis	87 3		0 8					3 9	3 1								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	C2 0or f18 1	1 E + 0 8		chromosome 20 open reading frame 181		24 6	0 . 4 7 9	0 . 8 8 5		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HD AC 6	1 0 0 1 3	Q9UB N7	histone deacetyl ase 6	Ep ige net ic reg ula tor	28 8	0 . 4 6 5	0 . 8 4 6	1	0. 01		0	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HD AC 5	1 0 0 1 4	Q9U QL6	histone deacetyl ase 5	Ep ige net ic reg ula tor	11 4	0 . 5 5 2	0 . 7 6 9	1	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BC L2 L11	1 0 0 1 8	O435 21	BCL2 like 11		17 3	0 . 5 1	0 . 7 3 1	0. 8 8 5 7	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TR AP	1 E + 0 8		triiodothyroni ne receptor auxiliary protein		80	0 . 5 7 9	0 . 7 3 1		0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 246	1 E + 0 8		microRNA 1246		76	0 . 5 9 2	0 . 8 0 8		0. 01		1	1	0	20 15	2 0 1 5

Rheumatoid Arthritis	C0003873	MI R1908	1E+08		microRNA 1908	37	0.67	0.57		0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	TMED7-TICAM2	1E+08	Q86XR7;Q9Y3B3	TMED7-TICAM2 readthrough	329	0.438	0.769	0.02594	0.01		1	1	0	2005	2005
Rheumatoid Arthritis	C0003873	MI R762	1E+08		microRNA 762	13	0.769	0.423		0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	AA A1	1E+08		aortic aneurysm, familial abdominal 1	29	0.695	0.615		0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	PA RP2	10038	Q9UGN5	poly(ADP-ribose) polymerase 2	40	0.633	0.538	2.3E-13	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	DN AJ B6	10049	O75190	DnaJ heat shock protein family (Hsp40) member B6	65	0.659	0.462	0.85436	0.01		1	1	0	1999	1999
Rheumatoid Ar	C0003873	SL C17A4	10050	Q9Y2C5	solute carrier family 17 member 4	15	0.78	0.385	1.57E-	0.01		1	1	0	2017	2017

thr itis									0 9								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA PLI NC	1. 0 1 E + 0 8		gastric adenocarcino ma associated, positive CD44 regulator, long intergenic non-coding RNA	20	0 . 7 3 6	0 . 2 6 9		0. 01		1	1	0	20 18	2 0 1 8	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LO C1 005 059 09	1. 0 1 E + 0 8		histidine-rich glycoprotein	17	0 . 7 2 2	0 . 3 8 5		0. 01		1	1	0	20 18	2 0 1 8	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LO C1 005 060 23	1. 0 1 E + 0 8		uncharacterize d LOC1005060 23	1	1	0 . 1 1 5		0. 01		1	1	3	20 16	2 0 1 6	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CN NM 3- DT	1. 0 1 E + 0 8		CNNM3 divergent transcript	1	1	0 . 1 1 5		0. 01		1	1	0	20 16	2 0 1 6	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	OC LN	1. 0 1 E + 0 8	Q166 25	occludin	19 5	0 . 5 0 7	0 . 8 4 6	8. 5 6 E - 0 7	0. 01		1	1	0	20 18	2 0 1 8	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA SP1 2	1. 0 1 E + 0 8	Q6U XS9	caspase 12 (gene/pseudog ene)	44	0 . 6 3 8	0 . 8 0 8	0. 0 0 1 2 7	0. 01		1	1	0	20 14	2 0 1 4	
Rh eu ma toi	C 00 03	H3 P43	1. 0 1 E		H3 histone pseudogene 43	1	1	0 . 1		0. 01		1	1	0	20 17	2 0 1 7	

d Ar thr itis	87 3		+ 0 8					1 5								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	P2 RX 5- TA X1 BP 3	1. 0 1 E + 0 8		P2RX5- TAX1BP3 readthrough (NMD candidate)		91	0 . 5 8 8	0 . 7 6 9		0. 01		1	1	0	20 10 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DN M1 L	1 0 0 5 9	O004 29	dynamini like	En zy me mo dul ato r	27 3	0 . 4 7 5	0 . 8 0 8	0. 0 0 5 6 8	0. 01		1	1	0	20 20 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R4 701	1. 0 1 E + 0 8		microRNA 4701		2	0 . 9 3 1	0 . 1 9 2		0. 01		1	1	0	20 19 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R4 764	1. 0 1 E + 0 8		microRNA 4764		1	1	0 . 1 1 5		0. 01		1	1	0	20 15 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PS C	1. 0 1 E + 0 8		Cholangitis, primary sclerosing		67	0 . 6 0 3	0 . 7 3 1		0. 01		1	1	0	19 97 9 9 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PT PR U	1 0 0 7 6	Q927 29	protein tyrosine phospha tase receptor type U	En zy me	88	0 . 5 8 1	0 . 6 5 4	0. 3 9 2 5 1	0. 01		1	1	0	20 17 0 1 7

Rheumatoid Arthritis	C0003873	MI R5 571	1.01E+08		microRNA 5571		3	0.89	0.154		0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	MI R5 100	1.01E+08		microRNA 5100		16	0.769	0.269		0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	G3 BP 1	10146	Q13283	G3BP stress granule assembly factor 1	Nucleic acid binding	78	0.597	0.654	0.033122	0.01		1	1	0	2003	2003
Rheumatoid Arthritis	C0003873	CH ST 4	10164	Q8NC G5	carbohydrate sulfotransferase 4		12	0.792	0.269	2E-09	0.01		1	1	0	2005	2005
Rheumatoid Arthritis	C0003873	CD K4	1019	P11802	cyclin dependent kinase 4	Kinase	433	0.412	0.808	0.06299	0.01		1	1	0	2006	2006
Rheumatoid Arthritis	C0003873	CD K7	10222	P50613	cyclin dependent kinase 7	Kinase	89	0.566	0.731	4.47E-07	0.01		1	1	0	2018	2018
Rheumatoid Ar	C0003873	GD F11	10220	O95390	growth differentiation factor 11	Signaling	86	0.584	0.692	0.9645	0.01		1	1	0	2019	2019

thritis																	
Rheumatoid Arthritis	C0003873	RASGRP2	10235	Q7LDG7	RAS guanyl releasing protein 2	Enzyme modulator	18	0.769	0.231	0.2436	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	SLC17A2	10246	O00624	solute carrier family 17 member 2	Transporter	13	0.805	0.269	1.42E-06	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	MIR6089	102E+08		microRNA 6089		2	0.931	0.192		0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	MIR6716	102E+08		microRNA 6716		6	0.861	0.192		0.01		0	1	0	2017	2017
Rheumatoid Arthritis	C0003873	MIR6785	102E+08		microRNA 6785		2	0.931	0.154		0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	CDK2AP2	10263	O75956	cyclin dependent kinase 2 associated protein 2	Enzyme modulator	117	0.544	0.808	0.78801	0.01		1	1	0	1990	1990
Rheumatoid	C0003	IRX5	102	P78411	iroquois homeobox 5	Transcript	63	0.6	0.8	0.97	0.01		1	1	0	2019	2019

d Ar thr itis	87 3		6 5			on fac tor		2 3	4 6	4 7							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TH RIL	1. 0 3 E + 0 8		TNF and HNRNPL related immunoregula tory long non- coding RNA		16	0 . 7 4 3	0 . 5		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD KN 1B	1 0 2 7	P4652 7	cyclin dependent kinase inhibitor 1B		45 4	0 . 4 0 9	0 . 7 6 9	0. 6 2 3 7 6	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FS TL 3	1 0 2 7 2	O956 33	follicle stimulating factor like 3	En zy me mo du lato r	33	0 . 6 9 5	0 . 4 2 3	0. 6 8 6 5 8	0. 01		0	1	0	20 05	2 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LO C1 027 243 34	1. 0 3 E + 0 8	P5705 3	histone H2B type F-S-like		22	0 . 7 1 1	0 . 6 1 5		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LO C1 027 250 35	1. 0 3 E + 0 8	O750 22	leukocyte immunoglobul in-like receptor subfamily B member 3		6	0 . 8 3 9	0 . 2 3 1		0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LIL RB 2	1 0 2 8 8		leukocyte immunoglobul in like receptor B2		56	0 . 6 2 3	0 . 6 1 5	1. 2 8 E - 1 4	0. 01		1	1	0	20 02	2 0 0 2

Rheumatoid Arthritis	C00873	DNAJ A2	10294	O60884	DnaJ heat shock protein family (Hsp40) member A2		10	0.8399	0.9389	0.901		1	1	0	1999	1999
Rheumatoid Arthritis	C00873	ADAR	1033	P55265	adenosine deaminase RNA specific	Enzyme	256	0.501	0.8062	0.0282	0.01	1	1	0	2020	2020
Rheumatoid Arthritis	C00873	CDKN2C	1031	P42773	cyclin dependent kinase inhibitor 2C		149	0.527	0.654	0.39526	0.01	1	1	0	2006	2006
Rheumatoid Arthritis	C00873	CRISP3	10321	P54108	cysteine rich secretory protein 3	Immune response	31	0.716	0.577	2.57-06	0.01	1	1	0	2019	2019
Rheumatoid Arthritis	C00873	CDKN3	10333	Q16667	cyclin dependent kinase inhibitor 3		150	0.514	0.769	0.01946	0.01	1	1	0	2006	2006
Rheumatoid Arthritis	C00873	CDR1-AS	10408		CDR1 antisense RNA		51	0.623	0.654		0.01	1	1	0	2019	2019
Rheumatoid Ar	C00873	CPQ	10404	Q9Y646	carboxypeptidase Q	Enzyme	87	0.579	0.769	1.32E-	0.01	1	1	0	2002	2002

thr itis									1 4								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SP AG 11 B	1 0 4 0 7	Q086 48;Q6 PDA7	sperm associated antigen 11B		44	0 . 6 5	0 . 7 3 1	0. 0 2 7 5 1	0. 01		1	1	0	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	YA P1	1 0 4 1 3	P4693 7	Yes associat ed protein 1	En zy me mo dul ato r	37 4	0 . 4 3 2	0 . 8 0 8	0. 9 9 9 1 8	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR MT 5	1 0 4 1 9	O147 44	protein arginine methyltr ansferas e 5	Ep ige net ic reg ula tor	13 1	0 . 5 3 9	0 . 7 6 9	0. 9 9 9 9	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CF DP 1	1 0 4 2 8	Q9UE E9	craniofacial development protein 1		71	0 . 6 1 9	0 . 6 1 5	0. 0 0 3 6 5 4	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TM EM 147	1 0 4 3 0	Q9BV K8	transme brane protein 147	Re ce pto r	4	0 . 8 6 1	0 . 1 9 2	0. 0 0 0 1 4	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ME RT K	1 0 4 6 1	Q128 66	MER proto- oncogen e, tyrosine kinase	Ki nas e	15 4	0 . 5 3 1	0 . 6 9 2	2. 6 6 E - 1 1	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi	C 00 03	CL EC 10 A	1 0 4	Q8IU N9	C-type lectin domain	Re ce pto r	64	0 . 6	0 . 6	7. 7 6 E	0. 01		1	1	0	20 06	2 0 0 6

d Ar thr itis	87 3		6 2		containi ng 10A			0 6	9 2	- 0 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FS T	1 0 4 6 8	P1988 3	follistati n	En zy me mo dul ato r	18 2	0 . 5 1 3	0 . 7 3 1	0. 9 8 0 1 4	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CR EB 3	1 0 4 8 8	O438 89	cAMP responsive element binding protein 3		39	0 . 6 6 3	0 . 6 5 4	1. 8 5 E - 0 5	0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SE MA 6B	1 0 5 0 1	Q9H3 T3	semapho rin 6B	Sig nal ing	13	0 . 7 8	0 . 2 3 1	0. 0 6 2 2 7	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CE BP B	1 0 5 1	P1767 6	CCAAT enhance r binding protein beta	Tr ans cri pti on fac tor	18 2	0 . 5 0 8	0 . 7 3 1	0. 3 5 8 0 9	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SE MA 3C	1 0 5 1 2	Q999 85	semapho rin 3C	Sig nal ing	71	0 . 6 1 9	0 . 7 3 1	0. 0 0 8 7 4	0. 01		1	1	0	20 04	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MY BB P1 A	1 0 5 1 4	Q9BQ G0	MYB binding protein la	En zy me	31	0 . 6 9 5	0 . 6 1 5	5. 2 3 E - 4 2	0. 01		1	1	0	20 03	2 0 0 3

Rheumatoid Arthritis	C0003873	CI B1	10519	Q99828	calcium and integrin binding 1	275	0.458	0.769	0.00326	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	ZN RD 2	10534	O60232	zinc ribbon domain containing 2	311	0.443	0.769	1.84E-07	0.01		1	1	0	2005	2005
Rheumatoid Arthritis	C0003873	UP K3 B	1.05E+08	Q9BT76	uroplakin 3B	82	0.584	0.808	0.00234	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	CE RN A3	1.05E+08		competing endogenous lncRNA 3 for miR-645	140	0.531	0.808		0.01		1	1	0	2011	2011
Rheumatoid Arthritis	C0003873	BA TF	10538	Q16520	basic leucine zipper ATF-like transcription factor	31	0.674	0.75	0.85462	0.01		1	1	0	2014	2014
Rheumatoid Arthritis	C0003873	CE CR	1055		cat eye syndrome chromosome region	81	0.599	0.731		0.01		1	1	0	2019	2019
Rheumatoid Ar	C0003873	AR PC 1A	10552	Q92747	actin related protein 2/3 complex	15	0.78	0.738	0.73997	0.01		1	1	1	2018	2018

thr itis					subunit 1A												
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IFI 44	1 0 5 6 1	Q8TC B0	interferon induced protein 44		38	0 . 6 7 8	0 . 5 3 8	1. 9 4 E - 1 5	0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NP C2	1 0 5 7 7	P6191 6	NPC intracellular cholesterol transporter 2		81	0 . 6 1 2	0 . 7 6 9	0. 0 1 7 7 6	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LO C1 060 074 93	1. 0 6 E + 0 8		regulatory region in intron 4 of PAX6		1	1	0 . 1 1 5		0. 01		1	1	0	19 99	1 9 9 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TRI M3	1 0 6 1 2	O753 82	tripartite motif containi ng 3	En zy me	31	0 . 6 8 2	0 . 4 2 3	0. 9 8 9 3	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CE NP E	1 0 6 2	Q022 24	centrom ere protein E	Ce llul ar str uct ure	78	0 . 6 3 6	0 . 6 9 2	0. 2 4 1 4 6	0. 01		0	1	0	19 99	1 9 9 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PO ST N	1 0 6 3 1	Q150 63	periostin	Sig nal ing	37 8	0 . 4 2 8	0 . 8 8 5	1. 0 7 E - 0 9	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi	C 00 03	DC TN 6	1 0 6	O003 99	dynactin subunit 6	Ce llul ar str	31 5	0 . 4	0 . 7	0. 0 5 5	0. 01		1	1	0	20 05	2 0 0 5

d Ar thr itis	87 3		7 1			uct ure		4 2	6 9	7 4 1							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	YM E1 L1	1 0 7 3 0	Q96T A2	YME1 like 1 ATPase	En zy me	60	0 . 6 3 3	0 . 6 5 4	0. 0 2 8 9 8 8	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA P3 K2	1 0 7 4 6	Q9Y2 U5	mitogen - activate d protein kinase kinase kinase 2	Ki nas e	37	0 . 6 8 6	0 . 2 3 1	0. 9 9 9 9	0. 01		1	1	0	20 04	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA SP2	1 0 7 4 7	O001 87	mannan binding lectin serine peptidas e 2	En zy me	86	0 . 5 8 2	0 . 6 9 2	3. 0 4 E - 1 4	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LO C1 079 874 62	1. 0 8 E + 0 8	O750 22	leukocyte immunoglobul in-like receptor subfamily B member 3		6	0 . 8 3 9	0 . 2 3 1		0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY SL TR 1	1 0 8 0 0	Q9Y2 71	cysteiny l leukotrie ne receptor 1	G- pro tei n co upl ed rec ept or	81	0 . 5 9 3	0 . 7 6 9	0. 0 1 2 0 3	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NE U3	1 0 8 2 5	Q9U Q49	neurami nidase 3	En zy me	39	0 . 6 6 6	0 . 6 5 4	2. 4 4 E - 0 8	0. 01		1	1	0	20 19	2 0 1 9

Rheumatoid Arthritis	C0003873	CEACAM8	1088	P31997	CEA cell adhesion molecule 8	29	0.682	0.538	3.3E-07	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	LYVE1	10894	Q9Y5Y7	lymphatic vessel endothelial hyaluronan receptor 1	80	0.587	0.731	4.72E-07	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	JTB	10899	O76095	jumping translocation breakpoint	64	0.615	0.769	0.42432	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	SUB1	10923	P53999	SUB1 regulator of transcription	260	0.465	0.846	0.89245	0.01		1	1	0	1990	1990
Rheumatoid Arthritis	C0003873	TMED2	10959	Q15363	transmembrane p24 trafficking protein 2	73	0.61	0.692	0.89231	0.01		1	1	0	1989	1989
Rheumatoid Arthritis	C0003873	IFI44L	10964	Q53G44	interferon induced protein 44 like	23	0.79	0.462	1.35E-12	0.01		1	1	0	2016	2016
Rheumatoid Ar	C0003873	RAB40B	10966	Q12829	RAB40B, member RAS oncogene family	99	0.563	0.731	8.66E-1	0.01		1	1	0	2017	2017

thr itis										0 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ER VK -32	1. 1 E + 0 8		endogenous retrovirus group K member 32, envelope		15 8	0 . 5 2 2	0 . 6 9 2		0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2 4	1 1 0 0 9	Q130 07	interleukin 24		20 2	0 . 4 9 8	0 . 7 6 9	5. 8 8 E - 0 7	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LIL RA 1	1 1 0 2 4	O750 19	leukocyt e immuno globulin like receptor A1	Re ce pto r	8	0 . 8 0 5	0 . 3 0 8	7. 3 9 E - 2 0	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LIL RB 3	1 1 0 2 5	O750 22	leukocyte immunoglobul in like receptor B3		10	0 . 8 0 5	0 . 2 6 9	3. 1 1 E - 0 6	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LIL RA 2	1 1 0 2 7	Q8N1 49	leukocyt e immuno globulin like receptor A2	Re ce pto r	6	0 . 8 6 1	0 . 2 3 1	6. 9 1 E - 2 0	0. 01		1	1	0	20 02	2 0 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PI M2	1 1 0 4 0	Q9P1 W9	Pim-2 proto- oncogen e, serine/th reonine kinase	Ki nas e	68	0 . 6 0 6	0 . 5 3 8	0. 9 4 8 0 1	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi	C 00 03	C5- OT 1	1. 1 1 E		C5 3' UTR overlapping transcript 1		1	1	0 . 1		0. 01		1	1	3	20 16	2 0 1 6

d Ar thr itis	87 3		+ 0 8					1 5									
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TP PP	1 1 0 7 6	O948 11	tubulin polymer ization promoti ng protein	Ce llul ar str uct ure	11 0	0 . 5 7	0 . 6 9 2	0. 2 0 3 4	0. 01		1	1	0	19 89	1 9 8 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DN AJ B4	1 1 0 8 0	Q9U DY4	DnaJ heat shock protein family (Hsp40) member B4		37	0 . 7 0 5	0 . 3 4 6 6	0. 0 1 6 2 2 7	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RC AN 3	1 1 1 2 3	Q9U KA8	RCAN family member 3	Sig nal ing	9	0 . 8 2 1	0 . 1 5 4	0. 0 0 1 5 7	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CH GA	1 1 1 3	P1064 5	chromogranin A		21 8	0 . 4 9	0 . 8 0 8	0. 0 3 0 3 6 9	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 RA PL 1	1 1 1 4 1	Q9NZ N1	interleuk in 1 receptor accessor y protein like 1	Re ce pto r	10 3	0 . 6 1 7	0 . 6 9 2	0. 9 9 8 8 6	0. 01		1	1	0	20 20	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KA T7	1 1 1 4 3	O952 51	lysine acetyltra nsferase 7	En zy me	35	0 . 6 8 2	0 . 5 3 8	0. 9 9 9 9	0. 01		1	1	0	20 17	2 0 1 7

Rheumatoid Arthritis	C0003873	ADAMTS7	11173	Q9UKP4	ADAM metallopeptidase with thrombospondin type 1 motif 7	Enzyme	40	0.666	0.577	2.25E-14	0.01		1	1	0	2006	2006
Rheumatoid Arthritis	C0003873	TR EH	11181	O43280	trehalase		42	0.677	0.654	8.96E-15	0.01		0	1	0	2017	2017
Rheumatoid Arthritis	C0003873	WIF1	11197	Q9Y5W5	WNT inhibitor 1	Calcium-binding protein	171	0.577	0.731	1.32E-09	0.01		1	1	0	2013	2013
Rheumatoid Arthritis	C0003873	CH EK2	11200	O96017	checkpoint kinase 2	Kinase	297	0.468	0.808	1.21E-24	0.01		1	1	0	2005	2005
Rheumatoid Arthritis	C0003873	CH N2	1124	P52757	chimerin 2		25	0.711	0.615	0.002301	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	CH P1	11261	Q99653	calcineurin like EF-hand protein 1		141	0.546	0.7667	0.667	0.01		1	1	0	1989	1989
Rheumatoid	C0003	TR EX1	112	Q9NSU2	three prime repair exonuclease 1		241	0.55	0.58	0.575	0.01		1	1	0	2010	2010

d Ar thr itis	87 3		7 7				1 7	0 8	2 8							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	B4 GA LT 7	1 1 2 8 5	Q9UB V7	beta-1,4- galactosyltran sferase 7	79	0 . 6 2 8	0 . 6 5 4	0. 0 0 1 3	0. 01		1	1	0	20 10	2 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CH RM 3	1 1 3 1	P2030 9	choliner gic receptor muscar inic 3	G- pro tei n co upl ed rec ept or	28 4	0 . 4 6 4	0 . 8 8 5	0. 9 9 2 5 3	0. 01		1	1	0	20 20 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD CA 5	1 1 3 1 3 0	Q96F F9	cell division cycle associated 5		10 5	0 . 5 6 3	0 . 8 0 1 8	0. 0 1 5 8	0. 01		1	1	0	20 15 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C4 6A 1	1 1 3 2 3 5	Q96N T5	solute carrier family 46 member 1	Tr ans por ter	97	0 . 6 0 6	0 . 7 3 1	0. 0 2 1 8 5 8	0. 01		1	1	0	20 18 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	VSI G4	1 1 3 2 6	Q9Y2 79	V-set and immunoglobul in domain containing 4		51	0 . 6 2 8	0 . 6 1 5	1. 5 E - 0 9	0. 01		1	1	0	20 02 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GL CC II	1 1 3 2 6 3	Q86V Q1	glucocorticoid induced 1		27	0 . 7 1 6	0 . 3 8 5	0. 0 5 9 0 3	0. 01		1	1	1	20 15 1 5

Rheumatoid Arthritis	C0003873	CHRNA7	1139	P36544;Q494W8	cholinergic receptor nicotinic alpha 7 subunit	Ion channel	172	0.532	0.654	0.0415	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	DBA2	114086		Diamond-Blackfan anemia 2		74	0.599	0.731		0.01		1	1	0	1999	1999
Rheumatoid Arthritis	C0003873	UCN3	114131	Q969E3	urocortin 3		82	0.593	0.731	0.0878	0.01		1	1	0	2011	2011
Rheumatoid Arthritis	C0003873	CIRBP	1153	Q14011	cold inducible RNA binding protein	Nucleic acid binding	72	0.592	0.731	0.0366	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	H3P8	1.15E+08		H3 histone pseudogene 8		116	0.544	0.808		0.01		1	1	0	1990	1990
Rheumatoid Arthritis	C0003873	H3P23	1.15E+08		H3 histone pseudogene 23		310	0.433	0.769		0.01		1	1	0	2005	2005
Rheumatoid Ar	C0003873	H3P19	1.15E+		H3 histone pseudogene 19		62	0.631	0.577		0.01		1	1	0	1989	1989

thr itis			0 8													
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H3 P40	1. 1 5 E + 0 8		H3 histone pseudogene 40	17 5	0 . 5 0 6	0 . 8 4 6		0. 01		1	1	0	20 02	2 0 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD CY AP 1R 1	1 1 7	P4158 6	ADCYA P receptor type I	G- pro tei n co upl ed rec ept or	11 8	0 . 5 6 1	0 . 7 6 9	7. 2 3 E - 1 0	0. 01		1	1	0	20 18 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR AP 1	1 1 8 4 7 1	Q96N Z9	proline rich acidic protein 1		59	0 . 6 2 1	0 . 6 1 5	0. 0 3 2 4 6 3	0. 01		1	1	0	20 05 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TP P1	1 2 0 0	O147 73	tripeptid yl peptidas e 1	En zy me	15 1	0 . 5 5 1	0 . 8 0 8	6. 2 6 E - 0 7	0. 01		1	1	0	20 12 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY P2 R1	1 2 0 2 2 7	Q6V VX0	cytochrome P450 family 2 subfamily R member 1		13 9	0 . 5 6 3	0 . 7 3 1	3. 7 9 E - 1 0	0. 01		1	1	0	20 14 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CL TA	1 2 1 1	P0949 6	clathrin light chain A	Tr ans por ter	55	0 . 6 2 8	0 . 6 5 4	0. 9 6 3 1 9	0. 01		1	1	0	20 05 0 0 5
Rh eu	C 00	TP H2	1 2	Q8IW U9	tryptophan hydroxylase 2		13 7	0 .	0 .	2. 5	0. 01		1	1	0	20 12 0

ma toi d Ar thr itis	03 87 3		1 2 7 8					5 4 6	6 5 4	4 E - 0 7						1 2	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CM KL R1	1 2 4 0	Q997 88	chemeri n chemoki ne-like receptor 1	G- pro tei n co upl ed rec ept or	75	0 . 6 1 2	0 . 6 9 2	0. 0 1 0 7 6 7	0. 01		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GG T6	1 2 4 9 7 5	Q6P5 31	gamma- glutamyltransf erase 6		2	0 . 9 3 1	0 . 1 1 5	2. 9 8 E - 0 8	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PL K3	1 2 6 3	Q9H4 B4	polo like kinase 3	Ki nas e	52	0 . 6 4 4	0 . 5 3 8	1. 8 5 E - 0 6	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CN N2	1 2 6 5	Q994 39	calponin 2	Ce llul ar str uct ure	36	0 . 6 6 6	0 . 5 3 8	0. 0 2 4 3 9 9	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO L1 A1	1 2 7 7	P0245 2	collagen type I alpha 1 chain		48 7	0 . 4 3	0 . 8 0 8	1 0 01	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar	C 00 03 87 3	OS CP 1	1 2 7 7 0 0	Q8W VF1	organic solute carrier partner 1		61	0 . 6 1	0 . 6 9 2	7. 0 3 E -	0. 01		1	1	0	20 02	2 0 0 2

thr itis									1 0							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO L1 A2	1 2 7 8	P0812 3	collagen type I alpha 2 chain		27 1	0 . 4 8 6	0 . 8 4 6	1	0. 01		1	1	0	20 17 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO L4 A5	1 2 8 7	P2940 0	collagen type IV alpha 5 chain		12 4	0 . 5 5 3	0 . 6 5 4	1	0. 01		1	1	0	20 19 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO L9 A2	1 2 9 8	Q140 55	collagen type IX alpha 2 chain		11 6	0 . 5 7 2	0 . 7 6 9	1. 0 5 E - 0 8	0. 01		0	1	0	20 06 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO L12 A1	1 3 0 3	Q997 15	collagen type XII alpha 1 chain	Re ce pto r	93	0 . 6 1 5	0 . 6 9 2	0. 9 7 3 6 1	0. 01		1	1	0	20 15 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KL F6	1 3 1 6	Q996 12	Kruppel like factor 6	Nu cle ic aci d bin din g	20 4	0 . 5 0 1	0 . 8 4 6	0. 9 7 9 4 6	0. 01		1	1	0	20 18 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD AD 1	1 3 2 6 1 2	Q96M 93	adenosin e deamina se domain containi ng 1	En zy me	8	0 . 8 2 1	0 . 2 6 9	0. 0 3 8 9 5 2	0. 01		1	1	1	20 10 0 1 0
Rh eu ma toi	C 00 03	ZF P42	1 3 2 6	Q96M M3	ZFP42 zinc finger protein	Tr ans cri pti	30	0 . 6	0 . 3		0. 01		1	1	0	20 10 0 1 0

d Ar thr itis	87 3		2 5			on fac tor		7 8	4 6								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 109	1 3 5 2 2 8	Q6Y HK3	CD109 molecule		81	0 . 5 9 5	0 . 6 5 4	2. 2 7 E - 4 4	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CP A1	1 3 5 7	P1508 5	carboxy peptidas e A1	En zy me	61	0 . 6 5	0 . 5 7 7	2. 6 6 E - 1 1	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CP B2	1 3 6 1	Q96I Y4	carboxy peptidas e B2	En zy me	14 8	0 . 5 3 6	0 . 8 4 6	2. 7 1 E - 1 7	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CL DN 7	1 3 6 6	O954 71	claudin 7	Ce ll- cel l jun cti on	19 2	0 . 4 9 4	0 . 8 0 8	0. 0 2 8 8 3	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CP OX	1 3 7 1	P3655 1	copropo rphyrino gen oxidase	En zy me	24 6	0 . 4 8 8	0 . 8 4 6	0. 1 7 1 5 2	0. 01		1	1	0	20 00	2 0 0 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CR AB P1	1 3 8 1	P2976 2	cellular retinoic binding protein 1	acid	53	0 . 6 3 1	0 . 6 1 5	0. 0 0 5 8 7 8	0. 01		1	1	0	20 15	2 0 1 5

Rheumatoid Arthritis	C0003873	CRHR2	1395	Q13324	corticotropin releasing hormone receptor 2	G-protein coupled receptor	89	0.584	0.731	8.55E-17	0.01		1	1	0	2011	2011
Rheumatoid Arthritis	C0003873	CRKL	1399	P46109	CRK proto-oncogene, adaptor protein	like	140	0.553	0.769	0.44604	0.01		1	1	0	2013	2013
Rheumatoid Arthritis	C0003873	ADOR A3	140	P0DMS8	adenosine A3 receptor	G-protein coupled receptor	36	0.682	0.5	0.00144	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	MUC17	140453	Q685J3	mucin 17, cell surface associated		53	0.638	0.577	7.9E-63	0.01		1	1	0	2008	2008
Rheumatoid Arthritis	C0003873	NRSN1	140767	Q8IZ57	neurensin 1		76	0.64	0.731	0.00308	0.01		1	1	0	1989	1989
Rheumatoid Arthritis	C0003873	SIRPA	140885	P78324	signal regulatory protein alpha	Signaling	82	0.592	0.769	0.67197	0.01		1	1	0	2008	2008

Rheumatoid Arthritis	C0003873	CS E1L	1434	P55060	chromosome segregation 1 like	Enzyme modulator	163	0.521	0.808	1	0.01		1	1	0	2001	2001
Rheumatoid Arthritis	C0003873	PIWI L4	143689	Q7Z3Z4	piwi RNA-mediated gene silencing 4	like	83	0.579	0.692	1.83E-06	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	CS F2RA	1438	P15509	colony stimulating factor 2 receptor subunit alpha	Signaling	49	0.67	0.615	2.4E-10	0.01		1	1	0	1994	1994
Rheumatoid Arthritis	C0003873	CS F3R	1441	Q99062	colony stimulating factor 3 receptor	Signaling	120	0.55	0.692	1.5E-10	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	OR 2A G1	144125	Q9H205	olfactory receptor family 2 subfamily AG member 1 (gene/pseudogene)	G-protein coupled receptor	100	0.582	0.80E-11	3.12E-11	0.01		1	1	0	2008	2008
Rheumatoid Arthritis	C0003873	CS NK1E	1454	P49674	casein kinase 1 epsilon		61	0.619926	0.69926	0.9926	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	PW AR1	145		Prader Willi/Angelman		246	0.7	0.7		0.01		1	1	0	2012	2012

to id Ar thr itis	87 3		6 2 4		an RNA 1	region		4 9	6 9								1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	B3 GN TL 1	1 4 6 7 1 2	Q67F W5	UDP- GlcNAc :betaGal beta-1,3- N- acetylgl ucosami nyltransf erase like 1	En zy me	12	0 . 7 6	0 . 3 4 6	4. 0 7 E - 2 8	0. 01		1	1	0	19 88	1 9 8 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PT PR VP	1 4 8 7 1 3		protein tyrosine phosphatase receptor type V, pseudogene		27	0 . 7 0 5	0 . 5 7 7		0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CT H	1 4 9 1	P3292 9	cystathi onine gamma- lyase	En zy me	93	0 . 5 7 8	0 . 6 1 5	7. 4 8 E - 0 8	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CT RB 1	1 5 0 4	P1753 8	chymotr ypsinog en B1	En zy me	18	0 . 7 6	0 . 3 8 5	2. 4 2 E - 0 6	0. 01		0	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO M MD 1	1 5 0 6 8 4	Q8N6 68	copper metabolism domain containing 1		55	0 . 6 3 3	0 . 6 9 2	0. 2 2 0 1	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar	C 00 03 87 3	GP BA R1	1 5 1 3 0 6	Q8TD U6	G protein- coupled bile acid receptor 1	G- pro tei n co upl ed	12 2	0 . 5 4 8	0 . 7 3 1	1. 3 6 E - 0 9	0. 01		1	1	0	20 19	2 0 1 9

thr itis						rec ept or											
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RM DN 2	1 5 1 3 9 3	Q96L Z7	regulator of microtubule dynamics 2		13 7	0 . 5 3 1	0 . 7 6 9	4. 4 1 E - 2 4	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CT SS	1 5 2 0	P2577 4	cathepsi n S	En zy me	13 1	0 . 5 3 9	0 . 7 3 1	0. 3 4 1 7 8	0. 01		1	1	0	20 02	2 0 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CU X1	1 5 2 3	P3988 0;Q13 948	cut like homeob ox 1	Tr ans cri pti on fac tor	28 3	0 . 4 6 5	0 . 8 4 6	1	0. 01		1	1	0	19 92	1 9 9 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY B5 A	1 5 2 8	P0016 7	cytochro me b5 type A	En zy me	95	0 . 6 0 1	0 . 6 5 4	0. 0 0 1 5 8 2	0. 01		1	1	1	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CR EB RF	1 5 3 2 2 2	Q8IU R6	CREB3 regulatory factor		50	0 . 6 3 6	0 . 5 9 9 7	0. 9 9 9 7	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY BA	1 5 3 5	P1349 8	cytochrome b- 245 alpha chain		17 7	0 . 5 2	0 . 7 6 9	8. 8 7 E - 0 6	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma	C 00 03	CY LD	1 5	Q9N QC7	CYLD lysine 63	En zy me	21 1	0 . 4	0 . 8	0. 9 9	0. 01		1	1	0	20 05	2 0

to id Ar thr itis	87 3		4 0		deubiqui tinase			9 8	4 6	9 9 3							0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY P1 A1	1 5 4 3	P0479 8	cytochro me P450 family 1 subfamil y A member 1	En zy me	37 9	0 . 4 3 6	0 . 8 4 6	1. 0 6 E - 1 7	0. 01		0	1	1	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AM OT	1 5 4 7 9 6	Q4VC S5	angiometin		52	0 . 6 4 1	0 . 5 3 8	0. 9 9 6 6	0. 01		1	1	0	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD RB 3	1 5 5	P1394 5	adrenoc eptor beta 3	G- pro tei n co upl ed rec ept or	14 2	0 . 5 3 3	0 . 7 3 1	2. 4 6 E - 0 7	0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY P2 B6	1 5 5 5	P2081 3	cytochrome P450 family 2 subfamily B member 6		38 8	0 . 4 2 8	0 . 8 4 6	1. 9 3 E - 1 0	0. 01		1	1	1	19 94	1 9 9 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY P2 C1 9	1 5 5 7	P3326 1	cytochrome P450 family 2 subfamily C member 19		27 4	0 . 4 6 7	0 . 8 4 6	6. 4 9 E - 2 0	0. 01		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar	C 00 03 87 3	CY P2 E1	1 5 7 1	P0518 1	cytochrome P450 family 2 subfamily E member 1		30 6	0 . 4 5 9	0 . 8 8 5	8. 0 7 E - 0 9	0. 01		1	1	0	20 18	2 0 1 8

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY P3 A4	1 5 7 6	P0868 4	cytochrome P450 family 3 subfamily A member 4	En zy me	29 1	0 . 4 6 2	0 . 8 8 5	5. 8 E - 1 1	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DC C	1 6 3 0	P4314 6	DCC netrin 1 receptor		27 9	0 . 4 7 1	0 . 8 0 8	0. 9 9 4 4 8	0. 01		0	1	1	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DC K	1 6 3 3	P2770 7	deoxycy tidine kinase	Ki nas e	10 2	0 . 5 6 1	0 . 6 9 2	1. 5 5 E - 0 5	0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IFN LR 1	1 6 3 7 0 2	Q8IU 57	interfero n lambda receptor 1	Re ce pto r	40	0 . 6 4 7	0 . 6 1 5	0. 0 6 2 5 3 2	0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KA NK 4	1 6 3 7 8 2	Q5T7 N3	KN motif and ankyrin repeat domains 4		7	0 . 8 3 9	0 . 2 6 9	2. 0 7 E - 0 9	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DE FA 1	1 6 6 7	P5966 5	defensin alpha 1		57	0 . 6 3 6	0 . 7 3 1		0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi	C 00 03	DE FA 3	1 6 6 8	P5966 6	defensin alpha 3		23	0 . 7	0 . 5	0. 0 9 0	0. 01		1	1	0	20 03	2 0 0 3

d Ar thr itis	87 3							1 6	3 8	5 4 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ID O2	1 6 9 3 5 5	Q6ZQ W0	indoleamine 2,3- dioxygenase 2		31	0 . 6 9 5	0 . 5 7 7	3. 1 4 E - 0 9	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AA VS 1	1 7		adeno- associated virus integration site 1		78	0 . 5 9 5	0 . 7 3 1		0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NQ O1	1 7 2 8	P1555 9	NAD(P)H quinone dehydrogenas e 1		36 8	0 . 4 3 4	0 . 8 8 5	1. 1 9 E - 0 9	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SA RD H	1 7 5 7	Q9UL 12	sarcosin e dehydro genase	En zy me	16 6	0 . 5 2 3	0 . 8 4 6	5. 2 7 E - 1 6	0. 01		1	1	0	20 04	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DN AH 8	1 7 6 9	Q96J B1	dynein axonem al heavy chain 8	En zy me	12 0	0 . 5 5 6	0 . 7 3 1	1. 1 5 E - 6 0	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DO CK 2	1 7 9 4	Q926 08	dedicator of cytokinesis 2		40	0 . 6 7 4	0 . 4 6 2	0. 9 9 9 6 9	0. 01		1	1	0	20 19	2 0 1 9

Rheumatoid Arthritis	C0003873	AGT	183	P01019	angiotensinogen	Enzyme modulator	765	0.367	0.923	4.97E-08	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	DSPP	1834	Q9NZW4	dentin sialophosphoprotein		114	0.556	0.769	1.12E-07	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	DUSP2	1844	Q05923	dual specificity phosphatase 2		118	0.558	0.769	4.47E-05	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	AGTR1	185	P30556	angiotensin II receptor type 1	G-protein coupled receptor	440	0.423	0.846	0.00532	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	DUSP8	1850	Q13202	dual specificity phosphatase 8		12	0.769	0.385	0.6975	0.01		1	1	0	2001	2001
Rheumatoid Arthritis	C0003873	DVL2	1856	O14641	dishevelled segment polarity protein 2	Signaling	58	0.621	0.577	1.36E-05	0.01		1	1	0	2017	2017
Rheumatoid	C0003	DYRK1A	1859	Q13627	dual specificity tyrosine	Kinase	212	0.5	0.799	0.999	0.01		0	1	0	2018	2018

d Ar thr itis	87 3				phospho rylation regulate d kinase 1A			3 3	6 9	6 7							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AG TR 2	1 8 6	P5005 2	angioten sin II receptor type 2	G-pro tein cou pled rec ept or	22 9	0 . 4 9 6	0 . 8 0 8	0. 0 8 2 3 5	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	S1P R3	1 9 0 3	Q995 00	sphingos ine-1- phospha te receptor 3	G-pro tein cou pled rec ept or	47	0 . 6 3 8	0 . 6 5 4	0. 0 4 6 9 4 5	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ED NR B	1 9 1 0	P2453 0	endothel in receptor type B	G-pro tein cou pled rec ept or	30 0	0 . 4 7	0 . 8 4 6	0. 0 9 2 4 2	0. 01		1	1	0	19 99	1 9 9 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EF NB 2	1 9 4 8	P5279 9	ephrin B2	Sig nal ing	10 9	0 . 5 6 1	0 . 6 9 2	0. 9 8 8 4 5	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EG R2	1 9 5 9	P1116 1	early growth response 2	Nu cle ic aci d bin din g	13 3	0 . 5 4 7	0 . 7 6 9	0. 5 0 2 9 2	0. 01		1	1	0	20 10	2 0 1 0
Rh eu ma	C 00 03	AH SG	1 9 7	P0276 5	alpha 2- HS	En zy me	20 4	0 . 5	0 . 8	3. 2 1	0. 01		1	1	0	20 17	2 0

to id Ar thr itis	87 3				glycopro tein	mo dul ato r		0 6	4 6	E - 1 0							1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NL RC 3	1 9 7 3 5 8	Q7RT R2	NLR family CARD domain containi ng 3	En zy me	21	0 . 7 6 9	0 . 2 6 9	2. 2 3 E - 2 5	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EIF 4E	1 9 7 7	P0673 0	eukaryot ic translati on initiatio n factor 4E	Nu cle ic aci d bin din g	31 7	0 . 4 4 8	0 . 8 4 6	0. 9 4 1 3 3	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EIF 4G 1	1 9 8 1	Q046 37	eukaryot ic translati on initiatio n factor 4 gamma 1	Nu cle ic aci d bin din g	13 9	0 . 5 5 3	0 . 8 0 8	1	0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EL AN E	1 9 9 1	P0824 6	elastase, neutroph il expresse d	En zy me	34 6	0 . 4 4 7	0 . 8 4 6	0. 0 0 1 2 2 7	0. 01		1	1	1	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	A2 M	2	P0102 3	alpha-2- macrogl obulin	En zy me mo dul ato r	14 7	0 . 5 2 9	0 . 7 6 9	4. 5 2 E - 1 1	0. 01		1	1	0	19 99	1 9 9 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EL N	2 0 0 6	P1550 2	elastin		54 5	0 . 4 1 5	0 . 8 8 5	2. 1 4 E - 1 4	0. 01		1	1	0	20 19	2 0 1 9

Rheumatoid Arthritis	C0003873	EMD	2010	P50402	emerin		163	0.542	0.73178	0.93178	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	MA RK2	2011	Q7KZI7	microtubule affinity regulating kinase 2	Kinase	115	0.555	0.692	0.999	0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	TIGIT	201633	Q495A1	T cell immunoreceptor with Ig and ITIM domains		56	0.623	0.538	0.017915	0.01		0	1	0	2019	2019
Rheumatoid Arthritis	C0003873	ENG	20022	P17813	endoglin		371	0.446	0.846	0.9958	0.01		1	1	0	2003	2003
Rheumatoid Arthritis	C0003873	C9orf72	2003228	Q96LT7	C9orf72-SMCR8 complex subunit		258	0.496	0.769	1.06-06	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	EPHA1	20041	P21709	EPH receptor A1	Kinase	119	0.544	0.731	1.46E-23	0.01		1	1	0	2008	2008
Rheumatoid Ar	C0003873	EPHA3	20042	P29320	EPH receptor A3	Kinase	193	0.497	0.692	1.2E-05	0.01		1	1	0	2004	2004

thritis																	
Rheumatoid Arthritis	C0003873	CLN8	2055	Q9UBY8	CLN8 transmembrane ER and ERGIC protein		50	0.682	0.423559	0.01		1	1	0	2007	2007	
Rheumatoid Arthritis	C0003873	EP0	2056	P01588	erythropoietin		646	0.3815	0.8125	0.01		1	1	0	2019	2019	
Rheumatoid Arthritis	C0003873	LV RN	206338	Q6Q4G3	laeverin	Enzyme	7	0.89	0.192	5.3E-17	0.01		1	1	0	2006	2006
Rheumatoid Arthritis	C0003873	ERBB3	2065	P21860	erb-b2 receptor tyrosine kinase 3	Kinase	318	0.448	0.8085	1.7E-15	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	ERCC2	2068	P18074	ERCC excision repair 2, TFIIH core complex helicase subunit	Enzyme	499	0.42	0.846	7.0E-20	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	EREG	2069	O14944	epiregulin	Signaling	121	0.554	0.692	1.7E-05	0.01		1	1	0	2014	2014
Rheumatoid	C0003	AKT2	208	P31751	AKT serine/threonine kinase 2	Kinase	264	0.4	0.74	0.644	0.01		1	1	0	2018	2018

d Ar thr itis	87 3							7 4	6 9	3 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ER V3- 1	2 0 8 6	Q142 64	endogenous retrovirus group 3 member 1, envelope		27	0 . 7	0 . 4 2 3		0. 01		0	1	0	19 95	1 9 9 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ES RR B	2 1 0 3	O957 18	estrogen related receptor beta	Nu cle ar rec ept or	10 2	0 . 5 6 5	0 . 8 4 6	0. 1 2 6 0 9	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ME CO M	2 1 2 2	Q031 12	MDS1 and EVI1 complex locus		19 1	0 . 5 1 3	0 . 7 3 1	1	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EX T1	2 1 3 1	Q163 94	exostosin glycosyl transferase 1	En zy me	20 5	0 . 5 2 2	0 . 7 6 9	0. 9 9 7 3 2	0. 01		1	1	0	20 05	2 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AL CA M	2 1 4	Q137 40	activate d leukocyt e cell adhesion molecul e	Ce ll ad hes ion	18 1	0 . 5 0 2	0 . 8 0 8	0. 7 3 2 6 7	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	F10	2 1 5 9	P0074 2	coagulat ion factor X	En zy me	22 8	0 . 4 9 3	0 . 7 6 9	2. 3 5 E - 0 6	0. 01		1	1	0	20 17	2 0 1 7

Rheumatoid Arthritis	C0003873	ALDH2	217	P05091	aldehyde dehydrogenase 2 family member	Enzyme	337	0.457	0.885	3.4E-10	0.01		1	1	0	1994	1994
Rheumatoid Arthritis	C0003873	FABP5	2171	Q01469	fatty acid binding protein 5		85	0.585	0.731	0.04708	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	FAP	2191	Q12884	fibroblast activation protein alpha	Enzyme	216	0.496	0.808	1.9E-28	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	FAT1	2195	Q14517	FAT atypical cadherin 1		178	0.508	0.808	1.2E-12	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	UNC5B	2199	Q8IZJ1	unc-5 netrin receptor B	Receptor	38	0.682	0.462	2.69E-07	0.01		1	1	0	2009	2009
Rheumatoid Arthritis	C0003873	ALDH1A3	220	P47895	aldehyde dehydrogenase 1 family member A3	Enzyme	83	0.578	0.654	0.1428	0.01		1	1	0	2015	2015
Rheumatoid Ar	C0003873	DLX7	220107	Q6UYE1	deleted in lymphocytic leukemia 7		34	0.705	0.346	0.18452	0.01		1	1	0	1990	1990

thritis																	
Rheumatoid Arthritis	C0003873	EFEMP1	2202	Q12805	EGF containing fibulin extracellular matrix protein 1	Extracellular structure	153	0.54	0.79	0.99	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	FCGR T	2217	P55899	Fc fragment of IgG receptor and transporter		102	0.563	0.654	0.414	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	FGD1	2245	P98174	FYVE, RhoGEF and PH domain containing 1	Enzyme modulator	131	0.573	0.731	0.997	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	FGF4	2249	P08620	fibroblast growth factor 4	Signaling	86	0.588	0.577	0.140	0.01		1	1	0	1998	1998
Rheumatoid Arthritis	C0003873	FGF7	2252	P21781	fibroblast growth factor 7	Signaling	167	0.519	0.846	0.708	0.01		1	1	0	1992	1992
Rheumatoid Arthritis	C0003873	FGF9	2254	P31371	fibroblast growth factor 9	Signaling	153	0.528	0.847	0.470	0.01		1	1	0	2018	2018
Rheumatoid	C0003873	FGFR1	2260	P11362	fibroblast growth factor	Kinase	816	0.3	0.88	0.999	0.01		1	1	0	2003	2003

d Ar thr itis	87 3				receptor 1			6 2	8 5	8 4							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FG FR 3	2 2 6 1	P2260 7	fibroblas t growth factor receptor 3	Ki nas e	65 4	0 . 3 9 1	0 . 8 4 6	1. 6 4 E - 0 5	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FH L2	2 2 7 4	Q141 92	four and a half LIM domains 2	Tr ans cri pti on fac tor	12 1	0 . 5 5 6	0 . 7 3 1	2. 8 7 E - 0 5	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	VE GF D	2 2 7 7	O439 15	vascular endothel ial growth factor D	Sig nal ing	13 2	0 . 5 3 8	0 . 7 6 9	2. 5 E - 0 5	0. 01		1	1	0	20 02	2 0 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IK ZF 2	2 2 8 0 7	Q9U KS7	IKARO S family zinc finger 2	Tr ans cri pti on fac tor	39	0 . 6 5 6	0 . 5 8 1	0. 9 8 7 3 1	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NR 1I4	2 2 8 1 7		nuclear receptor subfamily group member 4	1 I	3	0 . 8 9	0 . 3 8 5		0. 01		1	1	0	20 01	2 0 0 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PU F60	2 2 8 2 7	Q9U HX1	poly(U) binding splicing factor 60		18 8	0 . 5 3 6	0 . 7 6 9	0. 9 9 6 7 7	0. 01		1	1	0	20 18	2 0 1 8
Rh eu	C 00	FO XJ3	2 2	Q9UP W0	forkhead box J3		5	0 .	0 .	0. 9	0. 01		1	1	2	20 13	2 0

ma toi d Ar thr itis	03 87 3		8 8 7					8 9	1 9 2	9 5 9 8						1 3	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SA CM 1L	2 2 9 0 8	Q9NT J5	SAC1 like phosphatidyli nositide phosphatase		31	0 . 6 8 2	0 . 5	0. 6 9 5 3 6	0. 01		1	1	0	19 89	1 9 8 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 93	2 2 9 1 8	Q9NP Y3	CD93 molecul e	Ca lci um - bin din g pro tei n	36	0 . 6 6 3	0 . 5	1. 9 8 E - 1 0	0. 01		1	1	0	19 93	1 9 9 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SN W1	2 2 9 3 8	Q135 73	SNW domain containi ng 1	Tr ans cri pti on fac tor	29	0 . 6 8 2	0 . 4 2 3	0. 9 9 9 6 1	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	P2 RX 2	2 2 9 5 3	Q9UB L9	purinerg ic receptor P2X 2	Ion ch an nel	99	0 . 5 8 5	0 . 7 6 9	9. 6 5 E - 1 3	0. 01		1	1	0	20 10	2 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FO XJ1	2 3 0 2	Q929 49	forkhead box J1		61	0 . 6 1 9	0 . 5 7 7	0. 9 6 9 0 1	0. 01		1	1	0	20 07	2 0 0 7
Rh eu ma toi d Ar	C 00 03 87 3	MA ST 3	2 3 0 3 1	O603 07	microtu bule associat ed serine/th	Ki nas e	10	0 . 9 3 1	0 . 1 5 4	0. 9 9 9 1	0. 01		1	1	0	20 19	2 0 1 9

thr itis					reonine kinase 3												
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZN F29 2	2 3 0 3 6	O602 81	zinc finger protein 292	En zy me	53	0 . 6 9 5	0 . 4 2 3	1	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MO N2	2 3 0 4 1	Q7Z3 U7	MON2 homolog, regulator of endosome-to- Golgi trafficking		15	0 . 7 5 1	0 . 3 0 8	0. 5 9 3 8 8	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SM G1	2 3 0 4 9	Q96Q 15	SMG1 nonsens e mediate d mRNA decay associat ed PI3K related kinase	Ki nas e	90	0 . 5 7 5	0 . 8 0 8	1	0. 01		1	1	0	20 01	2 0 0 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZN F42 3	2 3 0 9 0	Q2M1 K9	zinc finger protein 423		97	0 . 5 9 2	0 . 8 0 8	0. 9 9 9 6	0. 01		1	1	0	20 10	2 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TA B2	2 3 1 1 8	Q9N YJ8	TGF-beta activated kinase 1 (MAP3K7) binding protein 2		72	0 . 6 1 7	0 . 6 5 4	0. 9 9 9 8	0. 01		1	1	1	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CI C	2 3 1 5 2	Q96R K0	capicua transcriptional repressor		14 1	0 . 5 2 3	0 . 6 9 2 9	0. 9 9 9 9	0. 01		1	1	0	20 10	2 0 1 0
Rh eu	C 00	FL NA	2 3	P2133 3	filamin A		57 1	0 . .	0 . .	1	0. 01		1	1	0	20 17	2 0

ma toi d Ar thr itis	03 87 3		1 6					4 1 9	8 4 6								1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PH LD B1	2 3 1 8 7	Q86U U1	pleckstrin homology like domain family B member 1		20	0 . 7 2 2	0 . 4 2 3	0. 1 0 6 6 7	0. 01		0	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FL T3	2 3 2 2	P3688 8	fms related receptor tyrosine kinase 3	Ki nas e	27 0	0 . 4 6 2	0 . 6 5 4	0. 6 0 7 7	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AR C	2 3 2 3 7	Q7LC 44	activity regulated cytoskeleton associated protein		10 1	0 . 5 7 3	0 . 7 6 9	0. 5 9 4 3 3	0. 01		1	1	0	19 97	1 9 9 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SA TB 2	2 3 3 1 4	Q9UP W6	SATB homeob ox 2	Tr ans cri pti on fac tor	23 3	0 . 5 0 3	0 . 7 6 9	0. 9 9 9 9	0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SY NM	2 3 3 3 6	O150 61	synemin		93	0 . 5 7 5	0 . 7 3 1	3. 0 3 E - 2 4	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CO TL 1	2 3 4 0 6	Q140 19	coactosi n like F- actin binding protein 1	Ce llul ar str uct ure	62	0 . 6 1 5	0 . 5 3 8	0. 0 3 9 0 7 7	0. 01		1	1	0	20 09	2 0 0 9

Rheumatoid Arthritis	C0003873	HARS2	23438	P49590	histidyl-tRNA synthetase 2, mitochondrial	Enzyme	25	0.705	0.462	2.79E-05	0.01		1	1	0	2006	2006
Rheumatoid Arthritis	C0003873	FOLR1	23448	P15328	folate receptor alpha		174	0.522	0.885	0.12642	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	CABI N1	23523	Q9Y6J0	calcineurin binding protein 1	Enzyme modulator	136	0.536	0.846	3.28E-17	0.01		1	1	0	2010	2010
Rheumatoid Arthritis	C0003873	SNAPIN	23557	O95295	SNAP associated protein		4	0.931	0.1912	0.001533	0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	DDAH2	23564	O95865	dimethylarginine dimethylaminohydrolase 2	Enzyme	36	0.67	0.538	0.001373	0.01		0	1	0	2014	2014
Rheumatoid Arthritis	C0003873	LPAR3	23566	Q9UBY5	lysophosphatidic acid receptor 3	G-protein coupled receptor	194	0.599	0.293	0.67935	0.01		1	1	0	2008	2008
Rheumatoid	C0003	FP R1	2357	P21462	formyl peptide receptor 1	G-protein	93	0.5	0.7		0.01		1	1	0	2008	2008

d Ar thr itis	87 3					co upl ed rec ept or		7 6	6 9								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DD AH 1	2 3 5 7 6	O947 60	dimethyl arginine dimethyl aminohy drolase 1	En zy me	73	0 . 6 0 4	0 . 6 1 5	0. 0 2 7 9 7	0. 01		0	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FA M2 15 A	2 3 5 9 1	Q9Y5 M1	family with sequence similarity 215 member A		43	0 . 6 5	0 . 5		0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AM AC R	2 3 6 0 0	Q9U HK6	alpha- methylacyl- CoA racemase		17 9	0 . 5 1	0 . 7 6 9	0. 0 2 3 6 3	0. 01		1	1	0	19 98	1 9 9 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CL EC 5A	2 3 6 0 1	Q9N Y25	C-type lectin domain containing 5A		37	0 . 6 6 3	0 . 3 4 6	0. 1 2 5 6 8	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 2A P	2 3 6 0 7	Q9Y5 K6	CD2 associated protein		11 3	0 . 5 5 8	0 . 7 3 1	0. 2 2 9 8 9	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HS PB P1	2 3 6 4 0	Q9NZ L4	HSPA (Hsp70) binding protein 1		14	0 . 8 6 1	0 . 2 6 9	0. 0 5 7 2 0 8	0. 01		1	1	0	20 11	2 0 1 1

Rheumatoid Arthritis	C0003873	PP1R15A	23645	O75807	protein phosphatase 1 regulatory subunit 15A		65	0.608	0.62	2.1E-12	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	PLD3	23646	Q8IV08	phospholipase D family member 3		29	0.7	0.462	1.75E-05	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	BRD1	23774	O95696	bromodomain containing 1		50	0.644	0.6549	0.9949	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	ALOX12	239	P18054	arachidonate 12-lipoxygenase, 12S type	Enzyme	119	0.558	0.692	1.44E-15	0.01		1	1	0	1997	1997
Rheumatoid Arthritis	C0003873	ABCA4	24	P78363	ATP binding cassette subfamily A member 4	Transporter	227	0.493	0.769	5.35E-48	0.01		1	1	0	2014	2014
Rheumatoid Arthritis	C0003873	ALOX5AP	241	P20292	arachidonate 5-lipoxygenase activating protein	Enzyme	76	0.612	0.731	0.077	0.01		1	1	0	1995	1995
Rheumatoid Ar	C0003873	SPESP1	24677	Q6UW49	sperm equatorial segment protein 1		25	0.711	0.538	0.3465	0.01		1	1	0	2016	2016

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FT L	2 5 1 2	P0279 2	ferritin light chain	Sto rag e	13 5	0 . 5 5 9	0 . 6 9 2	1. 6 6 E - 0 9	0. 01		1	1	0	19 97	1 9 9 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FU T4	2 5 2 6	P2208 3	fucosyltr ansferas e 4	En zy me	16 8	0 . 5 0 5	0 . 7 3 1	7. 7 3 E - 0 6	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZB TB 38	2 5 3 4 6 1	Q8N AP3	zinc finger and BTB domain containi ng 38	Tr ans cri pti on fac tor	60	0 . 6 6 3	0 . 6 1 5	0. 9 9 4 9	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EB F3	2 5 3 7 3 8	Q9H4 W6	EBF transcription factor 3		12 4	0 . 5 9 5	0 . 7 3 1	0. 9 9 9 3	0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TA C4	2 5 5 0 6 1	Q86U U9	tachykinin precursor 4		24	0 . 7 1 1	0 . 4 6 2	3. 6 1 E - 0 5	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PC SK 9	2 5 5 7 3 8	Q8NB P7	proprote in converta se subtilisi n/kexin type 9	En zy me	25 7	0 . 4 8 2	0 . 8 0 8	2. 7 1 E - 1 7	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi	C 00 03	CIZ 1	2 5 7	Q9UL V3	CDKN1A interacting zinc finger protein 1		80	0 . 6	0 . 5	0. 0 6 3	0. 01		1	1	0	20 16	2 0 1 6

d Ar thr itis	87 3		9 2					1 7		1 7 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	QP CT	2 5 7 9 7	Q167 69	glutamin yl- peptide cyclotra nsferase	En zy me	94	0 . 5 6 8	0 . 7 3 1	1. 2 E - 1 5	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR DX 5	2 5 8 2 4	P3004 4	peroxiredoxin 5		15 3	0 . 5 2 2	0 . 8 0 8	0. 0 0 1 7 9	0. 01		1	1	0	20 07	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PA RT 1	2 5 8 5 9		prostate androgen- regulated transcript 1		25 0	0 . 4 8 3	0 . 8 8 5		0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PO T1	2 5 9 1 3	Q9N UX5	protectio n of telomere s 1	Nu cle ic aci d bin din g	10 7	0 . 5 6	0 . 7 3 1	0. 8 5 3 4 3	0. 01		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NC R3	2 5 9 1 9 7	O149 31	natural cytotoxicity triggering receptor 3		53	0 . 6 3 8	0 . 7 6 9	0. 0 0 3 6 8	0. 01		1	1	1	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL4 I1	2 5 9 3 0 7	Q96R Q9	interleukin 4 induced 1		36	0 . 6 8 6	0 . 5 3 9 6	0. 0 0 3 9 6	0. 01		1	1	0	20 07	2 0 0 7
Rh eu	C 00	IBT K	2 5	Q9P2 D0	inhibitor of Bruton		33	0 .	0 .	0. 0	0. 01		1	1	0	20 19	2 0

ma toi d Ar thr itis	03 87 3		9 9 8		tyrosine kinase			6 7 8	5 3 8	0 2 1 4						1 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LRI G1	2 6 0 1 8	Q96J A1	leucine rich repeats and immuno globulin like domains 1	Re ce pto r	83	0 . 6 0 1	0 . 5 3 8	0. 0 3 5 0 3 1	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PY DC 1	2 6 0 4 3 4	Q8W XC3	pyrin domain containing 1		13	0 . 8 0 5	0 . 1 9 2		0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LRI T1	2 6 1 0 3	Q9P2 V4	leucine rich repeat, Ig-like and transmembran e domains 1		53	0 . 6 4 1	0 . 6 1 5	4. 5 9 E - 1 5	0. 01		1	1	0	20 02	2 0 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KIF BP	2 6 1 2 8	Q96E K5	kinesin family binding protein		83	0 . 6 1 5	0 . 7 3 1	0. 0 7 5 6 8 2	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA RS 1	2 6 1 7	P4125 0	glycyl- tRNA synthetase 1	En zy me	73	0 . 6 2 3	0 . 5 0 6 5	0. 3 0 6 5	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar	C 00 03 87 3	AM D1	2 6 2	P1770 7	adenosyl methionine decarboxylase 1	En zy me	84	0 . 5 9 3	0 . 5 7 7	0. 9 8 2 2 7	0. 01		1	1	0	20 19	2 0 1 9

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA TA 1	2 6 2 3	P1597 6	GATA binding protein 1		26 4	0 . 4 8 3	0 . 8 0 8	0. 9 4 7 9 8	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FB XO 2	2 6 2 3 2	Q9U K22	F-box protein 2		11	0 . 8 0 5	0 . 3 4 6	0. 0 0 2 1 5	0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA TA 2	2 6 2 4	P2376 9	GATA binding protein 2		22 9	0 . 4 9 6	0 . 6 5 4	0. 9 7 9 2 7	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CL EC 4E	2 6 2 5 3	Q9UL Y5	C-type lectin domain family 4 member E	Re ce pto r	35	0 . 6 9 5	0 . 5	1. 1 4 E - 0 5	0. 01		0	1	1	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA TA 4	2 6 2 6	P4369 4	GATA binding protein 4		33 6	0 . 4 5 8	0 . 8 4 6	0. 4 3 0 8	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FG F21	2 6 2 9 1	Q9NS A1	fibroblas t growth factor 21	Sig nal ing	23 6	0 . 4 8 5	0 . 7 6 9	0. 0 2 9 4 3 9	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi	C 00 03	AM D1 P2	2 6 3		adenosylmethi none decarboxylase		71	0 . 6	0 . 5		0. 01		1	1	0	20 19	2 0 1 9

d Ar thr itis	87 3				1 pseudogene 2		0 8	3 8									
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GC HF R	2 6 4 4	P3004 7	GTP cyclohydrolas e I feedback regulator	89	0 . 5 7 9	0 . 8 0 8	0. 0 4 8 2 5 1	0. 01		1	1	0	20 15	2 0 1 5	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GC K	2 6 4 5	P3555 7	glucokin ase	Ki nas e	21 0	0 . 5 2 3	0 . 8 0 8	0. 6 3 4 6 4	0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KA T2 A	2 6 4 8	Q928 30	lysine acetyltransfera se 2A		66	0 . 6 1	0 . 7 3 1	0. 5 7 3 3 1	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C1 7A 5	2 6 5 0 3	Q9NR A2	solute carrier family 17 member 5	Tr ans por ter	25 2	0 . 4 9 1	0 . 8 0 8	6. 8 5 E - 1 0	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GC Y	2 6 5 6		growth control, Y chromosome influenced		44	0 . 6 3 1	0 . 6 1 5		0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GD F2	2 6 5 8	Q9U K05	growth different iation factor 2	Sig nal ing	15 2	0 . 5 2 9	0 . 7 3 1	0. 0 2 4 6 6	0. 01		1	1	0	20 19	2 0 1 9

Rheumatoid Arthritis	C0003873	GREM1	26585	O60565	gremlin 1, DAN family BMP antagonist		179	0.588	0.8836	0.47436	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	AMH	2688	P03971	anti-Mullerian hormone		242	0.476	0.846	3.4E-12	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	B4GALT1	2683	P15291	beta-1,4-galactosyltransferase 1	Enzyme	45	0.674	0.538	0.03435	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	RNU1-1	26871		RNA, U1 small nuclear 1		66	0.68	0.731		0.01		0	1	0	2006	2006
Rheumatoid Arthritis	C0003873	GHGR	2693	Q92847	growth hormone secretagogue receptor	G-protein coupled receptor	171	0.588	0.769	0.06583	0.01		0	1	0	2010	2010
Rheumatoid Arthritis	C0003873	SMR3A	26952	Q99954	submaxillary gland androgen regulated protein 3A		19	0.751	0.538	0.39147	0.01		1	1	0	2017	2017
Rheumatoid	C0003	GJA1	2697	P17302	gap junction protein alpha 1	Cell-cell	662	0.3	0.855	0.155	0.01		1	1	0	2020	2020

d Ar thr itis	87 3					jun cti on		9 3	8 5	2 3							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AM PD 1	2 7 0	P2310 9	adenosin e monoph osphate deamina se 1	En zy me	10 6	0 . 5 7 3	0 . 6 9 2	1. 9 1 E - 2 1	0. 01		1	1	1	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SIG LE C7	2 7 0 3 6	Q9Y2 86	sialic acid binding Ig like lectin 7	Re ce pto r	13 7	0 . 5 3 5	0 . 8 4 6	2. 3 9 E - 0 7	0. 01		1	1	0	19 92	1 9 9 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LA T	2 7 0 4 0	O435 61	linker for activation of T cells		12 4	0 . 5 4 8	0 . 7 3 1	0. 0 0 9 2 3 8	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PE LP 1	2 7 0 4 3	Q8IZ L8	proline, glutamate and leucine rich protein 1		64	0 . 6 1 2	0 . 5 7 7	0. 9 9 9 8	0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DK K2	2 7 1 2 3	Q9UB U2	dickkopf WNT signaling pathway inhibitor 2		74	0 . 5 9 9	0 . 6 9 2	0. 7 5 3 1 8	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL3 6B	2 7 1 7 7	Q9NZ H7	interleukin 36 beta		5	0 . 8 6 1	0 . 1 5 4	0. 0 0 3 2 9 8	0. 01		1	1	0	20 06	2 0 0 6

Rheumatoid Arthritis	C0003873	SIGLE C9	27180	Q9Y336	sialic acid binding Ig like lectin 9	Receptor	36	0.66	0.43	2.53E-05	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	GC LC	2729	P48506	glutamate-cysteine ligase catalytic subunit	Enzyme	198	0.59	0.85	0.42718	0.01		1	1	0	1999	1999
Rheumatoid Arthritis	C0003873	BM P10	27302	O95393	bone morphogenetic protein 10	Signaling	32	0.674	0.5	0.90838	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	RA BGEF1	27342	Q9UJ41	RAB guanine nucleotide exchange factor 1	Enzyme modulator	122	0.55	0.731	0.00631	0.01		1	1	0	2006	2006
Rheumatoid Arthritis	C0003873	GL I1	2735	P08151	GLI family zinc finger 1		369	0.431	0.846	7.66E-14	0.01		1	1	0	2014	2014
Rheumatoid Arthritis	C0003873	AP OBEC3C	27350	Q9NRW3	apolipoprotein B mRNA editing enzyme catalytic subunit 3C	Enzyme	27	0.722	0.538	0.02691	0.01		1	1	0	2017	2017
Rheumatoid Ar	C0003873	GN A12	2768	Q03113	G protein subunit alpha 12	Enzyme modulator	130	0.547	0.769	0.96994	0.01		1	1	0	2014	2014

thr itis						ato r											
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GN AQ	2 7 7 6	P5014 8	G protein subunit alpha q	En zy me mo dul ato r	21 9	0 . 5 1 6	0 . 8 0 8	0. 9 8 0 6 9	0. 01		0	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GN B3	2 7 8 4	P1652 0	G protein subunit beta 3	En zy me	19 2	0 . 5 1 8	0 . 8 0 8	3. 3 3 E - 1 1	0. 01		1	1	1	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GN S	2 7 9 9	P1558 6	glucosa mine (N- acetyl)- 6- sulfatase	En zy me	51	0 . 7 0 5	0 . 5 3 8	0. 0 0 5 6 4	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GP C1	2 8 1 7	P3505 2	glypican 1		96	0 . 5 8 7	0 . 7 3 1	0. 0 1 5 4 7	0. 01		1	1	0	20 05	2 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GP LD 1	2 8 2 2	P8010 8	glycosylphosp hatidylinositol specific phospholipase D1		44	0 . 6 5 6	0 . 5 7 7	1. 5 9 E - 1 5	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IFN L2	2 8 2 6 1 6	Q8IZJ 0	interferon lambda 2		38	0 . 6 6 6	0 . 6 1 5	4. 9 9 E - 0 8	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi	C 00 03	GP R3	2 8 2 7	P4608 9	G protein- coupled	G- pro tei n	18	0 . 7	0 . 5	0. 0 0 0	0. 01		1	1	0	20 19	2 0 1 9

d Ar thr itis	87 3				receptor 3	co upl ed rec ept or		4 3		2 6 3							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AN G	2 8 3	P0395 0	angiogenin		18 5	0 . 5 1 1	0 . 7 6 9	0. 2 8 7 3 8	0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H1 9	2 8 3 1 2 0		H19 imprinted maternally expressed transcript		24 2	0 . 4 9 4	0 . 9 2 3		0. 01		1	1	2	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NE AT 1	2 8 3 1 3 1		nuclear paraspeckle assembly transcript 1		17 9	0 . 5 0 2	0 . 7 6 9		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UT S2 R	2 8 3 7	Q9U KP6	urotensi n 2 receptor	G- pro tei n co upl ed rec ept or	98	0 . 5 6 6	0 . 9 2	2. 3 2 E - 0 5	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IG HV 5- 78	2 8 3 8 7		immunoglobul in heavy variable 5-78 (pseudogene)		5	0 . 8 3 9	0 . 2 3 1		0. 01		1	1	0	20 01	2 0 0 1
Rh eu ma toi d Ar	C 00 03 87 3	IG HV 1- 69	2 8 4 6 1	P0174 2	immunoglobul in heavy variable 1-69		19	0 . 7 2 9	0 . 4 6 2		0. 01		1	1	0	20 02	2 0 0 2

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI F- AS 1	2 8 4 8 8 9		MIF antisense RNA 1		38	0 . 6 6 3	0 . 5 7 7		0. 01		1	1	2	19 99	1 9 9 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GP ER 1	2 8 5 2	Q995 27	G protein- coupled estrogen receptor 1	G- pro tei n co upl ed rec ept or	18 0	0 . 5 0 5	0 . 7 3 1	0. 5 7 4 3 4	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY P4 V2	2 8 5 4 4 0	Q6Z WL3	cytochro me P450 family 4 subfamil y V member 2	En zy me	42	0 . 6 7	0 . 5 7 7	2. 2 E - 1 0	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TR BV 28	2 8 5 5 9	A0A5 B6	T cell receptor beta variable 28		4	0 . 8 9	0 . 1 9 2		0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TR BV 27	2 8 5 6 0	A0A0 K0K1 C4	T cell receptor beta variable 27		5	0 . 8 6 1	0 . 2 3 1		0. 01		1	1	0	19 98	1 9 9 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TR BV 20- 1	2 8 5 6 7	A0A0 75B6 N2	T cell receptor beta variable 20-1		7	0 . 8 2 1	0 . 3 4 6		0. 01		1	1	0	19 93	1 9 9 3

Rheumatoid Arthritis	C0003873	TRBV14	28573	A0A5B0	T cell receptor beta variable 14		4	0.89	0.154		0.01		1	1	0	1998	1998
Rheumatoid Arthritis	C0003873	TRBV6-7	28600		T cell receptor beta variable 6-7 (non-functional)		1	1	0.115		0.01		1	1	0	1996	1996
Rheumatoid Arthritis	C0003873	TRBV3-1	28619	A0A576	T cell receptor beta variable 3-1		4	0.89	0.192		0.01		1	1	0	2003	2003
Rheumatoid Arthritis	C0003873	TRBV2	28620	A0A1B0GX68	T cell receptor beta variable 2		4	0.861	0.269		0.01		1	1	0	1993	1993
Rheumatoid Arthritis	C0003873	GP39	2863	O43194	G protein-coupled receptor 39	G-protein coupled receptor	45	0.65	0.615	2.81E-09	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	TRBC2	28638	A0A5B9	T cell receptor beta constant 2		4	0.931	0.192		0.01		1	1	0	1994	1994
Rheumatoid	C0003	TRAV5	286	A0A0B4J249	T cell receptor alpha variable 5		1	1	0.1		0.01		1	1	0	1998	1998

d Ar thr itis	87 3		8 8						1 5								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GR K5	2 8 6 9	P3494 7	G protein- coupled receptor kinase 5	Ki nas e	86	0 . 5 8 8	0 . 7 6 9	0. 6 7 5 6 7	0. 01		1	1	0	19 99	1 9 9 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GR B2	2 8 8 5	P6299 3	growth factor receptor bound protein 2		12 2	0 . 5 4 6	0 . 7 6 9	0. 9 3 9 3 4	0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IG KV 3D- 15	2 8 8 7 5	A0A0 87WS Y6	immuno globulin kappa variable 3D-15 (gene/ps eudogen e)	Im mu ne res po nse	4	0 . 8 6 1	0 . 1 9 2		0. 01		1	1	0	19 98	1 9 9 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GR IA1	2 8 9 0	P4226 1	glutamat e ionotrop ic receptor AMPA type subunit 1	Ion ch an nel	12 6	0 . 5 7	0 . 5 7 7	0. 9 9 8 6 9	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IG KV 1D- 8	2 8 9 0 4	A0A0 87WS Z0	immuno globulin kappa variable 1D-8	Im mu ne res po nse	4	0 . 8 6 1	0 . 1 9 2		0. 01		1	1	0	19 98	1 9 9 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IG KV 3- 20	2 8 9 1 2	P0161 9	immuno globulin kappa variable 3-20	Im mu ne res po nse	19	0 . 7 3 6	0 . 3 0 8		0. 01		1	1	0	19 98	1 9 9 8

Rheumatoid Arthritis	C0003873	IGKV2-29	28920	A2NJV5	immunoglobulin kappa variable 2-29 (gene/psudogene)	Immuneresponse	12	0.769	0.231		0.01		1	1	0	1998	1998
Rheumatoid Arthritis	C0003873	REM1	28954	O75628	RRAD GEM GTPase 1	and like	177	0.531	0.885	5.34E-08	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	LA MTOR2	28956	Q9Y2Q5	late endosomal/lysosomal adaptor, MAPK and MTOR activator 2		129	0.538	0.888	0.119816	0.01		1	1	0	1990	1990
Rheumatoid Arthritis	C0003873	RGCC	28984	Q9H4X1	regulator of cell cycle	of	81	0.595	0.769	0.04815	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	HIPK2	28996	Q9H2X6	homeodomain interacting protein kinase 2	Kinase	102	0.566	0.731	1	0.01		0	1	0	2019	2019
Rheumatoid Arthritis	C0003873	GRK4	29000	Q16099	glutamate ionotropic receptor kainate type subunit 4	Ion channel	41	0.678	0.413	0.1126	0.01		1	1	0	2014	2014
Rheumatoid Arthritis	C0003873	STXB P6	29091	Q8NF X7	syntrophin binding protein 6	Transporter	8	0.805	0.269	7.87E-01	0.01		1	1	0	2012	2012

Ar thr itis									0 5								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UH RF 1	2 9 1 2 8	Q96T 88	ubiquitin like with PHD and ring finger domains 1		12 5	0 . 5 4	0 . 6 9 2		0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CX CL 3	2 9 2 1	P1987 6	C-X-C motif chemoki ne ligand 3	Sig nal ing	47	0 . 6 5	0 . 6 9 2	0. 0 0 0 3 0 2	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PDI A3	2 9 2 3	P3010 1	protein disulfide isomerase family A member 3		10 0	0 . 5 6 6	0 . 7 6 9	0. 9 9 6 0 8	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GR PR	2 9 2 5	P3055 0	gastrin releasin g peptide receptor	G- pro tei n co upl ed rec ept or	85	0 . 5 9 5	0 . 5 3 8	0. 2 2 4 4 4	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GS N	2 9 3 4	P0639 6	gelsolin	Ce llul ar str uct ure	26 2	0 . 4 7 5	0 . 8 8 5	3. 8 9 E - 1 1	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GT S	2 9 7 3		Gilles de la Tourette syndrome		32	0 . 6 8 2	0 . 6 1 5		0. 01		1	1	0	20 18	2 0 1 8

Rheumatoid Arthritis	C003873	GY S1	2997	P13807	glycogen synthase 1		26	0.722	0.385	0.0291	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C003873	EF EM P2	30008	O95967	EGF containing fibulin extracellular matrix protein 2	Calcium-binding protein	126	0.59	0.692	0.0814	0.01		1	1	0	2006	2006
Rheumatoid Arthritis	C003873	GZ MM	3004	P51124	granzyme M	Enzyme	36	0.686	0.577	0.0125	0.01		1	1	0	2020	2020
Rheumatoid Arthritis	C003873	AN XA 2	3002	P07355	annexin A2		294	0.453	0.808	9.77E-05	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C003873	HA GH	3029	Q16775	hydroxyacylglutathione hydrolase		20	0.729	0.462	0.0177	0.01		1	1	0	1990	1990
Rheumatoid Arthritis	C003873	HA RS 1	3035	P12081	histidyl-tRNA synthetase 1	Enzyme	127	0.569	0.808	2.38E-06	0.01		1	1	0	2006	2006
Rheumatoid	C003	HA S1	3036	Q92839	hyaluronan synthase 1		45	0.67	0.5	1.31E	0.01		1	1	0	2004	2004

d Ar thr itis	87 3								7 7	- 1 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HA S3	3 0 3 8	O002 19	hyaluronan synthase 3		51	0 . 6 4 4	0 . 6 9 2	0. 8 8 3 1 6	0. 01		1	1	0	20 04	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HC RT R1	3 0 6 1	O436 13	hypocret in receptor 1	G- pro tei n co upl ed rec ept or	71	0 . 6 2 3	0 . 6 5 4	0. 0 0 0 1 7 4	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HD C	3 0 6 7	P1911 3	histidine decarboxylase		92	0 . 5 8 4	0 . 6 9 2	0. 0 0 4 1 0 9	0. 01		1	1	0	20 04	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AN XA 4	3 0 7	P0952 5	annexin A4		74	0 . 5 9 9	0 . 6 9 2	1. 1 9 E - 0 8	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HE XA	3 0 7 3	P0686 5	hexosam inidase subunit alpha	En zy me	79	0 . 6 3 3	0 . 6 1 5	1. 3 4 E - 1 1	0. 01		1	1	0	20 02	2 0 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HE XB	3 0 7 4	P0768 6	hexosam inidase subunit beta	En zy me	62	0 . 6 4 4	0 . 6 5 4	3. 4 9 E - 1 0	0. 01		1	1	0	20 02	2 0 0 2

Rheumatoid Arthritis	C0003873	ANXA5	308	P08758	annexin A5		283	0.458	0.769	3.8E-15	0.01		1	1	0	2013	2013
Rheumatoid Arthritis	C0003873	KCNIP3	30818	Q9Y2W7	potassium voltage-gated channel interacting protein 3	Ion channel	60	0.626	0.654	0.03604	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	CD209	30835	Q9NWX6	CD209 molecule	Receptor	57	0.626	0.769	2.74E-13	0.01		1	1	0	2009	2009
Rheumatoid Arthritis	C0003873	TAX1BP3	30851	O14907	Tax1 binding protein 3		27	0.716	0.615	0.005243	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	HK1	3098	P19367	hexokinase 1	Kinase	161	0.542	0.731	0.091459	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	HK2	3099	P52789	hexokinase 2	Kinase	152	0.515	0.769	0.004589	0.01		1	1	0	2018	2018
Rheumatoid Ar	C0003873	HLA-DRB2	3124		major histocompatibility complex, class II, DR beta 2 (pseudogene)		8	0.861	0.269		0.01		1	1	0	2018	2018

thr itis																
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- DR B6	3 1 2 8		major histocompatib ility complex, class II, DR beta 6 (pseudogene)	9	0 . 8 2 1	0 . 3 0 8		0. 01		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A- E	3 1 3 3	P1374 7	major histocompatib ility complex, class I, E	11 8	0 . 5 4 5	0 . 7 6 9	0. 0 3 6 7 7 3	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HM GC R	3 1 5 6	P0403 5	3-hydroxy-3- methylglutaryl -CoA reductase	15 4	0 . 5 2 9	0 . 6 9 2	0. 9 9 8 6 1	0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HM MR	3 1 6 1	O753 30	hyaluronan mediated motility receptor	11 7	0 . 5 4 4	0 . 6 1 5	5. 5 2 E - 2 1	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AP AF 1	3 1 7	O147 27	apoptotic peptidase activating factor 1	14 5	0 . 5 2 5	0 . 7 6 9	9. 6 2 E - 0 6	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HN RN PC	3 1 8 3	P0791 0	heterogeneous nuclear ribonucleoprot ein C	61	0 . 6 0 6	0 . 5 3 8	0. 9 7 7 2	0. 01		1	1	0	19 96	1 9 9 6
Rh eu ma toi	C 00 03	HO XB 2	3 2 1 2	P1465 2	homeobox B2	52	0 . 6	0 . 5	0. 0 0 0	0. 01		1	1	0	20 05	2 0 0 5

d Ar thr itis	87 3						1 2	7 7	1 4 6								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HO XD 4	3 2 3 3	P0901 6	homeobox D4	15	0 . 7 6	0 . 3 4 6	0. 0 0 5 4 4 8	0. 01		1	1	0	19 96	1 9 9 6	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AP CS	3 2 5	P0274 3	amyloid P component, serum	14 1	0 . 5 3 1	0 . 8 0 8	0. 0 3 1 7 4	0. 01		1	1	0	20 11	2 0 1 1	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HP RT 1	3 2 5 1	P0049 2	hypoxan thine phospho ribosyltr ansferase 1	En zy me	21 0	0 . 5	0 . 8 0 8	0. 9 3 7 2 8	0. 01		1	1	0	19 98	1 9 9 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HR G	3 2 7 3	P0419 6	histidine rich glycopro tein	En zy me mo dul ato r	72	0 . 6 0 3	0 . 5 7	5. 8 9 E - 1 4	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR MT 1	3 2 7 6	Q998 73	protein arginine methyltr ansferase 1	Ep ige net ic reg ula tor	11 0	0 . 5 5 2	0 . 8 0 8	0. 9 9 0 7	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HE S1	3 2 8 0	Q144 69	hes family bHLH transcrip tion factor 1	Tr ans cri pti on fac tor	24 3	0 . 4 6 8	0 . 8 8 5	0. 7 0 7 2	0. 01		1	1	0	20 17	2 0 1 7

Rheumatoid Arthritis	C0003873	BI RC2	329	Q13490	baculoviral IAP repeat containing 2	Enzyme modulator	125	0.535	0.731	0.42708	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	BI RC3	330	Q13489	baculoviral IAP repeat containing 3	Enzyme modulator	209	0.491	0.769	0.06597	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	HS PA1A	3303	P0D MV8; P0D MV9	heat shock protein family A (Hsp70) member 1A		229	0.486	0.769	0.0328	0.01		1	1	0	1996	1996
Rheumatoid Arthritis	C0003873	HS PA1B	3304	P0D MV8; P0D MV9	heat shock protein family A (Hsp70) member 1B		251	0.474	0.808	0.05346	0.01		1	1	0	1996	1996
Rheumatoid Arthritis	C0003873	HS PA5	3309	P11021	heat shock protein family A (Hsp70) member 5		350	0.434	0.835	0.07341	0.01		1	1	0	2014	2014
Rheumatoid Arthritis	C0003873	XI AP	331	P98170	X-linked inhibitor of apoptosis	Enzyme modulator	321	0.447	0.808	0.09837	0.01		1	1	0	2000	2000
Rheumatoid Ar	C0003873	HS PB1	3315	P04792	heat shock protein family B (small) member 1		395	0.436	0.808	2.78E-	0.01		1	1	0	2011	2011

thr itis									0 7								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HS PB 2	3 3 1 6	Q160 82	heat shock protein family B (small) member 2	29 0	0 . 4 5 7	0 . 7 6 9	0. 0 0 3 3	0. 01		1	1	0	20 11	2 0 1 1	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ND ST 1	3 3 4 0	P5284 8	N-deacetylase and N- sulfotransferas e 1	93	0 . 6 0 8	0 . 6 9 2	0. 9 9 9 5	0. 01		1	1	0	20 19	2 0 1 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AP OA 1	3 3 5	P0264 7	apolipoprotein A1	41 6	0 . 4 2 9	0 . 8 8 5	0. 0 0 5 4 9	0. 01		0	1	0	20 15	2 0 1 5	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AP OA 2	3 3 6	P0265 2	apolipop rotein A2	Tr ans por ter	77	0 . 5 8 2	0 . 7 6 9	0. 0 4 4 8	0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IAP P	3 3 7 5	P1099 7	islet amyloid polypept ide	Sig nal ing	18 3	0 . 5 0 7	0 . 8 0 8	0. 0 3 1 8 1	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RS PO 2	3 4 0 4 1 9	Q6U XX9	R-spondin 2	11 3	0 . 5 5 8	0 . 5 7 7	0. 0 2 4 6 0 8	0. 01		1	1	0	20 12	2 0 1 2	
Rh eu ma toi	C 00 03	ID DM 7	3 4 0 6		insulin dependent diabetes mellitus 7	5	0 . 8	0 . 1		0. 01		0	1	0	20 00	2 0 0 0	

d Ar thr itis	87 3						6 1	9 2									
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ID DM 13	3 4 1 2		insulin dependent diabetes mellitus 13	3	0 . 8 9	0 . 1 9 2		0. 01		1	1	0	20 02	2 0 0 2	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IFI 16	3 4 2 8	Q166 66	interfero n gamma inducibl e protein 16	Tr ans cri pti on fac tor	79	0 . 6 0 3	0 . 7 6 9	1. 7 8 E - 1 1	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IFI 27	3 4 2 9	P4030 5	interferon alpha inducible protein 27		33 2	0 . 4 3 7	0 . 7 6 9	0. 0 1 0 6 9 8	0. 01		1	1	0	20 05	2 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IFI 35	3 4 3 0	P8021 7	interfero n induced protein 35	Tr ans cri pti on fac tor	17	0 . 7 6	0 . 4 6 2	4. 2 8 E - 0 7	0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY CS P51	3 4 3 0 4 5		CYCS pseudogene 51		15	0 . 7 5 1	0 . 4 2 3		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IFI T2	3 4 3 3	P0991 3	interferon induced protein with tetratricopepti de repeats 2		42	0 . 6 5 6	0 . 5 0 9 9	0. 2 5 0 9 9	0. 01		1	1	0	20 17	2 0 1 7

Rheumatoid Arthritis	C0003873	IFT1	3434	P09914	interferon induced protein with tetratricopeptide repeats 1		39	0.666	0.50278	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	IFNGR2	3460	P38484	interferon gamma receptor 2	Receptor	71	0.597	0.5781	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	ZNF391	346157	Q9UJN7	zinc finger protein 391		1	1	0.15E-08	0.01		1	1	0	2011	2011
Rheumatoid Arthritis	C0003873	IGFBP4	3487	P22692	insulin like growth factor binding protein 4	Enzyme modulator	94	0.572257	0.0023057	0.01		1	1	0	2005	2005
Rheumatoid Arthritis	C0003873	IGFBP6	3489	P24592	insulin like growth factor binding protein 6	Enzyme modulator	71	0.601215	0.002915	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	IGFBP7	3490	Q16270	insulin like growth factor binding protein 7		241	0.4769	0.001287	0.01		1	1	0	2011	2011
Rheumatoid Ar	C0003873	IGH	3492		immunoglobulin heavy locus		238	0.473	0.654	0.01		1	1	0	2017	2017

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NM NA T3	3 4 9 5 6 5	Q96T 66	nicotinamide nucleotide adenylyltransf erase 3	7	0 . 8 2 1	0 . 3 4 6	6. 2 4 E - 0 8	0. 01		1	1	0	20 19	2 0 1 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IG KC	3 5 1 4	P0183 4	immunoglobul in kappa constant	26	0 . 7	0 . 4 2 3		0. 01		1	1	0	19 89	1 9 8 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HL A-P	3 5 2 9 6 3		major histocompatib ility complex, class I, P (pseudogene)	2	0 . 9 3 1	0 . 1 9 2		0. 01		1	1	0	20 09	2 0 0 9	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PA DI6	3 5 3 2 3 8	Q6TG C4	peptidyl arginine deiminase 6	14	0 . 7 6	0 . 2 6 9		0. 01		1	1	0	20 07	2 0 0 7	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TIC AM 2	3 5 3 3 7 6	Q86X R7;Q 9Y3B 3	toll like receptor adaptor molecule 2	33 2	0 . 4 3 8	0 . 7 6 9	0. 0 0 2 5 9 4	0. 01		1	1	0	20 05	2 0 0 5	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2 RG	3 5 6 1	P3178 5	interleuk in 2 receptor subunit gamma	Sig nal ing	16 4	0 . 5 3 5	0 . 7 6 9	0. 9 9 1 5 2	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi	C 00 03	IL1 1R A	3 5 9 0	Q146 26	interleuk in 11 receptor	Sig nal ing	46	0 . 6	0 . 6	6. 2 9 E	0. 01		1	1	0	20 18	2 0 1 8

d Ar thr itis	87 3				subunit alpha			6 3	5 4	- 2 1							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 2R B1	3 5 9 4	P4270 1	interleuk in 12 receptor subunit beta 1	Sig nal ing	11 8	0 . 5 5 5	0 . 7 3 1	9. 3 6 E - 1 5	0. 01		0	1	0	20 05	2 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL1 5R A	3 6 0 1	Q132 61	interleukin 15 receptor subunit alpha		72	0 . 6 0 3	0 . 7 6 9	2. 3 3 E - 0 6	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY CS P52	3 6 0 1 5 5		CYCS pseudogene 52		1	1	0 . 1 1 5		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	INS	3 6 3 0	P0130 8	insulin		40 5	0 . 4 4 5	0 . 9 2 3	0. 3 0 0 9 1	0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	INP P5 D	3 6 3 5	Q928 35	inositol polyphosphate -5- phosphatase D		10 9	0 . 5 5 8	0 . 7 3 1 9 8	0. 9 7 1 9 8	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IR AK 2	3 6 5 6	O431 87	interleuk in 1 receptor associat ed kinase 2	Ki nas e	22	0 . 7 2 2	0 . 3 8 5	2. 6 1 E - 1 9	0. 01		1	1	2	20 18	2 0 1 8
Rh eu	C 00 3	IRF 3	3 6	Q146 53	interfero n	Tr ans	17 4	0 . .	0 . .	0. 0	0. 01		1	1	0	20 07	2 0

matoid Arthritis	03873		61		regulatory factor 3	cription factor		517	808	00116							07
Rheumatoid Arthritis	C0003873	ISL1	3670	P61371	ISL LIM homeobox 1	Transcription factor	94	0.579	0.654	0.86857	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	ITGA2B	3674	P08514	integrin subunit alpha 2b		215	0.493	0.692	1.52E-16	0.01		1	1	0	1990	1990
Rheumatoid Arthritis	C0003873	ITGA5	3678	P08648	integrin subunit alpha 5		145	0.524	0.769	0.4255	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	ITGA9	3680	Q13797	integrin subunit alpha 9		62	0.621	0.692	0.008158	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	ITIH1	3697	P19827	inter-alpha-trypsin inhibitor heavy chain 1	Enzyme modulator	38	0.691	0.462	2.08E-31	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	ITIH4	3700	Q14624	inter-alpha-trypsin inhibitor heavy chain 4	Enzyme modulator	129	0.559	0.769	6.44E-13	0.01		1	1	0	2018	2018

Rheumatoid Arthritis	C0003873	ITP R2	3709	Q14571	inositol 1,4,5-trisphosphate receptor type 2	Ion channel	55	0.631	0.654	5.71E-29	0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	CD82	3732	P27701	CD82 molecule		172	0.507	0.731	1.27E-08	0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	KCNA4	3739	P22459	potassium voltage-gated channel subfamily A member 4	Ion channel	28	0.716	0.423	0.9827	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	MIA3	375056	Q5JRA6	MIA domain export factor 3	SH3 ER	27	0.716	0.423	0.0375	0.01		1	1	1	2012	2012
Rheumatoid Arthritis	C0003873	ENHO	375704	Q6UWT2	energy homeostasis associated		71	0.599	0.769	0.1026	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	KCNQ1	3784	P51787	potassium voltage-gated channel subfamily Q member 1	Ion channel	281	0.485	0.769	4.55E-08	0.01		1	1	1	2018	2018
Rheumatoid	C0003	PICSA R	3788		P38 inhibited cutaneous squamous cell carcinoma		11	0.8	0.3		0.01		1	1	0	2019	2019

d Ar thr itis	87 3		2 5		associated lincRNA			2 1	0 8								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KI R2 DS 3	3 8 0 8	Q149 52	killer cell immuno globulin like receptor, two Ig domains and short cytoplas mic tail 3	Re ce pto r	20	0 . 7 1 6	0 . 4 2 3		0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KI R2 DS 4	3 8 0 9	P4363 2	killer cell immuno globulin like receptor, two Ig domains and short cytoplas mic tail 4	Re ce pto r	30	0 . 6 7 4	0 . 5		0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KI R3 DS 1	3 8 1 3	Q149 43	killer cell immuno globulin like receptor, three Ig domains and short cytoplas mic tail 1	Re ce pto r	57	0 . 6 1 7	0 . 6 9 2		0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KI T	3 8 1 5	P1072 1	KIT proto- oncogen e, receptor tyrosine kinase	Ki nas e	71 5	0 . 3 6 6	0 . 8 0 8	0. 9 8 8 7	0. 01		1	1	0	20 20	2 0 2 0
Rh eu ma	C 00 03	KP NA 2	3 8	P5229 2	karyoph erin	Tr ans	79	0 . 5	0 . 6	0. 5 4	0. 01		1	1	0	20 15	2 0

to id Ar thr itis	87 3		3 8		subunit alpha 2	por ter		8 8	5 4	1 3 3							1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AR G2	3 8 4	P7854 0	arginase 2	En zy me	10 3	0 . 5 6 9	0 . 7 3 1	0. 0 0 1 8 2	0. 01		1	1	0	20 02	2 0 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KR TA P5- 9	3 8 4 6	P2637 1	keratin associated protein 5-9		2	0 . 9 3 1	0 . 1 1 4 5	0. 0 1 4 9 8 1	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KR T5	3 8 5 2	P1364 7	keratin 5		20 3	0 . 5 1 2	0 . 7 3 1	0. 6 4 1 7 2	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KR T7	3 8 5 5	P0872 9	keratin 7		28 7	0 . 4 6 3	0 . 8 0 8	3. 0 9 E - 1 2	0. 01		1	1	0	20 04	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KR T8	3 8 5 6	P0578 7	keratin 8		16 6	0 . 5 1 7	0 . 6 5 4	2. 3 6 E - 0 8	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KR T13	3 8 6 0	P1364 6	keratin 13		53	0 . 6 3 1	0 . 6 9 2	0. 0 0 0 6 4 1	0. 01		1	1	0	20 17	2 0 1 7

Rheumatoid Arthritis	C0003873	KRT16	3868	P08779	keratin 16		97	0.565	0.769	1.5E-14	0.01		1	1	0	2001	2001
Rheumatoid Arthritis	C0003873	THESIS	387357	Q8N1K5	thymocyte selection associated		32	0.682	0.654	1.96E-06	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	RTL1	388015	A6NKG5	retrotransposon Gag like 1		119	0.554	0.808	0.005614	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	LAG3	3902	P18627	lymphocyte activating 3	Receptor	154	0.517	0.692	0.027623	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	LAIR2	3904	Q6IS4	leukocyte associated immunoglobulin like receptor 2	Receptor	12	0.78	0.269	2.6E-07	0.01		1	1	0	2008	2008
Rheumatoid Arthritis	C0003873	LA3	3909	Q16787	laminin subunit alpha 3	Enzyme modulator	110	0.576	0.731	8.83E-46	0.01		1	1	0	2017	2017
Rheumatoid	C0003873	RPS12P4	3913		ribosomal protein S12 pseudogene 4		1	1	0.15		0.01		1	1	0	2011	2011

Ar thr itis			7 0														
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LB R	3 9 3 0	Q147 39	lamin B receptor	En zy me	30 7	0 . 4 7 3	0 . 8 0 8	0. 1 8 1 4 3	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LC AT	3 9 3 1	P0418 0	lecithin- choleste rol acyltran sferase	En zy me	94	0 . 5 8 8	0 . 6 5 4	0. 0 8 1 0 2	0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LC K	3 9 3 2	P0623 9	LCK proto- oncogen e, Src family tyrosine kinase	Ki nas e	10 3	0 . 5 6 4	0 . 7 6 9	0. 9 9 2 6	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LE CT 2	3 9 5 0	O149 60	leukocyt e cell derived chemota xin 2	Sig nal ing	47	0 . 6 5 3	0 . 5 0	0. 0 1 4 8 1	0. 01		1	1	1	20 05	2 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LIF R	3 9 7 7	P4270 2	LIF receptor subunit alpha	Sig nal ing	19 8	0 . 5 2 3	0 . 8 0 8	1. 4 9 E - 1 3	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LN PE P	4 0 1 2	Q9UI Q6	leucyl and cystinyl aminope ptidase	En zy me	17 4	0 . 5 1 4	0 . 7 3 1	0. 9 9 5 7	0. 01		1	1	0	19 92	1 9 9 2
Rh eu ma	C 00 03	SA PC D1	4 0 1	Q5SS Q6	suppressor APC domain containing 1		2	0 . 9	0 . 1	1. 8 1	0. 01		1	1	0	20 11	2 0

to id Ar thr itis	87 3		2 5 1				3 1	5 4	E - 0 7							1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CR IP3	4 0 1 2 6 2	Q6Q6 R5	cysteine rich protein 3	17	0 . 8 0 5	0 . 3 0 8	0. 0 0 6 4 8	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LO XL 2	4 0 1 7	Q9Y4 K0	lysyl oxidase like 2	14 9	0 . 5 2 7	0 . 7 3 1	3. 3 8 E - 0 7	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LE RF S	4 0 3 3 2 3		lncRNA negative regulator of fibroblast-like synoviocyte migration, SYNCRIP interacting	1	1	0 . 1 1 5		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LR P1	4 0 3 5	Q079 54	LDL receptor related protein 1	25 2	0 . 4 8 2	0 . 7 6 9	1	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LR P2	4 0 3 6	P9816 4	LDL receptor related protein 2	25 4	0 . 4 9 1	0 . 8 4 6	0. 9 9 9 9	0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LR P6	4 0 4 0	O755 81	LDL receptor related protein 6	13 4	0 . 5 3 6	0 . 8 0 8	0. 6 9 6 4	0. 01		1	1	0	20 14	2 0 1 4

Rheumatoid Arthritis	C0003873	LS P1	4046	P33241	lymphocyte specific protein 1	41	0.7	0.462	1.47E-06	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	LT BR	4055	P36941	lymphotoxin beta receptor	78	0.592	0.692	0.3058	0.01		1	1	0	2008	2008
Rheumatoid Arthritis	C0003873	MI RL ET 7B	406884		microRNA let-7b	186	0.493	0.769		0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	MI R1 06 A	406899		microRNA 106a	140	0.524	0.846		0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	LY Z	4069	P61626	lysozyme	178	0.526	0.846	3.41E-06	0.01		1	1	0	1989	1989
Rheumatoid Arthritis	C0003873	MI R1 25 A	406910		microRNA 125a	225	0.489	0.769		0.01		1	1	0	2019	2019
Rheumatoid Ar	C0003873	MI R1 37	406928		microRNA 137	171	0.513	0.846		0.01		1	1	0	2018	2018

thr itis																
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 41	4 0 6 9 3 3		microRNA 141	17 9	0 . 4 9 7	0 . 8 0 8		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 42	4 0 6 9 3 4		microRNA 142	22 0	0 . 4 8	0 . 8 4 6		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 47 A	4 0 6 9 3 9		microRNA 147a	21	0 . 7 1 6	0 . 4 2 3		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 50	4 0 6 9 4 2		microRNA 150	28 2	0 . 4 5 5	0 . 8 0 8		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 6-1	4 0 6 9 5 0		microRNA 16-1	57	0 . 6 2 3	0 . 5		0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 8A	4 0 6 9 5 3		microRNA 18a	15 4	0 . 5 2	0 . 8 4 6		0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi	C 00 03	MI R1 82	4 0 6 9		microRNA 182	21 1	0 . 4	0 . 8		0. 01		1	1	0	20 18	2 0 1 8

d Ar thr itis	87 3		5 8				8 6	4 6								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 83	4 0 6 9 5 9		microRNA 183	19 0	0 . 4 9 4	0 . 8 8 5		0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 88	4 0 6 9 6 4		microRNA 188	61	0 . 6 1 2	0 . 8 0 8		0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 93 A	4 0 6 9 6 8		microRNA 193a	11 6	0 . 5 4 1	0 . 7 3 1		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 96 A2	4 0 6 9 7 3		microRNA 196a-2	70	0 . 5 9 9	0 . 5 7 7		0. 01		1	1	1	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 99 A1	4 0 6 9 7 6		microRNA 199a-1	87	0 . 5 7 8	0 . 5 7 7		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 99 A2	4 0 6 9 7 7		microRNA 199a-2	87	0 . 5 7 8	0 . 5 7 7		0. 01		1	1	0	20 18	2 0 1 8

Rheumatoid Arthritis	C0003873	MI R19A	406979		microRNA 19a	151	0.512	0.808		0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	MI R19B1	406980		microRNA 19b-1	144	0.529	0.769		0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	MI R200C	406985		microRNA 200c	202	0.486	0.846		0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	MI R203A	406986		microRNA 203a	237	0.471	0.808		0.01		1	1	0	2011	2011
Rheumatoid Arthritis	C0003873	MI R204	406987		microRNA 204	203	0.487	0.808		0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	MI R212	406994		microRNA 212	126	0.535	0.808		0.01		1	1	0	2018	2018
Rheumatoid Ar	C0003873	MI R219A2	407003		microRNA 219a-2	8	0.839	0.269		0.01		1	1	0	2015	2015

thr itis																
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 3A	4 0 7 0 1 0		microRNA 23a	17 4	0 . 4 9 9	0 . 8 0 8		0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 6B	4 0 7 0 1 7		microRNA 26b	12 8	0 . 5 2 9	0 . 8 0 8		0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 7B	4 0 7 0 1 9		microRNA 27b	14 1	0 . 5 2 9	0 . 7 6 9		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 9B 1	4 0 7 0 2 4		microRNA 29b-1	21 2	0 . 4 8 5	0 . 8 4 6		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R2 9B 2	4 0 7 0 2 5		microRNA 29b-2	21 4	0 . 4 8 4	0 . 8 8 5		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R3 01 A	4 0 7 0 2 7		microRNA 301a	10 2	0 . 5 5 8	0 . 8 0 8		0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi	C 00 03	MI R3 20 A	4 0 7 0		microRNA 320a	14 5	0 . 5	0 . 8		0. 01		1	1	0	20 19	2 0 1 9

d Ar thr itis	87 3		3 7				2 6	0 8								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R3 3A	4 0 7 0 3 9		microRNA 33a	10 0	0 . 5 6	0 . 6 5 4		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R3 4B	4 0 7 0 4 1		microRNA 34b	16 5	0 . 5 0 9	0 . 8 0 8		0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R3 4C	4 0 7 0 4 2		microRNA 34c	13 1	0 . 5 4 1	0 . 8 8 5		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R7- 1	4 0 7 0 4 3		microRNA 7- 1	52	0 . 6 2 8	0 . 6 9 2		0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R7- 2	4 0 7 0 4 4		microRNA 7- 2	54	0 . 6 2 3	0 . 6 9 2		0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R7- 3	4 0 7 0 4 5		microRNA 7- 3	53	0 . 6 2 6	0 . 6 9 2		0. 01		1	1	0	20 17	2 0 1 7

Rheumatoid Arthritis	C0003873	MIR99B	407056		microRNA 99b		52	0.633	0.615		0.01		1	1	0	2020	2020
Rheumatoid Arthritis	C0003873	CAPRI N1	40776	Q14444	cell cycle associated protein 1	Transporter	29	0.691	0.57247	0.9747	0.01		1	1	0	2020	2020
Rheumatoid Arthritis	C0003873	TNFSF12 - TNFSF13	40777	O43508	TNFSF12-TNFSF13 readthrough		91	0.579	0.61957	0.797	0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	ARRB1	4008	P49407	arrestin beta 1	Enzyme modulator	92	0.588	0.84694	0.99394	0.01		1	1	0	2011	2011
Rheumatoid Arthritis	C0003873	MAA	4080		microphthalmia or anophthalmia and associated anomalies		37	0.666	0.577		0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	SMAD1	4086	Q15797	SMAD family member 1	Transcription factor	138	0.533	0.73103	0.98803	0.01		1	1	0	2018	2018
Rheumatoid Ar	C0003873	ARRB2	4009	P32121	arrestin beta 2	Enzyme modulator	119	0.561	0.769	0.50658	0.01		1	1	0	2019	2019

thr itis						ato r											
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ASI C1	4 1	P7834 8	acid sensing ion channel subunit 1	Ion ch an nel	52	0 . 6 5 3	0 . 6 1 5	0. 9 3 0 1 7	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA L	4 1 1 8	P2114 5	mal, T cell different iation protein	Tr ans por ter	10 2	0 . 5 7	0 . 5 7 7	0. 8 3 1 9 7	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA PT	4 1 3 7	P1063 6	microtubule associated protein tau		46 9	0 . 4 4 6	0 . 9 2 3	0. 0 6 0 2 6	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA RK 1	4 1 3 9	Q9P0 L2	microtu bule affinity regulatin g kinase 1	Ki nas e	40	0 . 6 6 3	0 . 5 7 7	0. 6 0 4 5	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MB NL 1	4 1 5 4	Q9NR 56	muscleb lind like splicing regulato r 1	Nu cle ic aci d bin din g	52	0 . 6 5	0 . 6 1 5	0. 7 0 5 7 9	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AD AM 11	4 1 8 5	O750 78	ADAM metallo ptidase domain 11	En zy me	42	0 . 6 7	0 . 5 3 8	1. 0 4 E - 0 5	0. 01		1	1	0	20 10	2 0 1 0
Rh eu ma toi	C 00 03	MD M4	4 1 9 4	O151 51	MDM4 regulato r of p53	Nu cle ic aci	26 5	0 . 4	0 . 8	0. 9 9 9	0. 01		1	1	0	20 10	2 0 1 0

d Ar thr itis	87 3					d bin din g		6 1	0 8	9 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA P3 K3	4 2 1 5	Q997 59	mitogen - activate d protein kinase kinase kinase 3	Ki nas e	57	0 . 6 2 6	0 . 6 9 2 5	0. 9 8 5 3 5	0. 01		1	1	0	20 04	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MG AT 5	4 2 4 9	Q093 28	alpha- 1,6- mannos ylglycop rotein 6- beta-N- acetylgl ucosami nyltransf erase	En zy me	59	0 . 6 3 8	0 . 5 9 9 8	0. 9 9 8	0. 01		1	1	0	20 10	2 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KI TL G	4 2 5 4	P2158 3	KIT ligand		24 9	0 . 4 7 3	0 . 8 8 0 5	0. 8 5 0 2 4	0. 01		1	1	0	19 88	1 9 8 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AS AH 1	4 2 7	Q135 10	N- acylsphi ngosine amidohy drolase 1	En zy me	17 6	0 . 5 2 6	0 . 8 0 8	1. 2 6 E - 1 2	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI TF	4 2 8 6	O750 30	melanocyte inducing transcription factor		24 4	0 . 4 9 9	0 . 8 0 8	0. 9 8 1 1 9	0. 01		1	1	0	20 07	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA P3 K1 1	4 2 9 6	Q165 84	mitogen - activate d protein kinase kinase kinase 11	Ki nas e	74	0 . 5 9 7	0 . 6 1 0 8 7 5	0. 0 1 0 8 7 5	0. 01		1	1	0	20 04	2 0 0 4

Rheumatoid Arthritis	C0003873	KMT2A	4297	Q03164	lysine methyltransferase 2A		535	0.41	0.885	1	0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	AF1	4299	P51825	AF4/FMR2 family member 1	Transcription factor	49	0.659	0.423	0.71038	0.01		1	1	1	2018	2018
Rheumatoid Arthritis	C0003873	MP7	4316	P09237	matrix metalloproteinase 7	Enzyme	320	0.446	0.885	1.04E-09	0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	MP15	4324	P51511	matrix metalloproteinase 15	Enzyme	54	0.644	0.5354	0.07354	0.01		1	1	0	1999	1999
Rheumatoid Arthritis	C0003873	MP16	4325	P51512	matrix metalloproteinase 16	Enzyme	58	0.626	0.577	0.91797	0.01		0	1	0	2000	2000
Rheumatoid Arthritis	C0003873	MP17	4326	Q9ULZ9	matrix metalloproteinase 17	Enzyme	30	0.705	0.38	2.2E-08	0.01		1	1	0	2000	2000
Rheumatoid Ar	C0003873	MNAT1	4331	P51948	MNAT1 component of CDK activating kinase	Enzyme module	131	0.539	0.846	1.31E-	0.01		1	1	0	2015	2015

thr itis						ato r				1 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MO BP	4 3 3 6	Q138 75	myelin associat ed oligoden drocyte basic protein	Ce llul ar str uct ure	20	0 . 7	0 . 4 2 3	0. 5 4 6 2 3	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MO S	4 3 4 2	P0054 0	MOS proto- oncogen e, serine/th reonine kinase	Ki nas e	78	0 . 6 1 7	0 . 5 8 9 2 8	0. 5 8 9 2 8	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MS	4 3 9 7		multiple sclerosis		95	0 . 5 9 9	0 . 6 9 2		0. 01		1	1	0	20 10	2 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC DC 88 C	4 4 0 1 9 3	Q9P2 19	coiled-coil domain containing 88C		54	0 . 6 4 7	0 . 3 4 6	3. 3 E - 0 8	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA LH M6	4 4 1 1 6 8	Q5R3 K3	calcium homeostasis modulator family member 6		7	0 . 8 9	0 . 1 9 2	0. 0 0 9 4 6 1	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 35 B	4 4 2 8 9 1		microRNA 135b		11 1	0 . 5 5 4	0 . 7 3 1		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi	C 00 03	MI R1 48 B	4 4 2 8		microRNA 148b		78	0 . 5	0 . 6		0. 01		1	1	0	20 18	2 0 1 8

d Ar thr itis	87 3		9 2					9 2	9 2								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MS D	4 4 3 4		microcephaly with spastic diplegia (Paine syndrome)		35	0 . 6 7 4	0 . 6 5 4		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MS H2	4 4 3 6	P4324 6	mutS homolog 2	Nu cle ic aci d bin din g	49 0	0 . 4 0 6	0 . 8 0 8	0. 8 9 5 3 9	0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MS H3	4 4 3 7	P2058 5	mutS homolog 3	Nu cle ic aci d bin din g	24 5	0 . 4 7 4	0 . 7 6 9	7. 4 4 E - 3 1	0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TA RP	4 4 5 3 4 7		TCR gamma alternate reading frame protein		44	0 . 6 3 8	0 . 5		0. 01		0	1	0	19 95	1 9 9 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MS MB	4 4 7 7	P0811 8	microse minopro tein beta	Sig nal ing	19 5	0 . 4 9 8	0 . 8 4 6	0. 0 1 6 1 9 9	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PL F	4 5 0 0 9 5		Pulmonary function		12 4	0 . 5 4 4	0 . 7 3 1		0. 01		0	1	0	20 19	2 0 1 9

Rheumatoid Arthritis	C0003873	ND1	4535	P03886	NADH dehydrogenase, subunit 1 (complex I)	Enzyme	260	0.522	0.769		0.01		1	1	0	2005	2005
Rheumatoid Arthritis	C0003873	MTNR1B	4544	P49286	melatonin receptor 1B	G-protein coupled receptor	93	0.588	0.731	0.00648	0.01		0	1	0	2005	2005
Rheumatoid Arthritis	C0003873	MUC2	4583	Q02817	mucin 2, oligomeric mucus/gel-forming	Enzyme modulator	225	0.486	0.808	9.43E-10	0.01		1	1	0	2008	2008
Rheumatoid Arthritis	C0003873	MUC3A	4584	Q02505	mucin 3A, cell surface associated		52	0.636	0.5	1.48E-10	0.01		1	1	0	2008	2008
Rheumatoid Arthritis	C0003873	MUC4	4585	Q99102	mucin 4, cell surface associated		183	0.506	0.769	2.79E-54	0.01		1	1	0	2005	2005
Rheumatoid Arthritis	C0003873	MUC5AC	4586	P98088	mucin 5AC, oligomeric mucus/gel-forming	Enzyme modulator	224	0.483	0.808	9.99E-09	0.01		1	1	0	2008	2008
Rheumatoid	C0003	MX1	4599	P20591	MX dynamin like	Enzyme	71	0.5	0.7	3.42E	0.01		1	1	0	2017	2017

d Ar thr itis	87 3				GTPase 1	dul ato r		9 9	3 1	- 1 8							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MY CN	4 6 1 3	P0419 8	MYCN proto- oncogen e, bHLH transcrip tion factor	Tr ans cri pti on fac tor	31 4	0 . 4 5 4	0 . 8 0 8	0. 8 8 9 7	0. 01		1	1	0	20 05	2 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SE RPI NC 1	4 6 2	P0100 8	serpin family C member 1	En zy me mo dul ato r	18 4	0 . 5 0 7	0 . 7 6 9	0. 9 9 2	0. 01		1	1	0	19 96	1 9 9 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AT F3	4 6 7	P1884 7	activatin g transcrip tion factor 3	Tr ans cri pti on fac tor	22 8	0 . 4 9 4	0 . 8 8 5	0. 0 2 9 6	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NB N	4 6 8 3	O609 34	nibrin	Nu cle ic aci d bin din g	29 1	0 . 4 6 7	0 . 8 0 8	2. 1 8 E - 1 6	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NC F4	4 6 8 9	Q150 80	neutrophil cytosolic factor 4		58	0 . 6 4 4	0 . 6 1 5	9. 0 2 E - 0 8	0. 01		1	1	0	20 07	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ND UF A7	4 7 0 1	O951 82	NADH:ubiqui none oxidoreductas e subunit A7		2	0 . 9 3 1	0 . 1 1 5	6. 6 E - 0 5	0. 01		1	1	0	20 15	2 0 1 5

Rheumatoid Arthritis	C0003873	NDUF S3	4722	O75489	NADH:ubiquinone oxidoreductase core subunit S3		120	0.581	0.769	0.00583	0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	NE DD 9	4739	Q14511	neural precursor cell expressed, developmentally down-regulated 9		113	0.548	0.769	0.12634	0.01		1	1	0	2003	2003
Rheumatoid Arthritis	C0003873	AT OH 1	474	Q92858	atonal bHLH transcription factor 1	Enzyme	53	0.633	0.5	0.01783	0.01		1	1	0	1997	1997
Rheumatoid Arthritis	C0003873	NE LL 1	4745	Q92832	neural EGFL like 1	Calcium-binding protein	122	0.539	0.761	8.67E-12	0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	NE U1	4758	Q99519	neuraminidase 1	Enzyme	207	0.513	0.769	7.34E-05	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	AT P1 A1	476	P05023	ATPase Na ⁺ /K ⁺ transporting subunit alpha 1	Transporter	89	0.601	0.808	1	0.01		1	1	0	2005	2005
Rheumatoid	C0003	NF AT C2	4773	Q13469	nuclear factor of activate	Transcripti	154	0.5	0.7	0.999	0.01		1	1	0	2015	2015

d Arthritis	873				d T cells 2	on factor		25	31	95							
Rheumatoid Arthritis	C0003873	NFIA	4774	Q12857	nuclear factor I A	Nucleic acid binding	95	0.599	0.808	0.995	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	NFILA3	4783	Q16649	nuclear factor, interleukin 3 regulated	Transcription factor	54	0.633	0.615	0.8197	0.01		1	1	0	2013	2013
Rheumatoid Arthritis	C0003873	NFKBIB	4793	Q15653	NFKB inhibitor beta		16	0.743	0.462	0.4245	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	NFYA	4800	P23511	nuclear transcription factor Y subunit alpha	Nucleic acid binding	43	0.65	0.654	0.14619	0.01		1	1	0	2013	2013
Rheumatoid Arthritis	C0003873	NNAT	4826	Q16517	neuronatin		50	0.633	0.538	0.4036	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	NMT1	4836	P30419	N-myristoyltransferase 1	Enzyme	22	0.78	0.423	0.955	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	NONO	488	Q15233	non-POU	Nucle	142	0.	0.	0.9	0.01		1	1	0	2017	2017

matoid Arthritis	03873		41		domain containing octamer binding	ic acid binding		554	731	935							17
Rheumatoid Arthritis	C0003873	NPAS2	4862	Q99743	neuronal domain protein 2	PAS	82	0.595	0.654	1	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	NPBP	4879	P16860	natriuretic peptide B		193	0.513	0.888	9.8E-06	0.01		1	1	0	2008	2008
Rheumatoid Arthritis	C0003873	NTRK1	4914	P04629	neurotrophic receptor tyrosine kinase 1	Kinase	443	0.422	0.808	1.96E-06	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	NUCB2	4925	P80303	nucleobindin 2	Calcium-binding protein	140	0.54	0.731	2E-10	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	OAP	4937		osteoarthritis, precocious		9	0.792	0.992		0.01		1	1	0	2016	2016
Rheumatoid Ar	C0003873	MIR382	494331		microRNA 382		71	0.603	0.692		0.01		1	1	0	2017	2017

thrititis																	
Rheumatoid Arthritis	C0003873	OAZ1	4946	P54368	ornithine decarboxylase antizyme 1	Enzyme modulator	22	0.722	0.423	0.1747	0.01		1	1	0	2010	2010
Rheumatoid Arthritis	C0003873	ODF1	4956	Q14990	outer dense fiber of sperm tails 1		14	0.769	0.385	0.9721	0.01		1	1	0	2000	2000
Rheumatoid Arthritis	C0003873	OPRK1	4986	P41145	opioid receptor kappa 1	G-protein coupled receptor	156	0.555	0.615	4.06E-05	0.01		1	1	0	2000	2000
Rheumatoid Arthritis	C0003873	P2RX1	5023	P51575	purinergic receptor P2X 1	Ion channel	94	0.584	0.808	6.76E-11	0.01		1	1	0	2010	2010
Rheumatoid Arthritis	C0003873	P2RX3	5024	P56373	purinergic receptor P2X 3	Ion channel	125	0.565	0.769	1.03E-06	0.01		1	1	0	2010	2010
Rheumatoid Arthritis	C0003873	P2RX4	5025	Q99571	purinergic receptor P2X 4	Ion channel	138	0.547	0.808	4.98E-12	0.01		1	1	0	2010	2010

Rheumatoid Arthritis	C003873	P2RX5	5026	Q93086	purinergic receptor P2X 5	Ion channel	132	0.548	0.769	2.85E-13	0.01		1	1	0	2010	2010
Rheumatoid Arthritis	C003873	P2RY1	5028	P47900	purinergic receptor P2Y1	G-protein coupled receptor	126	0.551	0.769	0.51522	0.01		1	1	0	2010	2010
Rheumatoid Arthritis	C003873	P2RY2	5029	P41231	purinergic receptor P2Y2	G-protein coupled receptor	136	0.543	0.808	0.04245	0.01		1	1	0	2010	2010
Rheumatoid Arthritis	C003873	P2RY11	5032	Q96G91	purinergic receptor P2Y11	G-protein coupled receptor	27	0.705	0.538	0.07706	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C003873	PEBP1	5037	P30086	phosphatidylethanolamine binding protein 1	Enzyme modulator	181	0.5	0.808	0.09167	0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C003873	FURIN	5045	P09958	furin, paired basic amino acid cleaving enzyme	Enzyme	80	0.612	0.769	0.9994	0.01		1	1	0	2019	2019

Rheumatoid Arthritis	C0003873	SE RPI NB 2	5055	P05120	serpin family B member 2	Enzyme modulator	183	0.502	0.88	6.38E-12	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	DEF6	50619	Q9H4E7	DEF6 guanine nucleotide exchange factor	Nucleic acid binding	22	0.751	0.346	0.99768	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	PARD6A	50855	Q9NPB6	par-6 family cell polarity regulator alpha	Cell-cell junction	6	0.861	0.231	0.006472	0.01		1	1	0	2008	2008
Rheumatoid Arthritis	C0003873	PCBP1	50933	Q15365	poly(rC) binding protein 1	Enzyme	49	0.658	0.538	0.99945	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	IBD5	50941		inflammatory bowel disease 5		21	0.705	0.358		0.01		1	1	0	2004	2004
Rheumatoid Arthritis	C0003873	EXOSC1	51013	Q9Y3B2	exosome component 1	Enzyme	3	0.931	0.154	7.35E-09	0.01		1	1	0	2016	2016
Rheumatoid Ar	C0003873	TMED7	51014	Q86XR7;Q9Y3B3	transmembrane p24 trafficking protein 7	Transporter	336	0.436	0.808	0.47966	0.01		1	1	0	2005	2005

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ND UF A1 3	5 1 0 7 9	Q9P0 J0	NADH: ubiquino ne oxidored uctase subunit A13	En zy me	13 1	0 . 5 5 6	0 . 6 9 2	3. 8 E - 0 6	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RM DN 1	5 1 1 1 5	Q96D B5	regulator of microtubule dynamics 1		12 3	0 . 5 4 6	0 . 7 6 9	5. 9 E - 1 0	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IR AK 4	5 1 1 3 5	Q9N WZ3	interleuk in 1 receptor associat ed kinase 4	Ki nas e	90	0 . 5 7 8	0 . 7 6 9	7. 8 E - 0 9	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DB R1	5 1 1 6 3	Q9U K59	debranc hing RNA lariats 1	En zy me	15	0 . 7 6 9	0 . 3 8 5	1. 1 8 E - 0 8	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZD HH C2	5 1 2 0 1	Q9UI J5	zinc finger DHHC-type palmitoyltrans ferase 2		24	0 . 7 2 9	0 . 4 6 2	0. 0 0 1 0 0 1	0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PC SK 1	5 1 2 2	P2912 0	proprote in converta se subtilisi n/kexin type 1	En zy me	14 0	0 . 5 4 8	0 . 6 1 5	2. 7 5 E - 0 9	0. 01		1	1	0	20 01	2 0 0 1
Rh eu ma toi	C 00 03	CL EC 1B	5 1 2	Q9P1 26	C-type lectin domain family 1 member B		58	0 . 6 5	0 . 6 6	4. 9 4 E	0. 01		1	1	0	20 14	2 0 1 4

d Ar thr itis	87 3		6 6						1 5	- 0 8							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RA SL 12	5 1 2 8 5	Q9N YN1	RAS like family 12	En zy me mo dul ato r	14	0 . 7 5 1	0 . 3 8 5	0. 0 0 8 7 1	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PC YT 1A	5 1 3 0	P4958 5	phosphate cytidyltransf erase 1, choline, alpha		25 6	0 . 4 8 5	0 . 8 8 5	2. 0 2 E - 0 5	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZB TB 7A	5 1 3 4 1	O953 65	zinc finger and BTB domain containi ng 7A	Tr ans cri pti on fac tor	10 3	0 . 5 6 4	0 . 7 6 9	0. 9 5 9 1 5	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HO OK 1	5 1 3 6 1	Q9UJ C3	hook microtu bule tethering protein 1	En zy me mo dul ato r	24	0 . 7 1 6	0 . 4 6 2	3. 8 7 E - 0 8	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PD E4 D	5 1 4 4	Q084 99	phosphodieste rase 4D		21 0	0 . 5 1 9	0 . 8 4 6	0. 9 9 8	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ISY NA 1	5 1 4 7 7	Q9NP H2	inositol-3- phosphate synthase 1		16 8	0 . 5 1	0 . 7 6 9	2. 4 9 E - 0 5	0. 01		1	1	0	20 04	2 0 0 4

Rheumatoid Arthritis	C0003873	NE LF CD	51497	Q8IXH7	negative elongation factor complex member C/D		24	0.705	0.758	0.1707	0.01		1	1	0	2010	2010
Rheumatoid Arthritis	C0003873	ZC3H C1	51530	Q86WB0	zinc finger C3HC-type containing 1		23	0.76	0.7308	0.00256	0.01		1	1	1	2013	2013
Rheumatoid Arthritis	C0003873	SC LY	51540	Q96I15	selenocysteine lyase	Enzyme	161	0.533	0.731	2.33E-09	0.01		1	1	0	2004	2004
Rheumatoid Arthritis	C0003873	ATP6 V1 H	51606	Q9UI12	ATPase H ⁺ transporting V1 subunit H	Transporter	13	0.78	0.746	0.00145	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	PD K1	51633	Q15118	pyruvate dehydrogenase kinase 1	Kinase	164	0.51	0.808	1.1E-05	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	SF3 B6	51639	Q9Y3B4	splicing factor 3b subunit 6		116	0.544	0.808	0.5502	0.01		1	1	0	1990	1990
Rheumatoid Ar	C0003873	EN PP1	5167	P22413	ectonucleotide pyrophosphatase /phosph	Enzyme	247	0.498	0.808	4.9E-01	0.01		1	1	0	2001	2001

thr itis					odiester ase 1					0 8							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PD PK 1	5 1 7 0	O155 30	3- phospho inositide depende nt protein kinase 1	Ki nas e	77	0 . 5 8 8	0 . 8 0 8	0. 9 8 0 1 3	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GH RL	5 1 7 3 8	Q9UB U3	ghrelin and obestatin prepropeptide		18 3	0 . 5 1 7	0 . 7 6 9	1. 3 9 E - 1 1	0. 01		1	1	1	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC P1	5 2	P2466 6	acid phosphatase 1		10 7	0 . 5 6 6	0 . 7 3 1	1. 7 5 E - 0 8	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PG K1	5 2 3 0	P0055 8	phospho glycerat e kinase 1	Ki nas e	14 4	0 . 5 4 2	0 . 7 6 9	0. 7 6 5 3 7	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PG M1	5 2 3 6	P3687 1	phosphogluco mutase 1		72	0 . 6 2 8	0 . 5 7 7	5. 0 6 E - 1 5	0. 01		1	1	0	19 85	1 9 8 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PH EX	5 2 5 1	P7856 2	phospha te regulatin g endopep tidase homolog X-linked	En zy me	14 2	0 . 5 4 8	0 . 8 0 8	0. 9 9 9 6	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi	C 00 03	PI3	5 2 6 6	P1995 7	peptidas e inhibitor 3	En zy me mo	92	0 . 5 7	0 . 6 6	0. 1 6 9	0. 01		1	1	0	20 17	2 0 1 7

d Ar thr itis	87 3					dul ato r			9 2	6 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PIG R	5 2 8 4	P0183 3	polymeric immunoglobul in receptor		71	0 . 6 1 5	0 . 8 0 8	0. 8 1 3 1	0. 01		1	1	0	19 98	1 9 9 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PI M1	5 2 9 2	P1130 9	Pim-1 proto- oncogen e, serine/th reonine kinase	Ki nas e	22 4	0 . 4 8 2	0 . 7 6 9	0. 8 4 8 4 6	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PIN 1	5 3 0 0	Q135 26	peptidylprolyl cis/trans isomerase, NIMA- interacting 1		21 2	0 . 4 8 8	0 . 7 6 9	0. 7 4 0 3 1	0. 01		1	1	0	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PK D1	5 3 1 0	P9816 1	polycystin 1, transient receptor potential channel interacting		21 7	0 . 4 9 3	0 . 7 6 9	1	0. 01		1	1	0	20 01	2 0 0 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PL A2 G2 A	5 3 2 0	P1455 5	phospho lipase A2 group IIA	En zy me	21 5	0 . 4 8 8	0 . 8 0 8	0. 0 9 7 2 7 8	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PL AT	5 3 2 7	P0075 0	plasmin ogen activator , tissue type	En zy me	39 2	0 . 4 4 5	0 . 8 8 5	5. 6 6 E - 0 5	0. 01		1	1	0	20 06	2 0 0 6

Rheumatoid Arthritis	C0003873	PLAUR	5329	Q03405	plasminogen activator, urokinase receptor		147	0.536	0.731	0.03538	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	SPAI7	53340	Q15506	sperm autoantigenic protein 17		48	0.647	0.577	0.06616	0.01		1	1	0	2002	2002
Rheumatoid Arthritis	C0003873	PLCG2	5336	P16885	phospholipase C gamma 2	Enzyme	82	0.588	0.88	0.9562	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	PLD1	5337	Q13393	phospholipase D1		104	0.576	0.731	4.78E-21	0.01		1	1	0	2011	2011
Rheumatoid Arthritis	C0003873	SERPINF2	5345	P08697	serpin family F member 2	Enzyme modulator	104	0.575	0.88	0.03624	0.01		1	1	0	1996	1996
Rheumatoid Arthritis	C0003873	PLK1	5347	P53350	polo like kinase 1	Kinase	253	0.467	0.88	0.97851	0.01		1	1	0	2007	2007
Rheumatoid Ar	C0003873	PLTP	5360	P55058	phospholipid transfer protein		62	0.633	0.654	9E-09	0.01		1	1	0	2018	2018

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2 0R A	5 3 8 3 2	Q9U HF4	interleuk in 20 receptor subunit alpha	Re ce pto r	25	0 . 7 1 6	0 . 3 4 6	0. 0 2 7 1 2 9	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2 0R B	5 3 8 3 3	Q6U XL0	interleuk in 20 receptor subunit beta	Re ce pto r	12	0 . 7 6 9	0 . 3 4 6	3. 6 5 E - 0 8	0. 01		0	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	H2 BS 1	5 4 1 4 5	P5705 3	H2B.S histone 1		22	0 . 7 1 1	0 . 6 1 5		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CY CS	5 4 2 0 5	P9999 9	cytochrome c, somatic		67	0 . 5 9 9	0 . 7 6 9	0. 6 3 6 4 7	0. 01		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PO LD 1	5 4 2 4	P2834 0	DNA polymerase delta 1, catalytic subunit		18 9	0 . 5 0 7	0 . 7 6 9	2. 4 2 E - 0 6	0. 01		1	1	0	19 99	1 9 9 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TE RF 2IP	5 4 3 8 6	Q9N YB0	TERF2 interacting protein		12 6	0 . 5 4 8	0 . 7 3 1	2. 6 7 E - 0 5	0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi	C 00 03	SIA E	5 4 4	Q9H AT2	sialic acid acetylest erase	En zy me	30	0 . 7	0 . 5	7. 7 9 E	0. 01		1	1	0	20 15	2 0 1 5

d Ar thr itis	87 3		1 4				1 1	7 7	- 1 2								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PO MC	5 4 4 3	P0118 9	proopiomelan ocortin		87 3	0 . 3 5 6	0 . 8 4 6	0. 0 0 1 1 7	0. 01		1	1	0	20 01	2 0 0 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PO N2	5 4 4 5	Q151 65	paraoxonase 2		11 7	0 . 5 6 6	0 . 8 0 8	5. 4 4 E - 0 5	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SM OX	5 4 4 9 8	Q9N WM0	spermine oxidase		91	0 . 6 0 3	0 . 7 6 9	0. 3 9 6 4	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AT R	5 4 5	Q135 35	ATR serine/th reonine kinase	Ki nas e	32 1	0 . 4 5 6	0 . 9 2 3	3. 5 2 E - 0 9	0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PO U2 F1	5 4 5 1	P1485 9	POU class 2 homeobox 1		11 5	0 . 5 5 8	0 . 7 6 9	0. 9 0 2 2 9	0. 01		1	1	0	19 98	1 9 9 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PO U2 F2	5 4 5 2	P0908 6	POU class 2 homeobox 2		69	0 . 5 9 9	0 . 6 9 2	0. 9 9 8 8 4	0. 01		1	1	0	20 19	2 0 1 9
Rh eu	C 00	UG T1	5 4	Q9H AW8	UDP glucuronosyltr		88	0 .	0 .	4. 5	0. 01		1	1	0	20 12	2 0

matoid Arthritis	03873	A10	575		transferase family 1 member A10		588	615	9E-19							12
Rheumatoid Arthritis	C0003873	UGT1A8	54576	Q9HAW9	UDP glucuronosyltransferase family 1 member A8	90	0.588	0.654	1.31E-09	0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	UGT1A7	54577	Q9HAW7	UDP glucuronosyltransferase family 1 member A7	125	0.555	0.692	8.66E-14	0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	UGT1A6	54578	P19224	UDP glucuronosyltransferase family 1 member A6	115	0.566	0.654	3.05E-07	0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	EGLN1	54583	Q9GZT9	egl-9 family hypoxia inducible factor 1	130	0.544	0.731	0.97403	0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	PPARA	5465	Q07869	peroxisome proliferator activated receptor alpha	408	0.432	0.85	0.030182	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	UGT1A4	54657	P22310	UDP glucuronosyltransferase family 1 member A4	84	0.595	0.654	5.98E-07	0.01		1	1	0	2012	2012

Rheumatoid Arthritis	C0003873	UGT1A1	54658	P22309	UDP glucuronosyltransferase family 1 member A1		302	0.	0.	3.26E-06	0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	PPBP	5473	P02775	pro-platelet basic protein	Signaling	111	0.	0.	0.0548739	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	IL17RD	54756	Q8NFM7	interleukin 17 receptor D		82	0.	0.	1.05E-06	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	SAMD9	54809	Q5K651	sterile alpha motif domain containing 9		90	0.	0.	1.05E-33	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	QPCTL	54814	Q9NXS2	glutaminyl-peptidyl cyclotransferase like	Enzyme	18	0.	0.	1.57E-08	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	ZCHC2	54877	Q9C0B9	zinc finger CCHC-type containing 2		9	0.	0.	0.99376	0.01		1	1	0	2009	2009
Rheumatoid Ar	C0003873	UHRF1BP1	54887	Q6BDS2	UHRF1 binding protein 1		26	0.	0.	4.47E-9	0.01		1	1	0	2016	2016

thr itis										1 3							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD KA L1	5 4 9 0 1	Q5V V42	CDK5 regulatory subunit associated protein 1 like 1		86	0 . 6 1 7	0 . 6 1 5	0. 0 1 6 0 2 1	0. 01		1	1	1	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PP M1 A	5 4 9 4	P3581 3	protein phospha tase, Mg2+/ Mn2+ depende nt 1A	En zy me	33	0 . 6 9 1	0 . 5	0. 9 9 8 3 4	0. 01		1	1	0	20 20	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BA NP	5 4 9 7 1	Q8N9 N5	BTG3 associated nuclear protein		27	0 . 7 4 3	0 . 2 6 9	0. 9 9 3 8 8	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA RC HF 1	5 5 0 1 6	Q8TC Q1	membrane associated ring-CH-type finger 1		12 6	0 . 5 4	0 . 8 0 8	0. 0 0 8 6 7 8	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PP P1 R1 A	5 5 0 2	Q135 22	protein phospha tase 1 regulato ry inhibitor subunit 1A	En zy me mo dul ato r	10 6	0 . 5 5 9	0 . 6 9 2	0. 0 2 1 8 9 4	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TT C3 8	5 5 0 2 0	Q5R3 I4	tetratricopepti de repeat domain 38		1	1	0 . 1 1 5	3. 2 6 E - 1 3	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi	C 00 03	AK IRI N2	5 5 1	Q53H 80	akirin 2		28	0 . 7	0 . 3	0. 9 2 3	0. 01		1	1	0	20 11	2 0 1 1

d Ar thr itis	87 3		2 2				1 6	4 6	5 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PI WI L2	5 5 1 2 4	Q8TC 59	piwi like RNA- mediated gene silencing 2	65	0 . 6 1 2	0 . 5 7 7	2. 7 1 E - 0 8	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RM DN 3	5 5 1 7 7	Q96T C7	regulator of microtubule dynamics 3	13 4	0 . 5 3 4	0 . 7 6 9	5. 1 7 E - 0 5	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NA DS YN 1	5 5 1 9 1	Q6IA 69	NAD synthetase 1	14	0 . 7 8	0 . 2 3 1	1. 2 5 E - 1 6	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TH NS L2	5 5 2 5 8	Q86Y J6	threonine synthase like 2	4	0 . 8 6 1	0 . 1 5 4	1. 4 8 E - 0 6	0. 01		1	1	0	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	KI R2 DL 5B	5 5 3 1 2 8	Q8N HK3	killer cell immunoglobul in like receptor, two Ig domains and long cytoplasmic tail 5B	27	0 . 6 8 2	0 . 4 2 3		0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IM PA CT	5 5 3 6 4	Q9P2 X3	impact RWD domain protein	85	0 . 5 9 3	0 . 8 0 8	4. 8 3 E - 0 8	0. 01		1	1	0	20 19	2 0 1 9

Rheumatoid Arthritis	C0003873	MI R448	554212		microRNA 448		63	0.61	0.65		0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	PRCP	5547	P42785	prolylcarboxypeptidase	Enzyme	68	0.633	0.692	8.76E-12	0.01		1	1	0	2009	2009
Rheumatoid Arthritis	C0003873	PRF1	5551	P14222	perforin 1		163	0.54	0.692	5.49E-06	0.01		1	1	0	2013	2013
Rheumatoid Arthritis	C0003873	SYBU	55638	Q9NX95	syntabulin	Transporter	120	0.546	0.769	9.77E-05	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	NLRP2	55655	Q9NX02	NLR family pyrin domain containing 2		155	0.515	0.731	1.42E-38	0.01		1	1	2	2015	2015
Rheumatoid Arthritis	C0003873	ZN F334	55713	Q9HCZ1	zinc finger protein 334		1	1	0.115	1.61E-09	0.01		1	1	0	2011	2011
Rheumatoid Ar	C0003873	ATF7IP	55729	Q6VMQ6	activating transcription factor 7 interacting protein		145	0.543	0.799	0.9993	0.01		1	1	0	2015	2015

thr itis																	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DH X3 2	5 5 7 6 0	Q7L7 V1	DEAH- box helicase 32 (putative)	En zy me	20	0 . 7 6	0 . 2 6 9	1. 6 5 E - 0 9	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PA G1	5 5 8 2 4	Q9N WQ8	phosphoprotein membrane anchor with glycosphingol ipid microdomains 1		17 4	0 . 5 0 5	0 . 8 0 8	0. 0 7 7 6 4	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SE LE NO S	5 5 8 2 9	Q9BQ E4	selenoprotein S		55	0 . 6 2 8	0 . 6 1 5	1. 4 3 E - 0 9	0. 01		1	1	0	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CE NP J	5 5 8 3 5	Q9HC 77	centrom ere protein J	En zy me	15 0	0 . 5 4 6	0 . 8 4 6	2. 0 6 E - 2 7	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PK N1	5 5 8 5	Q165 12	protein kinase N1	Ki nas e	48	0 . 6 4 7	0 . 6 9 2	0. 2 0 4 4 2	0. 01		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR KC Z	5 5 9 0	Q055 13	protein kinase C zeta	Ki nas e	88	0 . 6 0 4	0 . 6 5 4	0. 5 4 1	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi	C 00 03	MA PK 9	5 6 0 1	P4598 4	mitogen - activate	Ki nas e	11 5	0 . 5	0 . 7	0. 0 6 9	0. 01		1	1	0	20 07	2 0 0 7

d Arthritis	873				d protein kinase 9			61	31	738							
Rheumatoid Arthritis	C0003873	MA PK10	5602	P53779	mitogen-activated protein kinase 10	Kinase	75	0.606	0.692	0.2753	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	MA PK13	5603	O15264	mitogen-activated protein kinase 13	Kinase	26	0.705	0.577	6.72E-11	0.01		1	1	0	2004	2004
Rheumatoid Arthritis	C0003873	EIF2A K2	5610	P19525	eukaryotic translation initiation factor 2 alpha kinase 2	Kinase	142	0.538	0.769	0.01643	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	ANKH	56172	Q9HCJ1	ANKH inorganic pyrophosphate transport regulator	Transporter	89	0.606	0.692	0.2756	0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	PROP1	5626	O75360	PROP paired-like homeobox 1		117	0.576	0.615	0.08746	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	AZGP1	563	P25311	alpha-2-glycoprotein 1, zinc-binding		101	0.566	0.769	4.15E-06	0.01		1	1	0	2017	2017

Rheumatoid Arthritis	C0003873	ME T3 L3	56339	Q86U44	methyltransferase like 3		79	0.585	0.58	1.8E-07	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	PP AN	56342	Q9NQ55	peter pan homolog		18	0.729	0.577	1.72E-12	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	LT B4 R2	56413	Q9NPC1	leukotriene B4 receptor 2	G-protein coupled receptor	49	0.631	0.615	1.38E-05	0.01		1	1	0	2003	2003
Rheumatoid Arthritis	C0003873	PR SS2	5645	P07478	serine protease 2	Enzyme	66	0.628	0.769		0.01		1	1	0	2005	2005
Rheumatoid Arthritis	C0003873	MA SP1	5648	P48740	mannan binding lectin serine peptidase 1	Enzyme	123	0.565	0.885	1.23E-11	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	CY P26 B1	56603	Q9NR63	cytochrome P450 family 26 subfamily B member 1	Enzyme	36	0.666	0.598	0.9787	0.01		1	1	0	2018	2018
Rheumatoid	C0003	PS EN 1	5663	P49768	presenilin 1	Enzyme	369	0.4	0.8	0.973	0.01		1	1	1	1998	1998

d Ar thr itis	87 3							6 9	4 6	2 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SA R1 A	5 6 6 8 1	Q9NR 31	secretion associated Ras related GTPase 1A		25	0 . 7 4 3	0 . 5 3 8	0. 3 7 1 7 8	0. 01		1	1	0	20 07	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SP HK 2	5 6 8 4 8	Q9NR A0	sphingos ine kinase 2	Ki nas e	14 0	0 . 5 4 6	0 . 7 3 1	1. 2 8 E - 0 7	0. 01		1	1	0	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PS MB 5	5 6 9 3	P2807 4	proteasome 20S subunit beta 5		27	0 . 7 1 1	0 . 3 8 5	0. 9 5 8 9 3	0. 01		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AR NT L2	5 6 9 3 8	Q8W YA1	aryl hydrocar bon receptor nuclear transloc ator like 2	Tr ans cri pti on fac tor	41	0 . 6 4 4	0 . 6 5 4	6. 0 4 E - 1 0	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PS MB 6	5 6 9 4	P2807 2	proteasome 20S subunit beta 6		10 0	0 . 5 6 1	0 . 7 3 1	0. 0 1 5 7 7 9	0. 01		1	1	0	19 90	1 9 9 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DU SP2 2	5 6 9 4 0	Q9NR W4	dual specificity phosphatase 22		40	0 . 6 5 9	0 . 6 1 5	0. 0 0 9 3 4 2	0. 01		1	1	0	20 18	2 0 1 8

Rheumatoid Arthritis	C0003873	PRDM8	56978	Q9NQV8	PR/SET domain 8		39	0.678	0.462	0.776	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	ADAMTS9	56999	Q9P2N4	ADAM metallopeptidase with thrombospondin type 1 motif 9	Enzyme	53	0.633	0.692	1E-06	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	PCBP4	57060	P57723	poly(rC) binding protein 4	Enzyme	147	0.523	0.808	0.02371	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	PCNP	57092	Q8WW12	PEST proteolytic signal containing nuclear protein		11	0.839	0.192	0.7853	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	PNPLA2	57104	Q96AD5	patatin like phospholipase domain containing 2	Enzyme	199	0.511	0.846	0.0407	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	CD248	57124	Q9HCU0	CD248 molecule		76	0.615	0.570	0.59017	0.01		1	1	0	2010	2010
Rheumatoid Ar	C0003873	PSMD9	5715	O00233	proteasome 26S subunit, non-ATPase 9	Enzyme module	344	0.435	0.846	4.8E-6	0.01		1	1	0	2005	2005

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Rheumatoid Arthritis	C0003873	SLURP1	57152	P5500	secreted LY6/PLAUR domain containing 1		105	0.56	0.654	0.2534	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	PTBP1	5725	P2659	polypyrimidine tract binding protein 1		172	0.517	0.769	0.9961	0.01		1	1	0	1996	1996
Rheumatoid Arthritis	C0003873	KIR2DL5A	57292	Q8N109	killer cell immunoglobulin like receptor, two Ig domains and long cytoplasmic tail 5A	Receptor	21	0.711	0.423		0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	PTGER2	5732	P43116	prostaglandin E receptor 2	G-protein coupled receptor	79	0.597	0.731	0.0749	0.01		1	1	0	2009	2009
Rheumatoid Arthritis	C0003873	PTGER4	5734	P35408	prostaglandin E receptor 4	G-protein coupled receptor	120	0.558	0.7315	0.9755	0.01		1	1	0	2015	2015
Rheumatoid	C0003	MIR363	5740		microRNA 363		83	0.5	0.6		0.01		1	1	0	2017	2017

d Ar thr itis	87 3		3 1				7 8	9 2									
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AB HD 6	5 7 4 0 6	Q9BV 23	abhydrol ase domain containi ng 6	En zy me	24	0 . 7 5 1	0 . 3 8 5	2. 2 3 E - 0 5	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R4 32	5 7 4 4 5 1		microRNA 432		44	0 . 6 4 4	0 . 5 7 7		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R1 81 D	5 7 4 4 5 7		microRNA 181d		44	0 . 6 4 1	0 . 6 5 4		0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R4 98	5 7 4 4 6 0		microRNA 498		49	0 . 6 3 3	0 . 5		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R5 22	5 7 4 4 9 5		microRNA 522		21	0 . 7 2 2	0 . 3 4 6		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R5 06	5 7 4 5 1 1		microRNA 506		76	0 . 5 8 5	0 . 6 1 5		0. 01		1	1	0	20 19	2 0 1 9

Rheumatoid Arthritis	C0003873	REXO1	57455	Q8N1G1	RNA exonuclease 1 homolog	Enzyme	30	0.695	0.346	0.984	0.01		1	1	0	2010	2010
Rheumatoid Arthritis	C0003873	SRGAP1	57522	Q7Z6B7	SLIT-ROBO Rho GTPase activating protein 1	Enzyme modulator	29	0.686	0.598	0.9945	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	PTMA	5757	P06454	prothymosin alpha		71	0.604	0.731	0.03451	0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	PTMAP4	5761		prothymosin alpha pseudogene 4		49	0.638	0.731		0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	EPB41L5	57669	Q9HCM4	erythrocyte membrane protein band 4.1 like 5		16	0.78	0.346	0.020795	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	MAGEE1	57692	Q9HC15	MAGE family member E1	Cell adhesion	19	0.736	0.423	0.97046	0.01		1	1	0	2006	2006
Rheumatoid Ar	C0003873	GRHL3	57822	Q8TE85	grainyhead like transcription factor 3	Transcription	106	0.572	0.692	0.99292	0.01		1	1	0	1997	1997

thr itis						fac tor											
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PT PN 14	5 7 8 4	Q156 78	protein tyrosine phosphatase non-receptor type 14		48	0 . 6 3 8	0 . 6 1 5	0. 2 2 0 5 5	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MU C3 B	5 7 8 7 6	Q9H1 95	mucin 3B, cell surface associated		41	0 . 6 6 6	0 . 4 6 2		0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PT PRJ	5 7 9 5	Q129 13	protein tyrosine phospha tase receptor type J	En zy me	79	0 . 6 0 6	0 . 6 1 5	1. 2 9 E - 1 1	0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PT PR K	5 7 9 6	Q152 62	protein tyrosine phospha tase receptor type K	En zy me	34	0 . 6 8 6	0 . 3 8 5	0. 9 0 2 9 1	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BA X	5 8 1	Q078 12	BCL2 associat ed X, apoptosi s regulato r	Sig nal ing	42 0	0 . 4 1 7	0 . 8 8 5	0. 3 1 7 4 6	0. 01		0	1	0	19 99	1 9 9 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RB PJP 4	5 8 1 6 3		RBPJ pseudogene 4		12	0 . 8 0 5	0 . 4 2 3		0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi	C 00 03	JA M2	5 8 4	P5708 7	junctional adhesion molecule 2		17	0 . 7	0 . 4	0. 0 0 6	0. 01		0	1	1	20 14	2 0 1 4

d Ar thr itis	87 3		9 4					3 6	6 2	1 5 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RA G1	5 8 9 6	P1591 8	recombi nation activatin g 1	En zy me	20 9	0 . 5 0 9	0 . 7 6 9	2. 7 7 E - 0 5	0. 01		1	1	0	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RA G2	5 8 9 7	P5589 5	recombination activating 2		20 7	0 . 5 0 7	0 . 7 6 9	0. 0 2 0 2 8 7	0. 01		1	1	0	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2 2R A1	5 8 9 8 5	Q8N6 P7	interleuk in 22 receptor subunit alpha 1	Re ce pto r	28	0 . 6 8 2	0 . 5 3 8	0. 0 5 6 8 6	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC TA 2	5 9	P6273 6	actin alpha 2, smooth muscle	Ce llul ar str uct ure	20 0	0 . 5 0 8	0 . 8 4 6	0. 9 3 0 1 7	0. 01		1	1	2	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RA P1 A	5 9 0 6	P6283 4	RAP1A, member of RAS oncogen e family	En zy me mo dul ato r	21 5	0 . 5 0 2	0 . 8 0 8	0. 6 2 2 7	0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RA RG	5 9 1 6	P1363 1	retinoic acid receptor gamma	Nu cle ar rec ept or	62	0 . 6 0 8	0 . 7 3 1	0. 9 9 4 7 8	0. 01		1	1	0	20 15	2 0 1 5

Rheumatoid Arthritis	C0003873	HIVEP3	59269	Q5T1R4	HIVEP finger 3	zinc	31	0.722	0.462	0.90584	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	TRPV4	59341	Q9HBA0	transient receptor potential cation channel subfamily V member 4	Ion channel	422	0.457	0.808	2.24E-16	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	PBOV1	59351	Q9GZY1	prostate and breast cancer overexpressed 1		21	0.743	0.308		0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	RBP4	5950	P02753	retinol binding protein 4	Transporter	217	0.493	0.808	0.51951	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	OPN1LW	5956	P04000	opsin 1, long wave sensitive	G-protein coupled receptor	197	0.497	0.808	0.90535	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	RET	5979	P07949	ret proto-oncogene	Kinase	607	0.392	0.885	1	0.01		1	1	0	1995	1995
Rheumatoid Arthritis	C0003873	BCL2L1	598	Q07817	BCL2 like 1	Signaling	212	0.4	0.8	0.93	0.01		1	1	0	2006	2006

to id Ar thr itis	87 3							9 3	8 5	6 6 7							0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RE V3 L	5 9 8 0	O606 73	REV3 like, DNA directed polymerase zeta catalytic subunit		95	0 . 5 8 8	0 . 6 5 4	1	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RG S1	5 9 9 6	Q081 16	regulato r of G protein signalin g 1	En zy me mo dul ato r	47	0 . 6 5 3	0 . 7 3 1 7 8	0. 7 8 1 7 8	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RG S12	6 0 0 2	O149 24	regulator of G protein signaling 12		22	0 . 7 6 9	0 . 4 6 2	4. 0 9 E - 0 9	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RH CE	6 0 0 6	P1857 7	Rh blood group CcEe antigens		44	0 . 6 6 6	0 . 5 0 1 1 6 3	0. 0 0 1 6 3	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GR K1	6 0 1 1	Q158 35	G protein- coupled receptor kinase 1	Ki nas e	26	0 . 6 9 5	0 . 4 2 3	3. 0 7 E - 0 5	0. 01		1	1	0	19 99	1 9 9 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BC L3	6 0 2	P2074 9	BCL3 transcription coactivator		13 6	0 . 5 4 1	0 . 7 3 1	0. 9 8 8 7 1	0. 01		1	1	0	20 15	2 0 1 5

Rheumatoid Arthritis	C0003873	RM RP	6023		RNA component of mitochondrial RNA processing endoribonuclease	239	0.519	0.731		0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	RN AS E1	6035	P07998	ribonuclease A family member 1, pancreatic	68	0.604	0.692	0.025608	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	RN AS E3	6037	P12724	ribonuclease A family member 3	207	0.49	0.808		0.01		1	1	0	2004	2004
Rheumatoid Arthritis	C0003873	EX OC 4	60412	Q96A65	exocyst complex component 4	20	0.743	0.51E-13	3.41	0.01		1	1	0	2005	2005
Rheumatoid Arthritis	C0003873	BR D2	6046	P25440	bromodomain containing 2	303	0.45	0.808	0.9957	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	SL C5 A7	60482	Q9GZV3	solute carrier family 5 member 7	127	0.597	0.654	0.01522	0.01		1	1	0	2015	2015
Rheumatoid Ar	C0003873	PP CD C	60490	Q96CD2	phosphopantothienoylcysteine decarboxylase	8	0.861	0.192	0.0004	0.01		1	1	0	2018	2018

thr itis									7 9							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA S5	6 0 6 7 4		growth arrest specific 5		18 4	0 . 4 9 7	0 . 8 0 8		0. 01		1	1	0	20 19 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RO BO 1	6 0 9 1	Q9Y6 N7	roundabout guidance receptor 1		14 4	0 . 5 3 5	0 . 7 3 1	7. 2 7 E - 1 6	0. 01		1	1	0	20 18 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RO RA	6 0 9 5	P3539 8	RAR related orphan receptor A	Nu cle ar rec ept or	15 8	0 . 5 3 3	0 . 8 0 8	0. 4 0 0 9 6	0. 01		1	1	0	20 19 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BC S1 L	6 1 7	Q9Y2 76	BCS1 homolog, ubiquinol- cytochrome c reductase complex chaperone		17 2	0 . 5 3 4	0 . 8 0 8	4. 7 E - 1 3	0. 01		1	1	0	20 17 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RP S4 X	6 1 9 1	P6270 1	ribosom al protein S4 X- linked	Nu cle ic aci d bin din g	28	0 . 7 1 1	0 . 5 0 8	0. 9 3 2 2 2	0. 01		1	1	0	20 13 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R4 86- 1	6 1 9 5 5 4		microRNA 486-1		14 2	0 . 5 2 1	0 . 8 0 8		0. 01		1	1	0	20 17 0 1 7
Rh eu ma toi	C 00 03	RR AS	6 2 3 7	P1030 1	RAS related	En zy me mo	14 9	0 . 5	0 . 8	0. 0 0 4	0. 01		1	1	0	20 20 0 2 0

d Ar thr itis	87 3					dul ato r		4 3	0 8	6 6 3							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RR M2	6 2 4 1	P3135 0	ribonucleotide reductase regulatory subunit M2	En zy me	10 1	0 . 5 5 5	0 . 7 6 9	0. 2 9 6 4	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RX RA	6 2 5 6	P1979 3	retinoid X receptor alpha	Nu cle ar rec ept or	13 2	0 . 5 4 3	0 . 7 6 9	0. 9 8 5 2	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RY R1	6 2 6 1	P2181 7	ryanodine receptor 1	Ion ch an nel	32 0	0 . 4 8 9	0 . 8 0 8	1. 5 9 E - 2 9	0. 01		0	1	0	19 89	1 9 8 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	S10 0A 10	6 2 8 1	P6090 3	S100 calcium binding protein A10	Ca lci um - bin din g pro tei n	15 0	0 . 5 2 8	0 . 7 6 9	0. 1 6 8 4 3	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	S10 0A 11	6 2 8 2	P3194 9	S100 calcium binding protein A11	Ca lci um - bin din g pro tei n	10 3	0 . 5 5 6	0 . 7 3 1	0. 0 8 4 6 6	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar	C 00 03 87 3	SA A4	6 2 9 1	P3554 2	serum amyloid A4, constitutive	Tr ans por ter	13	0 . 7 8	0 . 2 6 9	0. 0 1 2 3	0. 01		1	1	0	20 17	2 0 1 7

thr itis										4 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SC D	6 3 1 9	O007 67	stearoyl-CoA desaturase		22 5	0 . 4 9	0 . 8 0 8	0. 9 6 9 6 8	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SR L	6 3 4 5	Q86T D4	sarcalu menin	En zy me mo dul ato r	77	0 . 5 9 7	0 . 7 3 1	8 E - 0 8	0. 01		1	1	0	20 04	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC L1	6 3 4 6	P2236 2	C-C motif chemoki ne ligand 1	Sig nal ing	79	0 . 5 8 7	0 . 6 9 2	0. 0 7 9 6 7	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC L11	6 3 5 6	P5167 1	C-C motif chemoki ne ligand 11	Sig nal ing	25 0	0 . 4 7 3	0 . 8 8 5	0. 0 1 0 2 1 1	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC L14	6 3 5 8	Q166 27	C-C motif chemoki ne ligand 14	Sig nal ing	29	0 . 6 9 5	0 . 4 2 3	0. 0 0 0 1 0 9	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC L23	6 3 6 8	P5577 3	C-C motif chemoki ne ligand 23	Sig nal ing	18	0 . 7 6	0 . 3 4 6	0. 0 0 0 5 9 7	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi	C 00 03	CC L24	6 3 6 9	O001 75	C-C motif chemoki ne	Sig nal ing	67	0 . 6	0 . 7	0. 0 0 7	0. 01		1	1	0	20 05	2 0 0 5

d Ar thr itis	87 3				ligand 24			0 8	3 1	0 8 9							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	XC L1	6 3 7 5	P4799 2	X-C motif chemoki ne ligand 1	Sig nal ing	67	0 . 6 0 1	0 . 6 9 2	0. 0 1 2 2 9 8	0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SD C4	6 3 8 5	P3143 1	syndeca n 4	Ex tra cel lul ar str uct ure	71	0 . 6 0 3	0 . 6 1 5	0. 0 0 4 1 4 8	0. 01		1	1	0	20 20	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MR PL 17	6 3 8 7 5	Q9NR X2	mitocho ndrial ribosom al protein L17	Nu cle ic aci d bin din g	4	0 . 8 6 1	0 . 1 9 2	0. 0 2 8 1 9 8	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ER VK -6	6 4 0 0 6		endogenous retrovirus group K member 6, envelope		16 2	0 . 5 2 1	0 . 8 0 8		0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ER AP 2	6 4 1 6 7	Q6P1 79	endoplas mic reticulu m aminope ptidase 2	En zy me	58	0 . 6 1 5	0 . 5 7 7	1 E - 2 8	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SE TM AR	6 4 1 9	Q53H 47	SET domain and mariner transpos ase fusion gene	Ep ige net ic reg ula tor	61	0 . 6 1 7	0 . 6 9 2	0. 0 0 1 0 2	0. 01		1	1	0	20 18	2 0 1 8

Rheumatoid Arthritis	C0003873	STRA6	64220	Q9BX79	signaling receptor and transporter of retinol STRA6		100	0.597	0.71	1.51E-10	0.01		1	1	0	2013	2013
Rheumatoid Arthritis	C0003873	ROBO3	64221	Q96MS0	roundabout guidance receptor 3	Receptor	154	0.52	0.88	2E-15	0.01		1	1	0	2010	2010
Rheumatoid Arthritis	C0003873	SFRP2	6423	Q96HF1	secreted frizzled related protein 2		134	0.544	0.731	0.00669	0.01		1	1	0	2003	2003
Rheumatoid Arthritis	C0003873	SFRP4	6424	Q6FJ7	secreted frizzled related protein 4		155	0.524	0.654	9.26E-05	0.01		1	1	0	2014	2014
Rheumatoid Arthritis	C0003873	SFRP5	6425	Q5T4F7	secreted frizzled related protein 5		106	0.599	0.692	5.18E-06	0.01		1	1	0	2014	2014
Rheumatoid Arthritis	C0003873	MP25	64386	Q9NPA2	matrix metalloproteinase 25	Enzyme	37	0.678	0.53E-14	8.73E-14	0.01		1	1	0	1999	1999
Rheumatoid Ar	C0003873	SGCA	6442	Q16586	sarcoglycan alpha	Calcium-binding	111	0.592	0.654	0.0027	0.01		0	1	0	2019	2019

thr itis						g pro tei n				1 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DC LR E1 C	6 4 4 2 1	Q96S D1	DNA cross- link repair 1C		15 0	0 . 5 4 4	0 . 8 0 8	2. 4 9 E - 0 7	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CI AO 3	6 4 4 2 8	Q9H6 Q4	cytosoli c iron- sulfur assembl y compon ent 3	En zy me	30	0 . 7	0 . 4 6 2	1. 8 9 E - 0 9	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SG CG	6 4 4 5	Q133 26	sarcogly can gamma	Ce llul ar str uct ure	93	0 . 6 2 1	0 . 6 1 5	4. 8 2 E - 0 5	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SH 3B P2	6 4 5 2	P7831 4	SH3 domain binding protein 2		65	0 . 6 2 3	0 . 6 5 4	1. 1 6 E - 1 1	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ITS N1	6 4 5 3	Q158 11	intersect in 1	En zy me mo dul ato r	51	0 . 6 5 6	0 . 5 7 7	1	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SH H	6 4 6 9	Q154 65	sonic hedgehog signaling molecule		30 3	0 . 4 6 1	0 . 8 4 6	0. 9 8 2 5 8	0. 01		1	1	0	20 19	2 0 1 9

Rheumatoid Arthritis	C0003873	ENGA SE	64772	Q8NF I3	endo-beta-N-acetylglucosaminidase	Enzyme	4	0.861	0.231	4.41E-25	0.01		1	1	0	2003	2003
Rheumatoid Arthritis	C0003873	P2RY12	64805	Q9H244	purinergic receptor P2Y12	G-protein coupled receptor	153	0.533	0.731	0.001686	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	IL25	64806	Q9H293	interleukin 25		139	0.529	0.846	0.000923	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	CDCP1	64866	Q9H5V8	CUB domain containing protein 1		81	0.604	0.654	0.0001	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	LINC00273	649159		long intergenic non-protein coding RNA 273		82	0.585	0.846		0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	SLAMF1	6504	Q13291	signaling lymphocytic activation molecule family member 1		70	0.612	0.650	0.00037	0.01		1	1	0	1999	1999
Rheumatoid	C0003	SLC2A1	6513	P11166	solute carrier family 2	Transporter	687	0.3	0.8	0.099	0.01		1	1	0	2019	2019

d Ar thr itis	87 3				member 1			8 8	0 8	4 1							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C3 A2	6 5 2 0	P0819 5	solute carrier family 3 member 2	Tr ans por ter	10 8	0 . 5 6 5	0 . 7 3 1	4. 2 2 E - 0 8	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C5 A5	6 5 2 8	Q929 11	solute carrier family 5 member 5	Tr ans por ter	19 5	0 . 4 9 9	0 . 7 6 9	0. 0 0 2 9 4 9	0. 01		1	1	0	20 05	2 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UC A1	6 5 2 9 9 5		urothelial cancer associated 1		15 2	0 . 5 1 2	0 . 8 0 8		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BM P5	6 5 3	P2200 3	bone morpho genetic protein 5	Sig nal ing	43	0 . 6 5 3	0 . 5 7 7	0. 0 0 0 9 0 1	0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SP AG 11 A	6 5 3 4 2 3	Q086 48;Q6 PDA7	sperm associated antigen 11A		44	0 . 6 5	0 . 7 3 1	6. 9 6 E - 0 5	0. 01		1	1	0	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C7 A4	6 5 4 5	O432 46	solute carrier family 7 member 4	Tr ans por ter	31	0 . 6 6 6	0 . 4 2 3	2. 8 3 E - 0 7	0. 01		1	1	0	19 97	1 9 9 7

Rheumatoid Arthritis	C0003873	SLC8A3	6547	P57103	solute carrier family 8 member A3	Transporter	51	0.66	0.46	0.0734	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	SLC22A2	6582	O15244	solute carrier family 22 member 2	Transporter	98	0.572	0.769	2.02E-12	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	SLIT3	6586	O75094	slit guidance ligand 3		62	0.623	0.615	0.7233	0.01		1	1	0	2010	2010
Rheumatoid Arthritis	C0003873	SNAI2	6591	O43623	snail family transcriptional repressor 2		189	0.505	0.692	0.731	0.01		1	1	0	2010	2010
Rheumatoid Arthritis	C0003873	BMX	660	P51813	BMX non-receptor tyrosine kinase	Kinase	38	0.633	0.856	0.0673	0.01		1	1	0	2008	2008
Rheumatoid Arthritis	C0003873	CHID1	6605	Q9BWS9	chitinase domain containing 1		5	0.861	0.912	1.38E-05	0.01		1	1	0	2014	2014
Rheumatoid Ar	C0003873	SMO	6608	Q99835	smoothened, frizzled class receptor	G-protein coupl	215	0.489	0.731	4.28E-1	0.01		1	1	0	2017	2017

thr itis						ed rec ept or				0 7							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SM PD 1	6 6 0 9	P1740 5	sphingo myelin phospho diesteras e 1	En zy me	24 7	0 . 4 9 9	0 . 8 8 5	3. 8 9 E - 1 0	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SIG LE C1	6 6 1 4	Q9BZ Z2	sialic acid binding Ig like lectin 1		75	0 . 5 9 7	0 . 6 5 4	5. 3 3 E - 4 6	0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SN AI1	6 6 1 5	O958 63	snail family transcriptional repressor 1		24 3	0 . 4 7 4	0 . 8 0 8	0. 2 1 7 5 4	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R5 39	6 6 4 6 1 2		microRNA 539		62	0 . 6 1	0 . 6 5 4		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SO X4	6 6 5 9	Q069 45	SRV- box transcrip tion factor 4	Tr ans cri pti on fac tor	24 6	0 . 4 8 9	0 . 8 0 8	0. 9 2 6 5 6	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DS T	6 6 7	Q030 01	dystonin	Ce llul ar str uct ure	14 7	0 . 5 5 2	0 . 8 4 6	1	0. 01		1	1	0	20 09	2 0 0 9
Rh eu	C 00	SP R	6 6	P3527 0	sepiapterin reductase		90	0 .	0 .	0. 0	0. 01		1	1	0	20 20	2 0

ma toi d Ar thr itis	03 87 3		9 7					6 3 1	6 5 4	4 3 4							2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BPI	6 7 1	P1721 3	bactericidal permeability increasing protein		83	0 . 6 1	0 . 7 6 9	1. 6 5 E - 1 4	0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SR C	6 7 1 4	P1293 1	SRC proto- oncogen e, non- receptor tyrosine kinase	Ki nas e	26 5	0 . 4 6 7	0 . 8 8 5	0. 9 9 6 9 1	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AK R1 D1	6 7 1 8	P5185 7	aldo- keto reductas e family 1 member D1	En zy me	40	0 . 7 1 1	0 . 3 8 5	1. 7 2 E - 0 7	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SR F	6 7 2 2	P1183 1	serum response factor	Tr ans cri pti on fac tor	14 7	0 . 5 3 4	0 . 8 0 8	0. 9 7 5 4 5	0. 01		1	1	0	19 99	1 9 9 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SR P54	6 7 2 9	P6101 1	signal recogniti on particle 54	Nu cle ic aci d bin din g	96	0 . 6 1 2	0 . 7 6 9	0. 9 9 8 9 5	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SR Y	6 7 3 6	Q050 66	sex determin ing region Y	Tr ans cri pti on fac tor	31 5	0 . 4 5 6	0 . 8 0 8		0. 01		1	1	0	20 08	2 0 0 8

Rheumatoid Arthritis	C0003873	RO60	6738	P10155	Ro60, Y RNA binding protein	Nucleic acid binding	61	0.61	0.692	0.58278	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	SSB	6741	P05455	small RNA binding exonuclease protection factor La	Nucleic acid binding	60	0.612	0.692	0.899615	0.01		1	1	0	2013	2013
Rheumatoid Arthritis	C0003873	ST2	6761		suppression of tumorigenicity 2		96	0.576	0.692		0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	STATH	6779	P02808	statherin		57	0.608	0.769	7.8E-05	0.01		1	1	0	2002	2002
Rheumatoid Arthritis	C0003873	STIM1	6786	Q13586	stromal interaction molecule 1		247	0.501	0.808	0.7534	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	AURKA	6790	O14965	aurora kinase A	Kinase	245	0.475	0.731	0.8676	0.01		1	1	0	2006	2006
Rheumatoid Ar	C0003873	TACR2	6865	P21452	tachykinin receptor 2	G-protein coupl	33	0.7	0.5	8.3E-	0.01		1	1	0	2005	2005

thritis						ed rec ept or				0 5							
Rheumatoid Arthritis	C0003873	TACR3	6870	P29371	tachykinin receptor 3	G-protein coupled receptor	147	0.553	0.769	1.81E-17	0.01		1	1	0	2005	2005
Rheumatoid Arthritis	C0003873	TAGLN	6876	Q01995	transgelin	Cellular structure	131	0.54	0.692	0.08527	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	TAL1	6886	P17542	TAL bHLH transcription factor 1, erythroid differentiation factor	Transcription factor	202	0.505	0.7359	0.569	0.01		1	1	0	2004	2004
Rheumatoid Arthritis	C0003873	TAT	6898	P17735	tyrosine aminotransferase		230	0.492	0.8469	0.0069	0.01		1	1	0	2006	2006
Rheumatoid Arthritis	C0003873	TBX1	6899	O43435	T-box transcription factor 1	Transcription factor	417	0.433	0.80861	0.8361	0.01		1	1	0	2018	2018
Rheumatoid Ar	C0003873	TCEA1	6917	P23193	transcription elongation factor A1	Nucleic acid bin	34	0.695	0.615	0.89541	0.01		1	1	0	2017	2017

thr itis						din g											
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PP AN - P2 RY 11	6 9 2 3 1 2	Q9N Q55	PPAN- P2RY11 readthrough		17	0 . 7 3 6	0 . 5 7 7	1. 7 2 E - 1 2	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TB X3	6 9 2 6	O151 19	T-box transcrip tion factor 3	Tr ans cri pti on fac tor	17 9	0 . 5 2 5	0 . 7 6 9	0. 9 8 9 0 7	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TC F3	6 9 2 9	P1592 3	transcrip tion factor 3	Tr ans cri pti on fac tor	24 4	0 . 4 7 6	0 . 8 4 6	0. 0 2 5 8 2 4	0. 01		1	1	0	19 92	1 9 9 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R4 21	6 9 3 1 2 2		microRNA 421		73	0 . 5 9 2	0 . 6 9 2		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R5 51 B	6 9 3 1 3 6		microRNA 551b		31	0 . 6 8 2	0 . 5 3 8		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R5 73	6 9 3 1 5 8		microRNA 573		17	0 . 7 4 3	0 . 3 8 5		0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi	C 00 03	MI R5 90	6 9 3 1		microRNA 590		99	0 . 5	0 . 6		0. 01		1	1	0	20 19	2 0 1 9

d Ar thr itis	87 3		7 5				5 3	9 2								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R6 13	6 9 3 1 9 8		microRNA 613	60	0 . 6 0 8	0 . 6 1 5		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R6 33	6 9 3 2 1 8		microRNA 633	12	0 . 7 6 9	0 . 3 4 6		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R6 42 A	6 9 3 2 2 7		microRNA 642a	12	0 . 7 6 9	0 . 3 0 8		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TC F7 L2	6 9 3 4	Q9N QB0	transcription factor 7 like 2	25 7	0 . 4 8 5	0 . 8 4 6	0. 9 9 5 3 7	0. 01		1	1	1	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TC N2	6 9 4 8	P2006 2	transcobalami n 2	10 4	0 . 5 7 8	0 . 6 1 5	1. 0 5 E - 0 6	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TR AV 6	6 9 5 6	A0A0 75B6 T7	T cell receptor alpha variable 6	1	1	0 . 1 1 5		0. 01		1	1	0	19 98	1 9 9 8

Rheumatoid Arthritis	C0003873	BT N1 A1	696	Q13410	butyrophilin subfamily 1 member A1	Enzyme modulator	9	0.839	0.346	1.95E-08	0.01		1	1	0	2011	2011
Rheumatoid Arthritis	C0003873	TR D	6964		T cell receptor delta locus		45	0.65	0.692		0.01		1	1	0	1994	1994
Rheumatoid Arthritis	C0003873	TR G	6965		T cell receptor gamma locus		54	0.631	0.538		0.01		0	1	0	1995	1995
Rheumatoid Arthritis	C0003873	TR GC 1	6966	P0CF51	T cell receptor gamma constant 1		35	0.663	0.385		0.01		0	1	0	1995	1995
Rheumatoid Arthritis	C0003873	PP P1 R1 1	6992	O60927	protein phosphatase 1 regulatory inhibitor subunit 11	Enzyme modulator	66	0.604	0.731	0.3581	0.01		1	1	1	2017	2017
Rheumatoid Arthritis	C0003873	TD GF 1	6997	P13385	teratocarcinoma-derived growth factor 1	Calcium-binding protein	95	0.584	0.731	9.16E-11	0.01		1	1	0	1996	1996
Rheumatoid	C0003	TD GF 1P3	6998	P51864	teratocarcinoma-derived growth	Calcium-	52	0.6	0.5		0.01		1	1	0	1996	1996

d Ar thr itis	87 3				factor 1 pseudog ene 3	bin din g pro tei n		3 1									
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR DX 2	7 0 0 1	P3211 9	peroxire doxin 2	En zy me	24 3	0 . 4 7 4	0 . 8 8 5	0. 0 8 6 5 1 3	0. 01		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TE F	7 0 0 8	Q105 87	TEF transcrip tion factor, PAR bZIP family member	Nu cle ic aci d bin din g	34	0 . 6 8 6	0 . 5 3 8	0. 6 3 2 9 1	0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TE P1	7 0 1 1	Q999 73	telomerase associated protein 1		54	0 . 6 2 1	0 . 6 5 4	4. 3 8 E - 4 9	0. 01		0	1	0	20 00	2 0 0 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TE RF 2	7 0 1 4	Q155 54	telomeric repeat binding factor 2		12 5	0 . 5 4 1	0 . 7 3 1	0. 9 9 2 3 7	0. 01		0	1	0	20 00	2 0 0 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TE RT	7 0 1 5	O147 46	telomera se reverse transcrip tase	En zy me	70 3	0 . 3 7 4	0 . 8 4 6	0. 9 9 0 4 6	0. 01		1	1	1	20 07	2 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TF	7 0 1 8	P0278 7	transferr in	En zy me	16 8	0 . 5 2 7	0 . 8 4 6	4. 1 E - 0 8	0. 01		1	1	0	20 02	2 0 0 2

Rheumatoid Arthritis	C0003873	NR2F1	7025	P10589	nuclear receptor subfamily 2 group F member 1	Nuclear receptor	53	0.656	0.644	0.9482	0.01		1	1	0	2000	2000
Rheumatoid Arthritis	C0003873	TFDP1	7027	Q14186	transcription factor Dp-1	Nucleic acid binding	56	0.623	0.692	0.9174	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	TF F1	7031	P04155	trefoil factor 1	Signaling	147	0.529	0.769	0.0889	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	TF F2	7032	Q03403	trefoil factor 2	Signaling	72	0.611	0.538	2.22E-07	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	TGFB2	7042	P61812	transforming growth factor beta 2	Signaling	389	0.433	0.885	0.9905	0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	TGFB3	7043	P10600	transforming growth factor beta 3	Signaling	230	0.498	0.8827	0.987	0.01		1	1	0	2010	2010
Rheumatoid Ar	C0003873	TG FBI	7045	Q15582	transforming growth factor beta induced	Signaling	225	0.484	0.769	5.97E-	0.01		1	1	0	2006	2006

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Rh eu ma toi d Ar thr itis	C 00 03 87 3	TG FB R1	7 0 4 6	P3689 7	transfor ming growth factor beta receptor 1	Ki nas e	34 7	0 . 4 5 1	0 . 8 8 5	0. 8 5 3 7 9	0. 01		1	1	0	20 07 0 0 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TG IF1	7 0 5 0	Q155 83	TGFB induced factor homeob ox 1	En zy me	10 0	0 . 5 8 8	0 . 7 6 9	0. 0 1 0 4 5 4	0. 01		1	1	0	20 05 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TH AS	7 0 5 5		thoracoabdom inal syndrome		12 0	0 . 5 6	0 . 8 0 8		0. 01		1	1	0	20 18 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NK X2- 1	7 0 8 0	P4369 9	NK2 homeob ox 1	Tr ans cri pti on fac tor	31 9	0 . 4 5 7	0 . 8 0 8	0. 3 5 8 7 4	0. 01		1	1	0	20 18 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN NC 1	7 1 3 4	P6331 6	troponin C1, slow skeletal and cardiac type	Ca lci um - bin din g pro tei n	54	0 . 6 4 7	0 . 4 6 2 3 3	0. 6 7 8 3 3	0. 01		1	1	0	20 18 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN NI3	7 1 3 7	P1942 9	troponin I3, cardiac type	Ce llul ar str uct ure	15 9	0 . 5 2	0 . 7 6 9	0. 0 9 6 2 8 4	0. 01		1	1	0	20 18 0 1 8

Rheumatoid Arthritis	C0003873	TP73	7161	O15350	tumor protein p73	Transcription factor	300	0.449	0.808	0.996	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	TPSAB1	7177	P20231;Q15661	tryptase alpha/beta 1	Enzyme	23	0.722	0.75	1.27E-13	0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	TPT1	7178	P13693	tumor protein, translationally-controlled 1	Cellular structure	143	0.528	0.731	0.8048	0.01		1	1	0	2008	2008
Rheumatoid Arthritis	C0003873	NR2C2	7182	P49116	nuclear receptor subfamily 2 group C member 2	Nuclear receptor	131	0.534	0.808	0.992	0.01		1	1	0	2020	2020
Rheumatoid Arthritis	C0003873	HSBP90B1	7184	P14625	heat shock protein 90 beta family member 1	Chaperone	155	0.522	0.808	0.992	0.01		1	1	0	2009	2009
Rheumatoid Arthritis	C0003873	TRAF3	7187	Q13114	TNF receptor associated factor 3	Signaling	129	0.541	0.769	0.9969	0.01		1	1	0	2018	2018
Rheumatoid Ar	C0003873	TRAF5	7188	O00463	TNF receptor associated factor 5	Signaling	36	0.659	0.654	1.67E-	0.01		1	1	0	2007	2007

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Rh eu ma toi d Ar thr itis	C 00 03 87 3	C3 AR 1	7 1 9	Q165 81	comple ment C3a receptor 1	G- pro tei n co upl ed rec ept or	73	0 . 6 0 1	0 . 7 3 1 E - 0 9	3. 3 1 E - 0 9	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HS P90 B2 P	7 1 9 0	Q58F F3	heat shock protein 90 beta family member 2, pseudog ene	Ch ap ero ne	11 0	0 . 5 5 8	0 . 8 4 6		0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CC T3	7 2 0 3	P4936 8	chapero nin containi ng TCP1 subunit 3	Ch ap ero ne	43	0 . 6 5	0 . 5 7 7	0. 9 9 9 8	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TR PC 1	7 2 2 0	P4899 5	transient receptor potential cation channel subfamil y C member 1	Ion ch an nel	97	0 . 5 6 6	0 . 7 6 9	0. 0 1 2 9 0 4	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TR PC 5	7 2 2 4	Q9UL 62	transient receptor potential cation channel subfamil y C member 5	Ion ch an nel	58	0 . 6 5 3	0 . 6 1 5	0. 9 9 9 7 3	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar	C 00 03 87 3	TR PM 2	7 2 2 6	O947 59	transient receptor potential cation channel subfamil y M	Ion ch an nel	13 3	0 . 5 4 6	0 . 7 3 1	8. 9 6 E - 4 4	0. 01		1	1	0	20 19	2 0 1 9

thr itis					member 2												
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R6 50	7 2 3 7 7 8		microRNA 650		35	0 . 6 7	0 . 5 7 7		0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R6 63 A	7 2 4 0 3 3		microRNA 663a		81	0 . 5 7 6	0 . 7 6 9		0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TT N	7 2 7 3	Q8W Z42	titin	Ki nas e	36 6	0 . 4 7	0 . 8 8 5	2. 5 6 E - 9 6	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SF TP A2	7 2 9 2 3 8	Q8IW L1	surfactant protein A2		11 1	0 . 5 6 3	0 . 7 3 1	0. 0 0 9 2 5 1	0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TY RO 3	7 3 0 1	Q064 18	TYRO3 protein tyrosine kinase	Ki nas e	10 9	0 . 5 5 9	0 . 7 6 9	8. 3 3 E - 1 0	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TY RP 1	7 3 0 6	P1764 3	tyrosina se related protein 1	En zy me	20 0	0 . 5 0 7	0 . 8 4 6	6. 5 6 E - 2 5	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi	C 00 03	UB E2 N	7 3 3 4	P6108 8	ubiquitin conjugating enzyme E2 N		80	0 . 5	0 . 6	0. 8 8 1	0. 01		1	1	0	20 18	2 0 1 8

d Ar thr itis	87 3						9 3	5 4	5 6								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UB TF	7 3 4 3	P1748 0	upstream binding transcription factor		44	0 . 7 0 5	0 . 4 6 2	1	0. 01		1	1	0	19 93	1 9 9 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UC N	7 3 4 9	P5508 9	urocorti n	Sig nal ing	13 4	0 . 5 3 9	0 . 7 6 9 9	0. 4 4 9 5 8	0. 01		1	1	0	20 01	2 0 0 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UC P2	7 3 5 1	P5585 1	uncoupli ng protein 2	Tr ans por ter	23 5	0 . 4 9 3	0 . 8 0 8	1. 5 5 E - 1 0	0. 01		1	1	0	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UG CG	7 3 5 7	Q167 39	UDP- glucose ceramid e glucosyl transfera se	En zy me	11 1	0 . 5 6	0 . 8 0 8	0. 9 4 1 4 7	0. 01		1	1	0	19 99	1 9 9 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UN G	7 3 7 4	P1305 1	uracil DNA glycosylase		66	0 . 6 1 7	0 . 6 5 4	0. 0 0 1 7 2 5	0. 01		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UT RN	7 4 0 2	P4693 9	utrophin		15 2	0 . 5 2 5	0 . 6 9 2	1 E - 1 9	0. 01		1	1	0	20 20	2 0 2 0

Rheumatoid Arthritis	C0003873	KDM6A	7403	O15550	lysine demethylase 6A	Epigenetic regulator	238	0.498	0.769	1	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	VAV1	7409	P15498	vav guanine nucleotide exchange factor 1		103	0.556	0.7993	0.993	0.01		1	1	4	2017	2017
Rheumatoid Arthritis	C0003873	VDAC1	7416	P21796	voltage dependent anion channel 1		116	0.556	0.7266	0.966	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	VIPR1	7433	P32241	vasoactive intestinal peptide receptor 1	G-protein coupled receptor	102	0.573	0.654	7.44E-27	0.01		1	1	0	2008	2008
Rheumatoid Arthritis	C0003873	TRPV1	7442	Q8NER1	transient receptor potential cation channel subfamily V member 1	Ion channel	404	0.446	0.885	1.01E-16	0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	WNT1	7471	P04628	Wnt family member 1	Signaling	216	0.495	0.7663	0.363	0.01		1	1	0	2000	2000
Rheumatoid Arthritis	C0003873	XBPI	74	P17861	X-box binding protein 1		234	0.4	0.83	0.03	0.01		1	1	0	2014	2014

to id Ar thr itis	87 3		9 4				7 7	4 6	2 0 1 4							1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	XB PIP 1	7 4 9 5		X-box binding protein 1 pseudogene 1	42	0 . 6 5 3	0 . 6 9 2		0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	XR CC 4	7 5 1 8	Q134 26	X-ray repair cross complementin g 4	19 2	0 . 5 2 8	0 . 7 6 9	8. 2 8 E - 0 7	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA 2	7 6 0	P0091 8	carbonic anhydrase 2	21 0	0 . 5 0 6	0 . 8 0 8	1. 6 9 E - 0 6	0. 01		1	1	0	20 01	2 0 0 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA 3	7 6 1	P0745 1	carbonic anhydrase 3	37	0 . 6 8 2	0 . 5 0 1 7 2 5	0. 0 0 1 7 2 5	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R6 71	7 6 8 2 1 3		microRNA 671	47	0 . 6 3 6	0 . 5 7 7		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MI R7 66	7 6 8 2 1 8		microRNA 766	46	0 . 6 3 3	0 . 5 7 7		0. 01		1	1	0	20 19	2 0 1 9

Rheumatoid Arthritis	C0003873	CANCAS	779	Q13698	calcium voltage-gated channel subunit alpha1 S	Ion channel	118	0.595	0.692	6.26E-12	0.01		1	1	0	2009	2009
Rheumatoid Arthritis	C0003873	PS	780904		Potocki-Shaffer syndrome		66	0.608	0.654		0.01		1	1	0	1991	1991
Rheumatoid Arthritis	C0003873	SCG2	7857	P13521	secretogranin II		57	0.628	0.615	2.12E-05	0.01		1	1	0	2000	2000
Rheumatoid Arthritis	C0003873	MANF	7873	P55145	mesencephalic astrocyte derived neurotrophic factor		62	0.621	0.654	0.001391	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	GGCT	79017	O75223	gamma-glutamylcyclo transferase		108	0.552	0.588	0.00143	0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	AHNAK	79026	Q09666	AHNAK nucleoprotein		60	0.623	0.615	0.89827	0.01		1	1	0	2002	2002
Rheumatoid Ar	C0003873	ASPS	79058	Q9BZE9	ASPSCR1 tether for SLC2A4, UBX domain containing		54	0.653	0.538	4.42E-	0.01		1	1	0	2019	2019

thr itis										1 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TS L	7 9 0 9 5 3		testis- expressed, seven-twelve, leukemia		18	0 . 7 4 3	0 . 3 4 6		0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DE K	7 9 1 3	P3565 9	DEK proto- oncogene		12 2	0 . 5 4 2	0 . 7 6 9	0. 1 3 0 6 5	0. 01		1	1	0	20 04	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	OP LL	7 9 3 3		ossification of posterior longitudinal ligament of spine		6	0 . 8 6 1	0 . 1 5 4		0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BH LH E41	7 9 3 6 5	Q9C0 J9	basic helix- loop- helix family member e41	Tr ans cri pti on fac tor	63	0 . 6 2 3	0 . 5 7 7	0. 9 9 2 1 2	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TF EB	7 9 4 2	P1948 4	transcription factor EB		15 0	0 . 5 2 7	0 . 7 3 1	0. 8 9 9 3 1	0. 01		1	1	0	20 20	2 0 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NT T	7 9 5 6		Noncoding transcript in T cells		16	0 . 7 4 3	0 . 4 6 2		0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi	C 00 03	NK AP	7 9 5	Q8N5 F7	NFKB activating protein		15	0 . 7 6	0 . 2	0. 9 9 7	0. 01		1	1	0	20 13	2 0 1 3

d Ar thr itis	87 3		7 6						6 9	3 5							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C5 2A 2	7 9 5 8 1	Q9H AB3	solute carrier family 52 member 2	Tr ans por ter	26 1	0 . 4 8 3	0 . 8 0 8	0. 0 2 4 7 8	0. 01		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SP AG 16	7 9 5 8 2	Q8N0 X2	sperm associat ed antigen 16	Ce llul ar str uct ure	17	0 . 7 6	0 . 3 8 5	1. 4 E - 3 4	0. 01		1	1	1	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FAI P8 L2	7 9 6 2 6	Q6P5 89	TNF alpha induced protein 8 like 2		90	0 . 5 7 5	0 . 6 1 5	0. 0 3 8 3 6 4	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NL RX 1	7 9 6 7 1	Q86U T6	NLR family member X1	En zy me	51	0 . 6 4 1	0 . 6 5 4	7. 7 3 E - 3 1	0. 01		0	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LR RC 31	7 9 7 8 2	Q6U Y01	leucine rich repeat containing 31		7	0 . 8 3 9	0 . 2 6 9	2 E - 0 6	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SH CB P1	7 9 8 0 1	Q8NE M2	SHC binding and spindle associated 1		72	0 . 6 0 6	0 . 6 5 4	9. 3 8 E - 0 8	0. 01		1	1	0	20 02	2 0 0 2

Rheumatoid Arthritis	C0003873	CAMKMT	79823	Q7Z624	calmodulin-lysine N-methyltransferase		185	0.51	0.88	1.38E-15	0.01		1	1	0	2020	2020
Rheumatoid Arthritis	C0003873	CCDC134	79879	Q9H6E4	coiled-coil domain containing 134		19	0.769	0.308	6E-07	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	TNIP3	79931	Q96KP6	TNFAIP3 interacting protein 3		12	0.76	0.308	0.00544	0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	NA2A5	80018	Q14CX7	N-alpha-acetyltransferase 25, NatB auxiliary subunit	Enzyme	81	0.603	0.692	1	0.01		1	1	0	2009	2009
Rheumatoid Arthritis	C0003873	TRPM3	80036	Q9HCF6	transient receptor potential cation channel subfamily M member 3	Ion channel	51	0.663	0.769	5.9E-07	0.01		1	1	0	2010	2010
Rheumatoid Arthritis	C0003873	CALM1	80011	P0DP23;P0DP24;P0DP25	calmodulin 1	Calcium-binding protein	253	0.472	0.808	0.9473	0.01		1	1	0	2020	2020
Rheumatoid Arthritis	C0003873	ZC3H1	80011	Q5D1E8	zinc finger CCH-	Nucleic	88	0.5	0.6	0.14	0.01		1	1	0	2012	2012

to id Ar thr itis	87 3	12 A	4 9		type containi ng 12A	aci d bin din g		7 8	5 4	0 1 5							1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BR D3	8 0 1 9	Q150 59	bromod omain containi ng 3	Ep ige net ic reg ula tor	42	0 . 7	0 . 5	0. 9 7 4 6 8	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	W DR 26	8 0 2 3 2	Q9H7 D7	WD repeat domain 26		90	0 . 6 0 6	0 . 7 6 9	1	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	EF HC 2	8 0 2 5 8	Q5JS T6	EF-hand domain containing 2		8	0 . 7 9 2	0 . 5 3 8	0. 9 9 1	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FE R1 L4	8 0 3 0 7	A9Z1 Z3	fer-1 like family member 4 (pseudo gene)	Tr ans por ter	32	0 . 7 1 1	0 . 3 4 6		0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PD GF D	8 0 3 1 0	Q9GZ P0	platelet derived growth factor D	Sig nal ing	94	0 . 5 7 9	0 . 5 3 8	0. 0 1 7 1 5	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TE T1	8 0 3 1 2	Q8NF U7	tet methylcytosin e dioxygenase 1		15 6	0 . 5 2 3	0 . 8 0 8	1	0. 01		1	1	0	20 03	2 0 0 3

Rheumatoid Arthritis	C0003873	PP1R2C	80316	O14990	PPP1R2C family member C	Enzyme modulator	231	0.478	0.846		0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	CEP70	80321	Q8NHQ1	centrosomal protein 70		20	0.743	0.462	4.56E-15	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	CSR3	8048	P50461	cysteine and glycine rich protein 3	Cellular structure	108	0.572	0.731	0.000159	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	CALM2	8005	P0DP23;P0DP24;P0DP25	calmodulin 2	Calcium-binding protein	252	0.472	0.808	0.00086	0.01		1	1	0	2020	2020
Rheumatoid Arthritis	C0003873	FOSL1	8061	P15407	FOS like 1, AP-1 transcription factor subunit	Transcription factor	150	0.519	0.846	0.00049	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	FGF23	8074	Q9GZV9	fibroblast growth factor 23	Signaling	305	0.461	0.731	0.00014	0.01		1	1	0	2020	2020
Rheumatoid	C0003	COL18A1	8007	P39060	collagen type XVIII alpha 1 chain		323	0.48	0.74E	1.04E	0.01		1	1	1	2018	2018

d Ar thr itis	87 3		8 1				4 9	0 8	- 1 0							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA LM 3	8 0 8	P0DP 23;P0 DP24; P0DP 25	calmodu lin 3	Ca lci um - bin din g pro tei n	21 5	0 . 4 8 5	0 . 8 4 6	0. 9 2 7 4 9	0. 01		1	1	0	20 20 2 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AP OL 6	8 0 8 3 0	Q9B WW8	apolipop rotein L6	Tr ans por ter	6	0 . 8 3 9	0 . 2 6 9	0. 0 9 0 2 9	0. 01		1	1	0	20 17 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AA AS	8 0 8 6	Q9NR G9	aladin repeat nucleoporin	WD	92	0 . 6 0 1	0 . 6 5 4	2. 4 4 E - 1 3	0. 01		1	1	0	20 16 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HM GA 2	8 0 9 1	P5292 6	high mobility group AT- hook 2	Nu cle ic aci d bin din g	38 2	0 . 4 2 9	0 . 8 0 8	0. 8 7 0 1 5	0. 01		1	1	0	20 17 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SL C3 8A 1	8 1 5 3 9	Q9H2 H9	solute carrier family 38 member 1	Tr ans por ter	64	0 . 6 1 5	0 . 7 6 9	0. 9 3 0 6 7	0. 01		1	1	0	20 12 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GD PD 5	8 1 5 4 4	Q8W TR4	glycerophosph odiester phosphodiester ase domain containing 5		18	0 . 7 6	0 . 3 0 8	0. 0 0 2 5	0. 01		1	1	0	20 07 0 0 7

Rheumatoid Arthritis	C0003873	LBH	81606	Q53QV2	LBH regulator of WNT signaling pathway	27	0.686	0.5	0.01436	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	FIP1L1	81608	Q6UN15	factor interacting with PAPOLA and CPSF1	111	0.575	0.57	0.789	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	MAP1LC3B	81631	Q9GZQ8	microtubule associated protein 1 light chain 3 beta	Cellular structure	167	0.506	0.819	0.017		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	SLC14A2	8170	Q15849	solute carrier family 14 member 2	Transporter	71	0.606	0.9217	1.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	MIAA	8190	Q16674	MIA domain containing	SH3	130	0.537	0.769	1.015		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	NCOA3	8202	Q9Y6Q9	nuclear receptor coactivator 3	Kinase	142	0.522	0.645	0.01		1	1	0	2003	2003
Rheumatoid Ar	C0003873	COLQ	8292	Q9Y215	collagen like tail subunit of asymmetric acetylcholinesterase		92	0.628	0.654	7.01		1	1	0	2019	2019

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Rh eu ma toi d Ar thr itis	C 00 03 87 3	EO ME S	8 3 2 0	O959 36	eomesod ermin	Tr ans cri pti on fac tor	60	0 . 6 1 9	0 . 6 9 2	0. 9 8 4 4 3	0. 01		1	1	1	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AR HG AP 24	8 3 4 7 8	Q8N2 64	Rho GTPase activating protein 24		27 3	0 . 4 5 6	0 . 8 0 8	3. 9 5 E - 1 0	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BC L2 L12	8 3 5 9 6	Q9HB 09	BCL2 like 12		67	0 . 6 0 6	0 . 6 5 4	3. 8 3 E - 0 9	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	FA M1 67 A	8 3 6 4 8	Q96K S9	family with sequence similarity 167 member A		31	0 . 6 7 8	0 . 6 9 2	1. 0 2 E - 1 1	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PA RP 9	8 3 6 6 6	Q8IX Q6	poly(ADP- ribose) polymerase family member 9		11 6	0 . 5 5 4	0 . 8 0 8	5 E - 0 9	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	SE SN 2	8 3 6 6 7	P5800 4	sestrin 2	En zy me	16 9	0 . 5 0 8	0 . 8 0 8	4. 1 9 E - 0 7	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi	C 00 03	ITC H	8 3 7	Q96J0 2	itchy E3 ubiquiti n protein ligase	En zy me	12 3	0 . 5	0 . 7	0. 9 9 9	0. 01		1	1	0	20 08	2 0 0 8

d Ar thr itis	87 3		3 7					5 6	6 9	9 7							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PL A2 G1 0	8 3 9 9	O154 96	phospho lipase A2 group X	En zy me	86	0 . 5 8 1	0 . 6 9 2	0. 0 6 9 5 0 7	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TM PR SS1 3	8 4 0 0 0	Q9BY E2	transme mbrane serine protease 13	En zy me	11 6	0 . 5 4 5	0 . 8 4 6	1. 4 8 E - 0 8	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ZN F64 4	8 4 1 4 6	Q9H5 82	zinc finger protein 644	Tr ans cri pti on fac tor	6	0 . 8 2 1	0 . 1 9 9 2	0. 9 9 1 4	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RE CK	8 4 3 4	O959 80	reversio n inducing cysteine rich protein with kazal motifs	En zy me mo dul ato r	12 3	0 . 5 4 7	0 . 7 3 1	1. 9 3 E - 1 0	0. 01		1	1	0	20 05	2 0 0 5
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CA VI N2	8 4 3 6	O958 10	caveolae associat ed protein 2	Tr ans cri pti on fac tor	61	0 . 6 1 7	0 . 6 1 5	7. 2 4 E - 0 9	0. 01		1	1	0	20 12	2 0 1 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DO T1 L	8 4 4 4	Q8TE K3	DOT1 like histone lysine methyltr ansferase	Ep ige net ic reg ula tor	79	0 . 5 9 9	0 . 6 9 2	1	0. 01		1	1	0	20 18	2 0 1 8

Rheumatoid Arthritis	C0003873	MAP1LC3A	84557	Q9H492	microtubule associated protein 1 light chain 3 alpha	Cellular structure	67	0.61	0.654	0.027922	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	CASR	8466	P41180	calcium sensing receptor	G-protein coupled receptor	517	0.41	0.846698	0.046698	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	ZNF469	84627	Q96JG9	zinc finger protein 469		101	0.584	0.769	0.071866	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	GP65	8477	Q8IYL9	G protein-coupled receptor 65	G-protein coupled receptor	47	0.653	0.114	0.0114	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	CILP	8483	O75339	cartilage intermediate layer protein		19	0.736	0.423	5.37E-26	0.01		1	1	0	2004	2004
Rheumatoid Arthritis	C0003873	MAP4K3	8491	Q8IVH8	mitogen-activated protein kinase kinase kinase 3	Kinase	29	0.711	0.423	0.010987	0.01		1	1	0	2013	2013

Rheumatoid Arthritis	C0003873	PPM1D	8493	O15297	protein phosphatase, Mg ²⁺ /Mn ²⁺ dependent 1D	Enzyme	177	0.513	0.88	2.23E-11	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	TMEM60	85025	Q9H2L4	transmembrane protein 60		10	0.821	0.115	0.7498	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	DNAJC14	85406	Q6Y2X3	DnaJ heat shock protein family (Hsp40) member C14		11	0.805	0.423	0.999	0.01		1	1	0	1999	1999
Rheumatoid Arthritis	C0003873	PIR	8544	O00625	pirin	Transcription factor	26	0.716	0.385	5.34E-10	0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	DKL3	85443	Q9C098	doublecortin like kinase 3	Kinase	47	0.647	0.615	0.13686	0.01		0	1	0	2016	2016
Rheumatoid Arthritis	C0003873	KHSP	8570	Q92945	KH-type splicing regulatory protein	Enzyme	148	0.526	0.846	1	0.01		1	1	0	1992	1992
Rheumatoid Ar	C0003873	STC2	8614	O76061	stanniocalcin 2	Signaling	88	0.573	0.692	0.26588	0.01		1	1	0	2008	2008

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Rh eu ma toi d Ar thr itis	C 00 03 87 3	PS MG 1	8 6 2 4	O954 56	proteasome assembly chaperone 1		97	0 . 5 7 9	0 . 7 3 1	0. 0 0 3 4 2	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HS D1 7B 6	8 6 3 0	O147 56	hydroxy steroid 17-beta dehydro genase 6	En zy me	82	0 . 5 9 2	0 . 6 9 2	0. 3 4 8 0 7	0. 01		0	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UN C5 C	8 6 3 3	O951 85	unc-5 netrin receptor C	Re ce pto r	47	0 . 6 5	0 . 4 6 2	0. 0 0 8 8 1	0. 01		1	1	0	20 09	2 0 0 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NC OA 1	8 6 4 8	Q157 88	nuclear receptor coactiva tor 1	Ki nas e	10 8	0 . 5 6 3	0 . 7 3 1	0. 9 9 9 8 1	0. 01		1	1	0	20 03	2 0 0 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NU MB	8 6 5 0	P4975 7	NUMB endocyti c adaptor protein	Sig nal ing	55	0 . 6 1 9	0 . 7 3 1	0. 0 0 3 9 9 6	0. 01		1	1	0	20 10	2 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MA RC O	8 6 8 5	Q9UE W3	macrophage receptor with collagenous structure		42	0 . 6 5 9	0 . 5 7 E - 2 1	7. 7 7 E - 2 1	0. 01		1	1	0	20 01	2 0 0 1
Rh eu ma toi	C 00 03	HY AL 2	8 6 9 2	Q128 91	hyaluron idase 2	En zy me	54	0 . 6	0 . 5	0. 1 8 6	0. 01		1	1	0	20 04	2 0 0 4

d Ar thr itis	87 3							4 4	7 7	8 2							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AC TN 1	8 7	P1281 4	actinin alpha 1		34	0 . 6 9 5	0 . 5 7 7	0. 9 9 9 7	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UR II	8 7 2 5	O947 63	URI1 prefoldi n like chaperone	Tr ans cri pti on fac tor	53	0 . 6 3 3	0 . 6 5 4	1. 1 1 E - 0 5	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RIP K1	8 7 3 7	Q135 46	receptor interacti ng serine/th reonine kinase 1	Ki nas e	25 0	0 . 4 7 9	0 . 6 7 9	0. 0 7 9 4 4	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FS F9	8 7 4 4	P4127 3	TNF superfamily member 9		90	0 . 5 7 9	0 . 6 9 2	0. 3 1 8 2 3	0. 01		1	1	0	20 04	2 0 0 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	TN FR SF1 8	8 7 8 4	Q9Y5 U5	TNF receptor superfamily member 18		53	0 . 6 3 1	0 . 5 3 8	1. 4 5 E - 0 6	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CR EG 1	8 8 0 4	O756 29	cellular repressor of E1A stimulated genes 1		37	0 . 6 6 3	0 . 4 2 3	0. 0 1 2 2 3	0. 01		1	1	0	19 87	1 9 8 7

Rheumatoid Arthritis	C0003873	HE SX1	8820	Q9UBX0	HESX homeobox 1		143	0.561	0.654	0.0797	0.01		1	1	0	1993	1993
Rheumatoid Arthritis	C0003873	SOCS2	8835	O14508	suppressor of cytokine signaling 2	Enzyme modulator	104	0.56	0.731	0.6299	0.01		1	1	0	2008	2008
Rheumatoid Arthritis	C0003873	CCN5	8839	O76076	cellular communication network factor 5	Signaling	61	0.621	0.462	1.97E-05	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	CCN4	8840	O95388	cellular communication network factor 4	Signaling	114	0.554	0.692	6.39E-07	0.01		1	1	5	2019	2019
Rheumatoid Arthritis	C0003873	PRDM1	8842	O43490	prominin 1	Transporter	477	0.41	0.846	1.95E-22	0.01		1	1	0	2019	2019
Rheumatoid Arthritis	C0003873	CDK5R1	8851	Q15078	cyclin dependent kinase 5 regulatory subunit 1	Enzyme modulator	153	0.529	0.808	0.9149	0.01		1	1	0	2015	2015
Rheumatoid Ar	C0003873	ALDH1A2	8854	O94788	aldehyde dehydrogenase 1 family	Enzyme	109	0.578	0.692	0.331	0.01		1	1	0	2015	2015

thritis					member A2												
Rheumatoid Arthritis	C0003873	PER3	8863	P56645	period circadian regulator 3	Transcription factor	122	0.59	0.731	1.37E-17	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	IER3	8870	P46695	immediate early response 3		78	0.53	0.7612	0.6322	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	ARHGEF7	8874	Q14155	Rho guanine nucleotide exchange factor 7		215	0.486	0.846	0.995	0.01		1	1	1	2002	2002
Rheumatoid Arthritis	C0003873	KRIT1	889	O00522	KRIT1 ankyrin repeat containing		201	0.5	0.808	0.0693	0.01		1	1	0	2020	2020
Rheumatoid Arthritis	C0003873	MTMR3	8897	Q13615	myotubularin related protein 3	Enzyme	41	0.682	0.462	0.9937	0.01		1	1	1	2019	2019
Rheumatoid Arthritis	C0003873	CCNB1	891	P14635	cyclin B1	Enzyme modulator	155	0.512	0.7393	0.193	0.01		1	1	0	2012	2012
Rheumatoid	C0003	KYNU	8942	Q16719	kynureninase	Enzyme	88	0.6	0.6	4.8E	0.01		1	1	0	2018	2018

d Ar thr itis	87 3							1 7	9 2	- 1 8							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	LM LN	8 9 7 8 2	Q96K R4	leishma nolysin like peptidas e	En zy me	13 8	0 . 5 2 8	0 . 8 4 6	1. 8 7 E - 1 4	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RP S6 KA 4	8 9 8 6	O756 76	ribosom al protein S6 kinase A4	Ki nas e	17	0 . 7 4 3	0 . 2 6 9	0. 9 9 7 1 5	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	HS PB 3	8 9 8 8	Q129 88	heat shock protein family B (small) member 3		32 7	0 . 4 8	0 . 7 6 9	6. 0 9 E - 0 5	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	UC N2	9 0 2 2 6	Q96R P3	urocortin 2		56	0 . 6 3 3	0 . 5 7 7	0. 0 3 7 9 4 7	0. 01		1	1	0	20 11	2 0 1 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PK D2 L1	9 0 3 3	Q9P0 L9	polycyst in 2 like 1, transient receptor potential cation channel	Ion ch an nel	12 4	0 . 5 6 5	0 . 7 3 1	1. 5 7 E - 2 7	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GA DD 45 GIP 1	9 0 4 8 0	Q8TA E8	GADD45G interacting protein 1		22	0 . 7 1 6	0 . 4 2 3	0. 0 0 0 1 0 3	0. 01		1	1	0	20 19	2 0 1 9

Rheumatoid Arthritis	C0003873	CC T	907		cataract, congenital, total		75	0.588	0.769		0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	CL DN 1	9076	O95832	claudin 1	Cell-cell junction	234	0.481	0.808	0.011	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	MT A1	9112	Q13330	metastasis associated 1	Nucleic acid binding	118	0.547	0.692	1	0.01		1	1	0	2016	2016
Rheumatoid Arthritis	C0003873	SL C1 6A 4	9122	O15374	solute carrier family 16 member 4	Transporter	114	0.55	0.731	9.67E-08	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	SL C1 6A 3	9123	O15427	solute carrier family 16 member 3	Transporter	122	0.542	0.701	0.0294	0.01		1	1	0	2015	2015
Rheumatoid Arthritis	C0003873	P2 RX 6	9127	O15547	purinergic receptor P2X 6	Ion channel	85	0.599	0.769	4.47E-09	0.01		1	1	0	2010	2010
Rheumatoid Ar	C0003873	SL C2 8A 2	9153	O43868	solute carrier family 28 member 2	Transporter	12	0.78	0.385	1.13E-	0.01		0	1	0	2018	2018

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Rh eu ma toi d Ar thr itis	C 00 03 87 3	EB AG 9	9 1 6 6	O005 59	estrogen receptor binding site associated antigen 9		69	0 . 6 1 5	0 . 4 6 2	0. 0 7 7 1 0 1	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MF SD 4B	9 1 7 4 9	Q5TF 39	major facilitato r superfa mily domain containi ng 4B	Tr ans por ter	13	0 . 8 0 5	0 . 2 6 9	8. 3 E - 0 6	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	OS MR	9 1 8 0	Q996 50	oncostat in M receptor	Sig nal ing	77	0 . 5 9 9	0 . 5 7 7	9. 2 1 E - 1 8	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	DE DD	9 1 9 1	O756 18	death effector domain containing		24	0 . 7 1 1	0 . 3 4 6	0. 9 5 9 1 2	0. 01		1	1	0	20 10	2 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 4	9 2 0	P0173 0	CD4 molecule		73	0 . 6 0 4	0 . 6 5 4	0. 0 0 7 8 9	0. 01		1	1	0	20 08	2 0 0 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	MT DH	9 2 1 4 0	Q86U E4	metadherin		20 0	0 . 4 9 1	0 . 7 6 9	0. 3 2 9 2 4	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi	C 00 03	LR AT	9 2 2 7	O952 37	lecithin retinol acyltransferas e		84	0 . 6	0 . 6	0. 0 2 8	0. 01		1	1	0	20 09	2 0 0 9

d Ar thr itis	87 3						0 8	5 4	3 5 4								
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NA F1	9 2 3 4 5	Q96H R8	nuclear assembly factor 1 ribonucleoprot ein	27	0 . 7	0 . 5	0. 9 7 7 9 3	0. 01		1	1	0	20 03	2 0 0 3	
Rh eu ma toi d Ar thr itis	C 00 03 87 3	RP S6 KA 5	9 2 5 2	O755 82	ribosom al protein S6 kinase A5	Ki nas e	28	0 . 7 2 2	0 . 5 7 7	0. 9 9 9 0 9	0. 01		1	1	0	20 14	2 0 1 4
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AI MP 1	9 2 5 5	Q129 04	aminoac yl tRNA syntheta se complex interacti ng multifun ctional protein 1	En zy me	12 5	0 . 5 6 6	0 . 7 6 9	3. 0 4 E - 0 7	0. 01		1	1	0	20 02	2 0 0 2
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PD LI M7	9 2 6 0	Q9NR 12	PDZ and LIM domain 7	Ce llul ar str uct ure	24 1	0 . 4 7 4	0 . 8 0 8	0. 7 0 8 3 8	0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PI WI L1	9 2 7 1	Q96J9 4	piwi like RNA- mediated gene silencing 1		99	0 . 5 7	0 . 7 3 1	7. 2 8 E - 1 4	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 9	9 2 8	P2192 6	CD9 molecule		15 6	0 . 5 2 8	0 . 7 6 9	0. 0 4 7 2 2	0. 01		1	1	0	19 89	1 9 8 9

Rheumatoid Arthritis	C0003873	ADGRG1	9289	Q9Y653	adhesion G protein-coupled receptor G1	G-protein coupled receptor	106	0.59	0.54	5.35E-10	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	S1PR2	9294	O95136	sphingosine-1-phosphate receptor 2	G-protein coupled receptor	93	0.585	0.731	0.008286	0.01		1	1	0	2008	2008
Rheumatoid Arthritis	C0003873	SRSF1	9295	Q05519	serine and arginine rich splicing factor 11	Nucleic acid binding	11	0.821	0.269	0.009806	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	MP20	9313	O60882	matrix metalloproteinase 20	Enzyme	40	0.663	0.538	6.08E-14	0.01		1	1	0	1999	1999
Rheumatoid Arthritis	C0003873	PPIG	9360	Q13427	peptidylprolyl isomerase G		203	0.497	0.846	0.00922	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	LONP1	9361	P36776	lon peptidase 1, mitochondrial	Enzyme	197	0.517	0.808	0.00993	0.01		1	1	0	2019	2019

Rheumatoid Arthritis	C0003873	ZFYVE9	9372	O95405	zinc finger FYVE-type containing 9		59	0.647	0.615	0.9244	0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	COX5A	9377	P20674	cytochrome c oxidase subunit 5A	Enzyme	171	0.515	0.846	0.4407	0.01		1	1	0	2000	2000
Rheumatoid Arthritis	C0003873	CIAO1	9391	O76071	cytosolic iron-sulfur assembly component 1		3	0.931	0.154	0.01245	0.01		1	1	0	1998	1998
Rheumatoid Arthritis	C0003873	CLEC6A	93978	Q6EIG7	C-type lectin domain containing 6A	Receptor	35	0.666	0.423	1.3E-06	0.01		1	1	2	2013	2013
Rheumatoid Arthritis	C0003873	ORMDL3	94103	Q8N138	ORMDL sphingolipid biosynthesis regulator 3		35	0.666	0.423	0.7839	0.01		1	1	0	2012	2012
Rheumatoid Arthritis	C0003873	CYP7B1	9420	O75881	cytochrome P450 family 7 subfamily B member 1	Enzyme	141	0.563	0.692	3.3E-06	0.01		1	1	0	2005	2005
Rheumatoid Ar	C0003873	AIM2	9447	O14862	absent in melanoma 2		167	0.521	0.769	2.19E-	0.01		1	1	0	2019	2019

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Rh eu ma toi d Ar thr itis	C 00 03 87 3	IL2 7R A	9 4 6 6	Q6U WB1	interleuk in 27 receptor subunit alpha	Sig nal ing	40	0 . 6 5 9	0 . 7 3 1	3. 9 E - 1 2	0. 01		1	1	0	20 10	2 0 1 0
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CH ST 3	9 4 6 9	Q7LG C8	carbohydrate sulfotransferas e 3		21 4	0 . 5 1 7	0 . 8 4 6	0. 0 0 7 2 4 3	0. 01		0	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 36	9 4 8	P1667 1	CD36 molecul e	Re ce pto r	35 1	0 . 4 4 6	0 . 8 4 6	1. 0 9 E - 6 0	0. 01		1	1	0	20 13	2 0 1 3
Rh eu ma toi d Ar thr itis	C 00 03 87 3	AT P6 V1 G1	9 5 5 0	O753 48	ATPase H+ transport ing V1 subunit G1	Tr ans por ter	2	0 . 9 3 1	0 . 1 5 4	0. 1 0 4 0 7	0. 01		1	1	0	20 01	2 0 0 1
Rh eu ma toi d Ar thr itis	C 00 03 87 3	GT F2I RD 1	9 5 6 9	Q9U HL9	GTF2I repeat domain containing 1		22 2	0 . 5 2 2	0 . 7 6 9	0. 9 0 0 3 9	0. 01		1	1	0	20 19	2 0 1 9
Rh eu ma toi d Ar thr itis	C 00 03 87 3	PR DX 6	9 5 8 8	P3004 1	peroxire doxin 6	En zy me	93	0 . 5 7 2	0 . 7 3 1	4. 8 2 E - 0 5	0. 01		1	1	0	20 15	2 0 1 5
Rh eu ma toi	C 00 03	AK AP 12	9 5 9 0	Q029 52	A-kinase anchoring protein 12		99	0 . 5	0 . 6	0. 0 3 5	0. 01		1	1	0	20 17	2 0 1 7

d Ar thr itis	87 3							6 6	1 5	6 6 6							
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 47	9 6 1	Q087 22	CD47 molecule		25 3	0 . 4 6 8	0 . 7 6 9	0. 9 1 9 2 4	0. 01		1	1	0	20 17	2 0 1 7
Rh eu ma toi d Ar thr itis	C 00 03 87 3	NC OR 1	9 6 1 1	O753 76	nuclear receptor corepres sor 1	Tr ans cri pti on fac tor	94	0 . 5 9 7	0 . 7 3 1	1	0. 01		1	1	0	20 18	2 0 1 8
Rh eu ma toi d Ar thr itis	C 00 03 87 3	ISG 15	9 6 3 6	P0516 1	ISG15 ubiquiti n like modifier	Nu cle ic aci d bin din g	14 8	0 . 5 3 1	0 . 8 0 8	0. 4 0 5 2 7	0. 01		1	1	0	20 16	2 0 1 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 58	9 6 5	P1925 6	CD58 molecule		80	0 . 5 8 4	0 . 7 6 9	0. 2 5 0 9 2	0. 01		1	1	0	19 96	1 9 9 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	CD 59	9 6 6	P1398 7	CD59 molecule (CD59 blood group)		26 2	0 . 4 6 9	0 . 8 0 8	0. 6 0 5 6 8	0. 01		1	1	0	20 06	2 0 0 6
Rh eu ma toi d Ar thr itis	C 00 03 87 3	BM S1P 20	9 6 6 1 0		BMS1 pseudogene 20		28	0 . 6 8 2	0 . 5 7 7		0. 01		1	1	0	19 98	1 9 9 8
Rh eu	C 00	LPI N2	9 6	Q925 39	lipin 2		81	0 .	0 .	5. 0	0. 01		1	1	0	20 17	2 0

matoid Arthritis	03873		63					628	615	3E-05							17
Rheumatoid Arthritis	C0003873	MA RF1	9665	Q9Y4F3	meiosis regulator and mRNA stability factor 1	Nucleic acid binding	4	0.931	0.154	1	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	CD63	967	P08962	CD63 molecule		128	0.542	0.731	0.017439	0.01		1	1	0	2007	2007
Rheumatoid Arthritis	C0003873	RIMS2	9699	Q9UQ26	regulating synaptic membrane exocytosis 2	Enzyme modulator	16	0.769	0.423	1	0.01		0	1	0	1997	1997
Rheumatoid Arthritis	C0003873	CD74	972	P04233	CD74 molecule	Enzyme modulator	170	0.512	0.889	0.2889	0.01		1	1	0	2020	2020
Rheumatoid Arthritis	C0003873	CD79A	973	P11912	CD79a molecule	Receptor	134	0.536	0.731	0.69226	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	HDAC4	9759	P56524	histone deacetylase 4	Epigenetic regulator	256	0.484	0.885	1	0.01		1	1	0	2019	2019

Rheumatoid Arthritis	C0003873	PCLA F	9768	Q15004	PCNA clamp associated factor		125	0.538	0.769	0.16276	0.01		1	1	0	2017	2017
Rheumatoid Arthritis	C0003873	CD A	978	P32320	cytidine deaminase	Enzyme	103	0.558	0.731	0.08104	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	GI T2	9815	Q14161	GIT ArfGAP 2		26	0.716	0.385	0.9793	0.01		1	1	0	2018	2018
Rheumatoid Arthritis	C0003873	CD K1	983	P06493	cyclin dependent kinase 1	Kinase	214	0.482	0.808	0.9206	0.01		1	1	0	1999	1999
Rheumatoid Arthritis	C0003873	TE SP A1	9840	A2RU30	thymocyte expressed, positive selection associated 1		5	0.839	0.154	4.69E-06	0.01		1	1	1	2015	2015
Rheumatoid Arthritis	C0003873	GA B2	9846	Q9UQC2	GRB2 associated binding protein 2	Receptor	110	0.563	0.692	0.9325	0.01		1	1	0	2005	2005
Rheumatoid Ar	C0003873	NR I13	9970	Q14994	nuclear receptor subfamily 1 group I	Nuclear receptor	318	0.448	0.846	3.53E-01	0.01		1	1	0	2001	2001

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Rh eu ma toi d Ar thr itis	C 00 03 87 3	HN RN PD L	9 9 8 7	O149 79	heterogeneous nuclear ribonucleoprot ein D like	82	0 . 5 9 7	0 . 6 5 4	0. 0 7 7 9 5 4	0. 01		1	1	0	19 96	1 9 9 6

Table S4. GeneCards predicted disease targets for rheumatoid arthritis

Gene Symbol	Description	Catego ry	Gi fts	GC Id	Rele vanc e score	GeneCards Link
PTPN22	Protein Tyrosine Phosphatase Non-Receptor Type 22	Protein Coding	47	GC01M113813	101.3037	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPN22
IL6	Interleukin 6	Protein Coding	47	GC07P022725	92.88411	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL6
HLA-DRB1	Major Histocompatibility Complex, Class II, DR Beta 1	Protein Coding	46	GC06M066007	92.80508	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DRB1
IL10	Interleukin 10	Protein Coding	45	GC01M206767	91.45555	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL10
TNF	Tumor Necrosis Factor	Protein Coding	49	GC06P083695	72.99629	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNF
CIITA	Class II Major Histocompatibility Complex Transactivator	Protein Coding	43	GC16P012093	72.05125	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CIITA
STAT4	Signal Transducer And Activator Of Transcription 4	Protein Coding	45	GC02M191029	71.54918	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STAT4
MIF	Macrophage Migration Inhibitory Factor	Protein Coding	46	GC22P023894	68.33475	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIF
SLC22A4	Solute Carrier Family 22 Member 4	Protein Coding	44	GC05P132294	67.25108	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC22A4

IRF5	Interferon Regulatory Factor 5	Protein Coding	45	GC07P128937	65.47908	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRF5
IL2RA	Interleukin 2 Receptor Subunit Alpha	Protein Coding	48	GC10M006010	63.51823	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL2RA
MIR146A	MicroRNA 146a	RNA Gene	22	GC05P160485	61.58196	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR146A
NFKBIL1	NFKB Inhibitor Like 1	Protein Coding	37	GC06P083692	59.8594	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NFKBIL1
CD244	CD244 Molecule	Protein Coding	42	GC01M160830	59.49183	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD244
PSTPIP1	Proline-Serine-Threonine Phosphatase Interacting Protein 1	Protein Coding	43	GC15P076993	57.40873	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSTPIP1
HLA-B	Major Histocompatibility Complex, Class I, B	Protein Coding	45	GC06M065915	56.7578	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-B
IL2RB	Interleukin 2 Receptor Subunit Beta	Protein Coding	46	GC22M037125	54.85216	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL2RB
MIR155	MicroRNA 155	RNA Gene	21	GC21P025573	50.48026	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR155
TLR1	Toll Like Receptor 1	Protein Coding	45	GC04M038793	50.3265	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLR1
LACC1	Laccase Domain Containing 1	Protein Coding	34	GC13P043879	49.9617	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LACC1
LTA	Lymphotoxin Alpha	Protein Coding	40	GC06P083693	48.15864	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LTA
MIR132	MicroRNA 132	RNA Gene	22	GC17M002049	45.78649	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR132
CHRNA3	Cholinergic Receptor Nicotinic Gamma Subunit	Protein Coding	40	GC02P232539	45.76495	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHRNA3

						bin/carddisp.pl?gene=CHRNA1
MIR150	MicroRNA 150	RNA Gene	22	GC19M049500	44.93126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR150
PADI4	Peptidyl Arginine Deiminase 4	Protein Coding	42	GC01P017308	43.63272	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PADI4
IL1B	Interleukin 1 Beta	Protein Coding	45	GC02M112829	42.90001	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL1B
CTLA4	Cytotoxic T-Lymphocyte Associated Protein 4	Protein Coding	44	GC02P203854	41.95121	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTLA4
CRP	C-Reactive Protein	Protein Coding	44	GC01M159727	41.41481	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CRP
COPA	COPI Coat Complex Subunit Alpha	Protein Coding	41	GC01M160288	40.80445	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COPA
PTPN2	Protein Tyrosine Phosphatase Non-Receptor Type 2	Protein Coding	45	GC18M024779	39.99292	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPN2
CD247	CD247 Molecule	Protein Coding	47	GC01M167399	39.31931	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD247
NOD2	Nucleotide Binding Oligomerization Domain Containing 2	Protein Coding	46	GC16P050693	38.51827	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOD2
TNFRSF1A	TNF Receptor Superfamily Member 1A	Protein Coding	46	GC12M006328	37.86541	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF1A
IL17A	Interleukin 17A	Protein Coding	40	GC06P052186	37.71717	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL17A
ANKRD55	Ankyrin Repeat Domain 55	Protein Coding	32	GC05M056099	37.61171	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANKRD55
NLRP1	NLR Family Pyrin Domain Containing 1	Protein Coding	42	GC17M005499	36.6207	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NLRP1

MMP3	Matrix Metallopeptidase 3	Protein Coding	48	GC11M102835	35.73695	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP3
SYK	Spleen Associated Tyrosine Kinase	Protein Coding	48	GC09P092021	35.20958	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SYK
IFNG	Interferon Gamma	Protein Coding	46	GC12M068154	34.14323	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFNG
IL1RN	Interleukin 1 Receptor Antagonist	Protein Coding	46	GC02P122460	33.94598	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL1RN
CXCL8	C-X-C Motif Chemokine Ligand 8	Protein Coding	38	GC04P073740	32.69721	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCL8
IL2	Interleukin 2	Protein Coding	43	GC04M122451	32.21674	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL2
TNFRSF1B	TNF Receptor Superfamily Member 1B	Protein Coding	45	GC01P012235	32.18861	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF1B
IL18	Interleukin 18	Protein Coding	41	GC11M112143	31.71845	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL18
TLR4	Toll Like Receptor 4	Protein Coding	49	GC09P117704	31.29188	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLR4
CCL2	C-C Motif Chemokine Ligand 2	Protein Coding	46	GC17P034255	31.17136	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL2
FAS	Fas Cell Surface Death Receptor	Protein Coding	48	GC10P092502	30.14841	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAS
TNFSF11	TNF Superfamily Member 11	Protein Coding	45	GC13P042562	29.90066	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFSF11
MMP1	Matrix Metallopeptidase 1	Protein Coding	49	GC11M102810	29.77418	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP1
IL4	Interleukin 4	Protein Coding	44	GC05P132673	29.63962	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=IL4
MEFV	MEFV Innate Immunity Regulator, Pyrin	Protein Coding	42	GC16M007269	29.47571	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MEFV
COMP	Cartilage Oligomeric Matrix Protein	Protein Coding	45	GC19M018783	28.75249	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COMP
FCRL3	Fc Receptor Like 3	Protein Coding	37	GC01M157674	28.64016	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCRL3
IL1R1	Interleukin 1 Receptor Type 1	Protein Coding	44	GC02P102136	28.62865	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL1R1
ACP5	Acid Phosphatase 5, Tartrate Resistant	Protein Coding	45	GC19M011574	28.59747	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACP5
CCR6	C-C Motif Chemokine Receptor 6	Protein Coding	42	GC06P167111	27.92742	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCR6
PTGS2	Prostaglandin-Endoperoxide Synthase 2	Protein Coding	47	GC01M186640	27.54896	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTGS2
IL23R	Interleukin 23 Receptor	Protein Coding	43	GC01P067138	27.39661	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL23R
TRAF1	TNF Receptor Associated Factor 1	Protein Coding	41	GC09M120902	27.28319	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRAF1
HLA-DQB1	Major Histocompatibility Complex, Class II, DQ Beta 1	Protein Coding	42	GC06M066016	27.15154	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DQB1
IL1A	Interleukin 1 Alpha	Protein Coding	42	GC02M112773	27.0717	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL1A
TNFRSF11B	TNF Receptor Superfamily Member 11b	Protein Coding	46	GC08M118923	26.88093	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF11B
SAA1	Serum Amyloid A1	Protein Coding	40	GC11P018510	26.81518	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAA1

COL2A1	Collagen Type II Alpha 1 Chain	Protein Coding	46	GC12M047972	26.33231	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL2A1
CD40	CD40 Molecule	Protein Coding	46	GC20P046118	26.27834	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD40
MMP13	Matrix Metalloproteinase 13	Protein Coding	49	GC11M102942	25.94187	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP13
CCR5	C-C Motif Chemokine Receptor 5	Protein Coding	44	GC03P046776	25.522	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCR5
MMP9	Matrix Metalloproteinase 9	Protein Coding	52	GC20P046008	24.86951	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP9
MTHFR	Methylenetetrahydrofolate Reductase	Protein Coding	46	GC01M011785	24.83603	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTHFR
MACIR	Macrophage Immunometabolism Regulator	Protein Coding	24	GC05P103259	24.80777	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MACIR
FCGR2A	Fc Gamma Receptor IIa	Protein Coding	45	GC01P161505	24.80118	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCGR2A
SLC11A1	Solute Carrier Family 11 Member 1	Protein Coding	45	GC02P218382	24.69929	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC11A1
IL6R	Interleukin 6 Receptor	Protein Coding	46	GC01P154405	24.43249	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL6R
S100A12	S100 Calcium Binding Protein A12	Protein Coding	38	GC01M153373	24.30909	https://www.genecards.org/cgi-bin/carddisp.pl?gene=S100A12
MMP2	Matrix Metalloproteinase 2	Protein Coding	50	GC16P055390	24.25435	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP2
TLR2	Toll Like Receptor 2	Protein Coding	49	GC04P153684	24.10735	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLR2
IL1RAPL2	Interleukin 1 Receptor Accessory Protein Like 2	Protein Coding	38	GC0XP104566	24.05863	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=IL1RAPL2
IL15	Interleukin 15	Protein Coding	38	GC04P141636	24.05667	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL15
VEGFA	Vascular Endothelial Growth Factor A	Protein Coding	46	GC06P043770	23.87633	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VEGFA
TGFB1	Transforming Growth Factor Beta 1	Protein Coding	49	GC19M041301	23.78368	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TGFB1
VCAM1	Vascular Cell Adhesion Molecule 1	Protein Coding	44	GC01P100719	23.69912	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VCAM1
BLK	BLK Proto-Oncogene, Src Family Tyrosine Kinase	Protein Coding	48	GC08P011486	23.68699	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BLK
CCL5	C-C Motif Chemokine Ligand 5	Protein Coding	41	GC17M035871	23.44533	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL5
NLRP3	NLR Family Pyrin Domain Containing 3	Protein Coding	45	GC01P247415	23.39787	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NLRP3
S100A9	S100 Calcium Binding Protein A9	Protein Coding	41	GC01P153357	23.16271	https://www.genecards.org/cgi-bin/carddisp.pl?gene=S100A9
IL6ST	Interleukin 6 Cytokine Family Signal Transducer	Protein Coding	46	GC05M055935	23.02585	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL6ST
FOXP3	Forkhead Box P3	Protein Coding	45	GC0XM049250	22.8975	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOXP3
FASLG	Fas Ligand	Protein Coding	45	GC01P172628	22.8768	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FASLG
TTR	Transthyretin	Protein Coding	46	GC18P031557	22.84327	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TTR
SPP1	Secreted Phosphoprotein 1	Protein Coding	44	GC04P087975	22.7118	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPP1

FCGR3B	Fc Gamma Receptor IIb	Protein Coding	42	GC01M161623	22.6153	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCGR3B
PDCD1	Programmed Cell Death 1	Protein Coding	45	GC02M241849	22.54808	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDCD1
RELN	Reelin	Protein Coding	42	GC07M103471	22.50375	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RELN
SERPINH1	Serpin Family H Member 1	Protein Coding	44	GC11P075562	22.43176	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPINH1
TNIP1	TNFAIP3 Interacting Protein 1	Protein Coding	39	GC05M151029	22.3955	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNIP1
ICAM1	Intercellular Adhesion Molecule 1	Protein Coding	48	GC19P010466	22.3233	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ICAM1
TIMP1	TIMP Metallopeptidase Inhibitor 1	Protein Coding	42	GC0XP047596	22.24322	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TIMP1
FCGR3A	Fc Gamma Receptor IIIa	Protein Coding	44	GC01M161541	22.2111	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCGR3A
CSF2	Colony Stimulating Factor 2	Protein Coding	41	GC05P132073	22.16519	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSF2
HLA-DQA1	Major Histocompatibility Complex, Class II, DQ Alpha 1	Protein Coding	42	GC06P083727	22.13786	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DQA1
IL13	Interleukin 13	Protein Coding	41	GC05P132656	21.81797	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL13
STAT3	Signal Transducer And Activator Of Transcription 3	Protein Coding	50	GC17M042313	21.56902	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STAT3
BGLAP	Bone Gamma-Carboxyglutamate Protein	Protein Coding	38	GC01P156242	21.53297	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BGLAP
TNFAIP3	TNF Alpha Induced Protein 3	Protein Coding	46	GC06P137866	21.48916	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFAIP3

						bin/carddisp.pl?gene=TNFAIP3
FCGR2B	Fc Gamma Receptor IIb	Protein Coding	45	GC01P161724	21.43319	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCGR2B
IL21	Interleukin 21	Protein Coding	42	GC04M122612	21.09099	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL21
CD40LG	CD40 Ligand	Protein Coding	46	GC0XP136649	21.07109	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD40LG
SELE	Selectin E	Protein Coding	41	GC01M169722	21.0079	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SELE
CSF1	Colony Stimulating Factor 1	Protein Coding	42	GC01P109911	20.96239	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSF1
CCR1	C-C Motif Chemokine Receptor 1	Protein Coding	44	GC03M046218	20.89093	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCR1
CD79A	CD79a Molecule	Protein Coding	45	GC19P041877	20.05658	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD79A
MBL2	Mannose Binding Lectin 2	Protein Coding	45	GC10M052760	20.04278	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MBL2
TNFRSF11A	TNF Receptor Superfamily Member 11a	Protein Coding	44	GC18P062325	20.01063	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF11A
ITGAM	Integrin Subunit Alpha M	Protein Coding	46	GC16P041126	19.97729	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGAM
FLG	Filaggrin	Protein Coding	40	GC01M152274	19.95661	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FLG
HMGB1	High Mobility Group Box 1	Protein Coding	44	GC13M030456	19.69697	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HMGB1
CXCL10	C-X-C Motif Chemokine Ligand 10	Protein Coding	42	GC04M076021	19.56744	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCL10

REL	REL Proto-Oncogene, NF-KB Subunit	Protein Coding	45	GC02P060881	19.2732	https://www.genecards.org/cgi-bin/carddisp.pl?gene=REL
ADAM17	ADAM Metallopeptidase Domain 17	Protein Coding	49	GC02M009488	19.21072	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAM17
ALB	Albumin	Protein Coding	48	GC04P073397	19.17338	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALB
HLA-DPB1	Major Histocompatibility Complex, Class II, DP Beta 1	Protein Coding	44	GC06P083734	19.14252	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DPB1
IL23A	Interleukin 23 Subunit Alpha	Protein Coding	36	GC12P057293	19.07604	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL23A
IL17RA	Interleukin 17 Receptor A	Protein Coding	43	GC22P018684	18.97851	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL17RA
GPI	Glucose-6-Phosphate Isomerase	Protein Coding	46	GC19P034359	18.90178	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPI
TNFSF13B	TNF Superfamily Member 13b	Protein Coding	43	GC13P108251	18.76754	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFSF13B
FSTL1	Follistatin Like 1	Protein Coding	41	GC03M120392	18.68401	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FSTL1
PRTN3	Proteinase 3	Protein Coding	44	GC19P000840	18.60434	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRTN3
IL10RA	Interleukin 10 Receptor Subunit Alpha	Protein Coding	44	GC11P117987	18.60401	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL10RA
MMP12	Matrix Metallopeptidase 12	Protein Coding	45	GC11M102862	18.59571	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP12
HLA-C	Major Histocompatibility Complex, Class I, C	Protein Coding	44	GC06M065914	18.48296	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-C
TNFAIP6	TNF Alpha Induced Protein 6	Protein Coding	41	GC02P151357	18.47494	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFAIP6

						bin/carddisp.pl?gene=TNFAIP6
PTGS1	Prostaglandin-Endoperoxide Synthase 1	Protein Coding	45	GC09P122370	18.27404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTGS1
BTNL2	Butyrophilin Like 2	Protein Coding	38	GC06M032393	18.27045	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BTNL2
HSPD1	Heat Shock Protein Family D (Hsp60) Member 1	Protein Coding	46	GC02M197486	18.14313	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPD1
MICA	MHC Class I Polypeptide-Related Sequence A	Protein Coding	38	GC06P031399	18.13344	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MICA
CXCR3	C-X-C Motif Chemokine Receptor 3	Protein Coding	42	GC0XM071615	18.09852	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCR3
MPO	Myeloperoxidase	Protein Coding	49	GC17M058269	18.08973	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MPO
CCL3	C-C Motif Chemokine Ligand 3	Protein Coding	37	GC17M036088	18.05998	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL3
ITGAV	Integrin Subunit Alpha V	Protein Coding	45	GC02P186589	17.84391	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGAV
ADIPOQ	Adiponectin, C1Q And Collagen Domain Containing	Protein Coding	44	GC03P186842	17.7664	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADIPOQ
MAFB	MAF BZIP Transcription Factor B	Protein Coding	42	GC20M040685	17.73362	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAFB
MMP8	Matrix Metalloproteinase 8	Protein Coding	46	GC11M102617	17.72693	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP8
CPT2	Carnitine Palmitoyltransferase 2	Protein Coding	48	GC01P053196	17.68966	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CPT2
SLC19A1	Solute Carrier Family 19 Member 1	Protein Coding	45	GC21M045493	17.67178	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC19A1

TAGAP	T Cell Activation RhoGTPase Activating Protein	Protein Coding	38	GC06M159034	17.66101	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAGAP
CCR2	C-C Motif Chemokine Receptor 2	Protein Coding	44	GC03P046775	17.63825	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCR2
OLAH	Oleoyl-ACP Hydrolase	Protein Coding	33	GC10P015032	17.63729	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OLAH
SIAE	Sialic Acid Acetylesterase	Protein Coding	37	GC11M124633	17.62323	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SIAE
IFNB1	Interferon Beta 1	Protein Coding	41	GC09M021077	17.61863	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFNB1
RELB	RELB Proto-Oncogene, NF-KB Subunit	Protein Coding	43	GC19P066884	17.61034	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RELB
NFKBIA	NFKB Inhibitor Alpha	Protein Coding	48	GC14M035401	17.58748	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NFKBIA
CAT	Catalase	Protein Coding	49	GC11P034460	17.58331	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAT
MAPK14	Mitogen-Activated Protein Kinase 14	Protein Coding	49	GC06P083841	17.47903	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAPK14
CD28	CD28 Molecule	Protein Coding	45	GC02P203706	17.39115	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD28
MAPK1	Mitogen-Activated Protein Kinase 1	Protein Coding	49	GC22M021759	17.20773	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAPK1
NOS2	Nitric Oxide Synthase 2	Protein Coding	47	GC17M027756	17.16114	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOS2
IL37	Interleukin 37	Protein Coding	36	GC02P122457	17.11699	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL37
CD44	CD44 Molecule (Indian Blood Group)	Protein Coding	45	GC11P035139	17.08488	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD44

						bin/carddisp.pl?gene=CD44
CHI3L1	Chitinase 3 Like 1	Protein Coding	44	GC01M203148	17.0572	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHI3L1
HSPA4	Heat Shock Protein Family A (Hsp70) Member 4	Protein Coding	40	GC05P133051	16.94462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPA4
STEAP4	STEAP4 Metalloreductase	Protein Coding	40	GC07M088392	16.91617	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STEAP4
CD36	CD36 Molecule	Protein Coding	46	GC07P080369	16.88031	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD36
ATIC	5-Aminoimidazole-4-Carboxamide Ribonucleotide Formyltransferase/IMP Cyclohydrolase	Protein Coding	44	GC02P215311	16.79704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATIC
HP	Haptoglobin	Protein Coding	44	GC16P072086	16.76994	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HP
S100A8	S100 Calcium Binding Protein A8	Protein Coding	41	GC01M153391	16.75831	https://www.genecards.org/cgi-bin/carddisp.pl?gene=S100A8
CXCL12	C-X-C Motif Chemokine Ligand 12	Protein Coding	42	GC10M044370	16.75396	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCL12
HLA-DMA	Major Histocompatibility Complex, Class II, DM Alpha	Protein Coding	39	GC06M066028	16.75094	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DMA
TNFRSF13C	TNF Receptor Superfamily Member 13C	Protein Coding	42	GC22M057604	16.65233	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF13C
MICB	MHC Class I Polypeptide-Related Sequence B	Protein Coding	40	GC06P083690	16.64386	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MICB
IL7	Interleukin 7	Protein Coding	40	GC08M078689	16.61375	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL7
PIK3CG	Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Gamma	Protein Coding	46	GC07P106865	16.56232	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIK3CG

						bin/carddisp.pl?gene=PIK3CG
HSPA5	Heat Shock Protein Family A (Hsp70) Member 5	Protein Coding	46	GC09M125234	16.54642	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPA5
CARD8	Caspase Recruitment Domain Family Member 8	Protein Coding	39	GC19M066028	16.53558	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CARD8
TFRC	Transferrin Receptor	Protein Coding	47	GC03M196027	16.45774	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TFRC
TLR9	Toll Like Receptor 9	Protein Coding	44	GC03M052222	16.39536	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLR9
JUN	Jun Proto-Oncogene, AP-1 Transcription Factor Subunit	Protein Coding	46	GC01M058780	16.35247	https://www.genecards.org/cgi-bin/carddisp.pl?gene=JUN
ACAN	Aggrecan	Protein Coding	46	GC15P118102	16.27408	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACAN
OSM	Oncostatin M	Protein Coding	41	GC22M030262	16.26777	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OSM
ADAMTS4	ADAM Metallopeptidase With Thrombospondin Type 1 Motif 4	Protein Coding	42	GC01M161184	16.23673	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAMTS4
IL22	Interleukin 22	Protein Coding	40	GC12M068248	16.14384	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL22
PHF19	PHD Finger Protein 19	Protein Coding	38	GC09M120855	16.09995	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PHF19
TRAF6	TNF Receptor Associated Factor 6	Protein Coding	44	GC11M036467	15.98972	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRAF6
RIPK1	Receptor Interacting Serine/Threonine Kinase 1	Protein Coding	46	GC06P003275	15.95637	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RIPK1
AP4B1-AS1	AP4B1 Antisense RNA 1	RNA Gene	14	GC01P113813	15.88724	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AP4B1-AS1

ITGB2	Integrin Subunit Beta 2	Protein Coding	49	GC21M044885	15.84304	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGB2
RETN	Resistin	Protein Coding	41	GC19P007669	15.84085	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RETN
C4A	Complement C4A (Rodgers Blood Group)	Protein Coding	43	GC06P083718	15.77849	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C4A
BMP6	Bone Morphogenetic Protein 6	Protein Coding	42	GC06P007726	15.76888	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BMP6
MAPK8	Mitogen-Activated Protein Kinase 8	Protein Coding	47	GC10P048306	15.74175	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAPK8
CTSK	Cathepsin K	Protein Coding	49	GC01M152112	15.65356	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTSK
DHODH	Dihydroorotate Dehydrogenase (Quinone)	Protein Coding	45	GC16P072008	15.58341	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DHODH
HLA-DMB	Major Histocompatibility Complex, Class II, DM Beta	Protein Coding	40	GC06M032934	15.56456	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DMB
APOH	Apolipoprotein H	Protein Coding	43	GC17M066212	15.563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APOH
CSF1R	Colony Stimulating Factor 1 Receptor	Protein Coding	49	GC05M150053	15.54609	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSF1R
FOLR2	Folate Receptor Beta	Protein Coding	41	GC11P072216	15.53863	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOLR2
CXCL1	C-X-C Motif Chemokine Ligand 1	Protein Coding	40	GC04P073869	15.52249	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCL1
PADI2	Peptidyl Arginine Deiminase 2	Protein Coding	41	GC01M017066	15.46547	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PADI2
CLEC16A	C-Type Lectin Domain Containing 16A	Protein Coding	36	GC16P010944	15.43327	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=CLEC16A
CXCR4	C-X-C Motif Chemokine Receptor 4	Protein Coding	49	GC02M136114	15.41358	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCR4
CCL20	C-C Motif Chemokine Ligand 20	Protein Coding	41	GC02P227842	15.30789	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL20
CR1	Complement C3b/C4b Receptor 1 (Knops Blood Group)	Protein Coding	45	GC01P207496	15.30057	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CR1
NR4A2	Nuclear Receptor Subfamily 4 Group A Member 2	Protein Coding	45	GC02M156324	15.28979	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR4A2
NAMPT	Nicotinamide Phosphoribosyltransferase	Protein Coding	46	GC07M106248	15.26194	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NAMPT
BTLA	B And T Lymphocyte Associated	Protein Coding	38	GC03M112463	15.24469	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BTLA
ANXA5	Annexin A5	Protein Coding	44	GC04M121667	15.18699	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANXA5
PLA2G2A	Phospholipase A2 Group IIA	Protein Coding	45	GC01M019975	15.15402	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLA2G2A
NR3C1	Nuclear Receptor Subfamily 3 Group C Member 1	Protein Coding	48	GC05M143277	15.1537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR3C1
CCRL2	C-C Motif Chemokine Receptor Like 2	Protein Coding	38	GC03P046407	15.15227	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCRL2
ELANE	Elastase, Neutrophil Expressed	Protein Coding	47	GC19P002810	15.10468	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ELANE
HFE	Homeostatic Iron Regulator	Protein Coding	44	GC06P026087	15.09504	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HFE
DDX39B	DEx-D-Box Helicase 39B	Protein Coding	38	GC06M031530	15.08054	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDX39B

CRH	Corticotropin Releasing Hormone	Protein Coding	42	GC08M066176	15.02802	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CRH
CD69	CD69 Molecule	Protein Coding	40	GC12M021100	15.0032	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD69
IL11	Interleukin 11	Protein Coding	39	GC19M055364	14.99198	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL11
PPP1CC	Protein Phosphatase 1 Catalytic Subunit Gamma	Protein Coding	43	GC12M110709	14.94761	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPP1CC
TIMP2	TIMP Metallopeptidase Inhibitor 2	Protein Coding	41	GC17M078852	14.94626	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TIMP2
IL16	Interleukin 16	Protein Coding	40	GC15P081159	14.94118	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL16
CD4	CD4 Molecule	Protein Coding	48	GC12P006786	14.94051	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD4
CILP	Cartilage Intermediate Layer Protein	Protein Coding	41	GC15M065194	14.93618	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CILP
SAA4	Serum Amyloid A4, Constitutive	Protein Coding	38	GC11M018234	14.90598	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAA4
CCR7	C-C Motif Chemokine Receptor 7	Protein Coding	42	GC17M042422	14.88598	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCR7
BST1	Bone Marrow Stromal Cell Antigen 1	Protein Coding	41	GC04P018192	14.84058	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BST1
CX3CR1	C-X3-C Motif Chemokine Receptor 1	Protein Coding	42	GC03M039279	14.82107	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CX3CR1
CCN6	Cellular Communication Network Factor 6	Protein Coding	33	GC06P112053	14.79699	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCN6
ERAP1	Endoplasmic Reticulum Aminopeptidase 1	Protein Coding	44	GC05M096760	14.75821	https://www.genecards.org/cgi-

						bin/cdddisp.pl?gene=ERAP1
CX3CL1	C-X3-C Motif Chemokine Ligand 1	Protein Coding	41	GC16P057372	14.75633	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=CX3CL1
ANXA1	Annexin A1	Protein Coding	46	GC09P073151	14.74983	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ANXA1
TNFRSF6B	TNF Receptor Superfamily Member 6b	Protein Coding	41	GC20P063696	14.70909	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=TNFRSF6B
MAP3K8	Mitogen-Activated Protein Kinase Kinase Kinase 8	Protein Coding	44	GC10P030510	14.62116	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=MAP3K8
LRRK2	Leucine Rich Repeat Kinase 2	Protein Coding	47	GC12P040196	14.61646	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=LRRK2
CCL4	C-C Motif Chemokine Ligand 4	Protein Coding	37	GC17P036103	14.42948	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=CCL4
ALOX5	Arachidonate 5-Lipoxygenase	Protein Coding	46	GC10P045374	14.36469	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ALOX5
TNFRSF10A	TNF Receptor Superfamily Member 10a	Protein Coding	43	GC08M023190	14.36466	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=TNFRSF10A
ANKH	ANKH Inorganic Pyrophosphate Transport Regulator	Protein Coding	41	GC05M014720	14.35605	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ANKH
CXCR5	C-X-C Motif Chemokine Receptor 5	Protein Coding	38	GC11P118924	14.33774	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=CXCR5
NFKB1	Nuclear Factor Kappa B Subunit 1	Protein Coding	49	GC04P102501	14.24818	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=NFKB1
CXCL9	C-X-C Motif Chemokine Ligand 9	Protein Coding	37	GC04M076001	14.21463	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=CXCL9
SH2D1A	SH2 Domain Containing 1A	Protein Coding	44	GC0XP124227	14.19325	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=SH2D1A

PRRC2A	Proline Rich Coiled-Coil 2A	Protein Coding	33	GC06P083697	14.17116	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRRC2A
CD86	CD86 Molecule	Protein Coding	42	GC03P122055	14.17063	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD86
DEK	DEK Proto-Oncogene	Protein Coding	40	GC06M018224	14.14616	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DEK
IL32	Interleukin 32	Protein Coding	37	GC16P011732	14.11727	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL32
SELL	Selectin L	Protein Coding	42	GC01M169690	14.06612	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SELL
IL18R1	Interleukin 18 Receptor 1	Protein Coding	41	GC02P102311	14.04528	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL18R1
ENO1	Enolase 1	Protein Coding	45	GC01M008861	14.01664	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENO1
LIF	LIF Interleukin 6 Family Cytokine	Protein Coding	40	GC22M030240	13.95521	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LIF
CTSB	Cathepsin B	Protein Coding	50	GC08M011842	13.92418	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTSB
CXCL5	C-X-C Motif Chemokine Ligand 5	Protein Coding	39	GC04M073995	13.89449	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCL5
CAST	Calpastatin	Protein Coding	44	GC05P096525	13.8069	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAST
IFNGR1	Interferon Gamma Receptor 1	Protein Coding	48	GC06M137197	13.67502	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFNGR1
HTRA1	HtrA Serine Peptidase 1	Protein Coding	44	GC10P122461	13.67453	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HTRA1
SYVN1	Synoviolin 1	Protein Coding	40	GC11M089758	13.67208	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SYVN1

						bin/carddisp.pl?gene=SYVN1
GNAQ	G Protein Subunit Alpha Q	Protein Coding	48	GC09M077716	13.6626	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GNAQ
CTSG	Cathepsin G	Protein Coding	44	GC14M024573	13.63105	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTSG
MMP14	Matrix Metalloproteinase 14	Protein Coding	49	GC14P032700	13.60407	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP14
HAS1	Hyaluronan Synthase 1	Protein Coding	38	GC19M066232	13.36506	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HAS1
CR2	Complement C3d Receptor 2	Protein Coding	45	GC01P207454	13.35006	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CR2
TNFRSF9	TNF Receptor Superfamily Member 9	Protein Coding	41	GC01M007915	13.33525	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF9
SAA2	Serum Amyloid A2	Protein Coding	34	GC11M018238	13.30334	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAA2
ABCB1	ATP Binding Cassette Subfamily B Member 1	Protein Coding	49	GC07M087504	13.1671	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCB1
IKBKB	Inhibitor Of Nuclear Factor Kappa B Kinase Subunit Beta	Protein Coding	50	GC08P042271	13.14229	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IKBKB
SRF	Serum Response Factor	Protein Coding	41	GC06P043171	13.09601	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SRF
NPSR1	Neuropeptide S Receptor 1	Protein Coding	40	GC07P034664	13.078	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NPSR1
ITGAL	Integrin Subunit Alpha L	Protein Coding	45	GC16P030472	13.05874	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGAL
LTBR	Lymphotoxin Beta Receptor	Protein Coding	40	GC12P006375	13.0238	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LTBR

IL18BP	Interleukin 18 Binding Protein	Protein Coding	40	GC11P071998	13.02169	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL18BP
JAM3	Junctional Adhesion Molecule 3	Protein Coding	42	GC11P134068	12.9921	https://www.genecards.org/cgi-bin/carddisp.pl?gene=JAM3
PRSS2	Serine Protease 2	Protein Coding	39	GC07P148358	12.98954	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRSS2
HGD	Homogentisate 1,2-Dioxygenase	Protein Coding	42	GC03M120628	12.93446	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HGD
TNFSF14	TNF Superfamily Member 14	Protein Coding	40	GC19M006663	12.90687	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFSF14
CDH11	Cadherin 11	Protein Coding	46	GC16M064943	12.90221	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDH11
LECT2	Leukocyte Cell Derived Chemotaxin 2	Protein Coding	35	GC05M135922	12.90004	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LECT2
IL12B	Interleukin 12B	Protein Coding	42	GC05M159314	12.84875	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL12B
H19	H19 Imprinted Maternally Expressed Transcript	RNA Gene	28	GC11M001995	12.76628	https://www.genecards.org/cgi-bin/carddisp.pl?gene=H19
PRKCD	Protein Kinase C Delta	Protein Coding	50	GC03P053156	12.68714	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKCD
HOTAIR	HOX Transcript Antisense RNA	RNA Gene	25	GC12M053962	12.66906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HOTAIR
IRAK1	Interleukin 1 Receptor Associated Kinase 1	Protein Coding	47	GC0XM154010	12.56267	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRAK1
SIGLEC1	Sialic Acid Binding Ig Like Lectin 1	Protein Coding	40	GC20M003686	12.41731	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SIGLEC1
ZNF334	Zinc Finger Protein 334	Protein Coding	34	GC20M046462	12.35258	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF334

						bin/carddisp.pl?gene=ZNF334
IL36RN	Interleukin 36 Receptor Antagonist	Protein Coding	39	GC02P122459	12.33298	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL36RN
PLB1	Phospholipase B1	Protein Coding	36	GC02P028460	12.27903	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLB1
PLA2G10	Phospholipase A2 Group X	Protein Coding	42	GC16M014672	12.27668	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLA2G10
VDR	Vitamin D Receptor	Protein Coding	49	GC12M047841	12.25633	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VDR
TAP2	Transporter 2, ATP Binding Cassette Subfamily B Member	Protein Coding	43	GC06M032821	12.21779	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAP2
TNFRSF4	TNF Receptor Superfamily Member 4	Protein Coding	40	GC01M001211	12.18949	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF4
IL26	Interleukin 26	Protein Coding	34	GC12M068201	12.08641	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL26
IL22RA1	Interleukin 22 Receptor Subunit Alpha 1	Protein Coding	38	GC01M024119	11.95796	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL22RA1
HLA-A	Major Histocompatibility Complex, Class I, A	Protein Coding	45	GC06P083654	11.8462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-A
IL1RAP	Interleukin 1 Receptor Accessory Protein	Protein Coding	43	GC03P190514	11.84372	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL1RAP
HAPLN1	Hyaluronan And Proteoglycan Link Protein 1	Protein Coding	41	GC05M083637	11.79408	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HAPLN1
IL17B	Interleukin 17B	Protein Coding	38	GC05M149371	11.7879	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL17B
CSF3	Colony Stimulating Factor 3	Protein Coding	38	GC17P040015	11.78711	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSF3

SUPT20H	SPT20 Homolog, SAGA Complex Component	Protein Coding	35	GC13M037009	11.74313	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SUPT20H
MUC1	Mucin 1, Cell Surface Associated	Protein Coding	47	GC01M155185	11.64341	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MUC1
GCH1	GTP Cyclohydrolase 1	Protein Coding	46	GC14M054842	11.55303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GCH1
C5	Complement C5	Protein Coding	45	GC09M120933	11.51311	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C5
MALAT1	Metastasis Associated Lung Adenocarcinoma Transcript 1	RNA Gene	24	GC11P069984	11.41199	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MALAT1
C4B	Complement C4B (Chido Blood Group)	Protein Coding	43	GC06P032014	11.3774	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C4B
IL12A	Interleukin 12A	Protein Coding	42	GC03P159988	11.37363	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL12A
CCL18	C-C Motif Chemokine Ligand 18	Protein Coding	34	GC17P036064	11.30127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL18
CASP10	Caspase 10	Protein Coding	46	GC02P201182	11.29622	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CASP10
CCR3	C-C Motif Chemokine Receptor 3	Protein Coding	44	GC03P046771	11.23719	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCR3
ELMO2	Engulfment And Cell Motility 2	Protein Coding	41	GC20M046366	11.21355	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ELMO2
CALCA	Calcitonin Related Polypeptide Alpha	Protein Coding	42	GC11M014945	11.21201	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CALCA
RASGRP1	RAS Guanyl Releasing Protein 1	Protein Coding	46	GC15M038488	11.18871	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RASGRP1
SFTPD	Surfactant Protein D	Protein Coding	42	GC10M079937	11.13456	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=SFTPD
PSMB9	Proteasome 20S Subunit Beta 9	Protein Coding	45	GC06P083730	11.08946	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMB9
MVK	Mevalonate Kinase	Protein Coding	46	GC12P109573	11.01072	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MVK
WAS	WASP Actin Nucleation Promoting Factor	Protein Coding	46	GC0XP048676	11.00922	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WAS
IL17F	Interleukin 17F	Protein Coding	41	GC06M066315	10.98434	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL17F
ZFAS1	ZNFX1 Antisense RNA 1	RNA Gene	20	GC20P049276	10.97871	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZFAS1
SNHG29	Small Nucleolar RNA Host Gene 29	RNA Gene	18	GC17P017038	10.97871	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNHG29
GSTM1	Glutathione S-Transferase Mu 1	Protein Coding	40	GC01P109687	10.92024	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GSTM1
CCL21	C-C Motif Chemokine Ligand 21	Protein Coding	40	GC09M034709	10.91666	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL21
GZMB	Granzyme B	Protein Coding	45	GC14M024630	10.86115	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GZMB
INS	Insulin	Protein Coding	45	GC11M002159	10.84706	https://www.genecards.org/cgi-bin/carddisp.pl?gene=INS
MMP7	Matrix Metalloproteinase 7	Protein Coding	46	GC11M102425	10.82843	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP7
UCA1	Urothelial Cancer Associated 1	RNA Gene	22	GC19P015828	10.79663	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UCA1
IGKC	Immunoglobulin Kappa Constant	Protein Coding	34	GC02M090885	10.79204	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGKC

IL33	Interleukin 33	Protein Coding	37	GC09P006572	10.77691	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL33
RAG2	Recombination Activating 2	Protein Coding	41	GC11M036575	10.72379	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAG2
PIK3CD	Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Delta	Protein Coding	51	GC01P009629	10.71171	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIK3CD
HMGB2	High Mobility Group Box 2	Protein Coding	40	GC04M173331	10.70827	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HMGB2
TLR3	Toll Like Receptor 3	Protein Coding	49	GC04P186059	10.48099	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLR3
STAT1	Signal Transducer And Activator Of Transcription 1	Protein Coding	50	GC02M190908	10.46094	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STAT1
ICOS	Inducible T Cell Costimulator	Protein Coding	42	GC02P203937	10.37501	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ICOS
B2M	Beta-2-Microglobulin	Protein Coding	46	GC15P044711	10.33602	https://www.genecards.org/cgi-bin/carddisp.pl?gene=B2M
TPMT	Thiopurine S-Methyltransferase	Protein Coding	45	GC06M018128	10.27546	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TPMT
MYD88	MYD88 Innate Immune Signal Transduction Adaptor	Protein Coding	48	GC03P038139	10.18017	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MYD88
BTK	Bruton Tyrosine Kinase	Protein Coding	50	GC0XM101349	10.1462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BTK
TP53	Tumor Protein P53	Protein Coding	50	GC17M007661	10.10886	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TP53
HPRT1	Hypoxanthine Phosphoribosyltransferase 1	Protein Coding	45	GC0XP134460	10.08449	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HPRT1
LTF	Lactotransferrin	Protein Coding	44	GC03M046435	10.04714	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=LTF
PRL	Prolactin	Protein Coding	41	GC06M022287	9.99847	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRL
ACTA2	Actin Alpha 2, Smooth Muscle	Protein Coding	45	GC10M088935	9.997743	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACTA2
ANGPT2	Angiopoietin 2	Protein Coding	45	GC08M006499	9.826532	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANGPT2
VWF	Von Willebrand Factor	Protein Coding	47	GC12M005917	9.81198	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VWF
PTGES	Prostaglandin E Synthase	Protein Coding	40	GC09M129738	9.793758	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTGES
ADA	Adenosine Deaminase	Protein Coding	49	GC20M044620	9.783412	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADA
MMP19	Matrix Metalloproteinase 19	Protein Coding	47	GC12M055835	9.769567	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP19
PTPRC	Protein Tyrosine Phosphatase Receptor Type C	Protein Coding	49	GC01P198607	9.747452	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPRC
SNHG28	Small Nucleolar RNA Host Gene 28	RNA Gene	17	GC01M159834	9.636161	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNHG28
IL3	Interleukin 3	Protein Coding	41	GC05P132060	9.605054	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL3
ACE	Angiotensin I Converting Enzyme	Protein Coding	49	GC17P063477	9.555857	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACE
GPT	Glutamic--Pyruvic Transaminase	Protein Coding	40	GC08P144502	9.512686	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPT
FBN1	Fibrillin 1	Protein Coding	45	GC15M048408	9.487437	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FBN1

ETS1	ETS Proto-Oncogene 1, Transcription Factor	Protein Coding	45	GC11M128458	9.44219	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ETS1
TNFSF4	TNF Superfamily Member 4	Protein Coding	39	GC01M173183	9.435301	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFSF4
TREX1	Three Prime Repair Exonuclease 1	Protein Coding	40	GC03P048977	9.427769	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TREX1
CFI	Complement Factor I	Protein Coding	45	GC04M109732	9.424962	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CFI
CXCL13	C-X-C Motif Chemokine Ligand 13	Protein Coding	40	GC04P077511	9.318037	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCL13
CD80	CD80 Molecule	Protein Coding	40	GC03M119524	9.295761	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD80
HAMP	Hepcidin Antimicrobial Peptide	Protein Coding	42	GC19P066535	9.292628	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HAMP
TAP1	Transporter 1, ATP Binding Cassette Subfamily B Member	Protein Coding	45	GC06M066023	9.286879	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAP1
DNASE1	Deoxyribonuclease 1	Protein Coding	42	GC16P003611	9.285975	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNASE1
MYC	MYC Proto-Oncogene, BHLH Transcription Factor	Protein Coding	49	GC08P127735	9.263966	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MYC
ICOSLG	Inducible T Cell Costimulator Ligand	Protein Coding	39	GC21M044222	9.258209	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ICOSLG
NLRP12	NLR Family Pyrin Domain Containing 12	Protein Coding	42	GC19M053793	9.176813	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NLRP12
BIRC5	Baculoviral IAP Repeat Containing 5	Protein Coding	45	GC17P078214	9.157294	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BIRC5
DNASE1L3	Deoxyribonuclease 1 Like 3	Protein Coding	42	GC03M058192	9.154231	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNASE1L3

						bin/carddisp.pl?gene=DNASE1L3
TNFSF12	TNF Superfamily Member 12	Protein Coding	39	GC17P011166	9.109595	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFSF12
FBXL19-AS1	FBXL19 Antisense RNA 1	RNA Gene	19	GC16M037214	9.105168	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FBXL19-AS1
CASP1	Caspase 1	Protein Coding	48	GC11M105025	9.031401	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CASP1
MMP10	Matrix Metalloproteinase 10	Protein Coding	44	GC11M102770	8.983663	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP10
TYMS	Thymidylate Synthetase	Protein Coding	46	GC18P000657	8.978648	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TYMS
TLR5	Toll Like Receptor 5	Protein Coding	45	GC01M223109	8.953194	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLR5
RELA	RELA Proto-Oncogene, NF-KB Subunit	Protein Coding	49	GC11M065653	8.933392	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RELA
PXK	PX Domain Containing Serine/Threonine Kinase Like	Protein Coding	37	GC03P058333	8.857019	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PXK
PON1	Paraoxonase 1	Protein Coding	46	GC07M095297	8.855175	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PON1
SLC26A2	Solute Carrier Family 26 Member 2	Protein Coding	44	GC05P149944	8.78796	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC26A2
IFIH1	Interferon Induced With Helicase C Domain 1	Protein Coding	45	GC02M162267	8.767211	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFIH1
CCN2	Cellular Communication Network Factor 2	Protein Coding	37	GC06M131948	8.727752	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCN2
BMP2	Bone Morphogenetic Protein 2	Protein Coding	44	GC20P006767	8.629303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BMP2

AIRE	Autoimmune Regulator	Protein Coding	44	GC21P044285	8.624952	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AIRE
GHRL	Ghrelin And Obestatin Prepropeptide	Protein Coding	42	GC03M010285	8.599505	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GHRL
PRF1	Perforin 1	Protein Coding	44	GC10M070597	8.59799	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRF1
TRAF3IP2	TRAF3 Interacting Protein 2	Protein Coding	44	GC06M111555	8.52512	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRAF3IP2
TF	Transferrin	Protein Coding	48	GC03P134296	8.517799	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TF
TNFRSF13B	TNF Receptor Superfamily Member 13B	Protein Coding	44	GC17M016929	8.511412	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF13B
RAG1	Recombination Activating 1	Protein Coding	45	GC11P036538	8.504069	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAG1
PPARG	Peroxisome Proliferator Activated Receptor Gamma	Protein Coding	50	GC03P012287	8.483553	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPARG
KIT	KIT Proto-Oncogene, Receptor Tyrosine Kinase	Protein Coding	50	GC04P054657	8.483397	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIT
MIF-AS1	MIF Antisense RNA 1	RNA Gene	15	GC22M023893	8.450796	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIF-AS1
CD58	CD58 Molecule	Protein Coding	39	GC01M116514	8.422945	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD58
ERAP2	Endoplasmic Reticulum Aminopeptidase 2	Protein Coding	39	GC05P096875	8.396812	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ERAP2
COL11A1	Collagen Type XI Alpha 1 Chain	Protein Coding	42	GC01M102876	8.360456	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL11A1
PTH	Parathyroid Hormone	Protein Coding	44	GC11M013492	8.356497	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=PTH
BANK1	B Cell Scaffold Protein With Ankyrin Repeats 1	Protein Coding	37	GC04P101411	8.329576	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BANK1
HGF	Hepatocyte Growth Factor	Protein Coding	49	GC07M081699	8.308176	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HGF
BCL2	BCL2 Apoptosis Regulator	Protein Coding	48	GC18M063123	8.289707	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCL2
TFR2	Transferrin Receptor 2	Protein Coding	44	GC07M100620	8.28105	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TFR2
ENG	Endoglin	Protein Coding	46	GC09M127815	8.271666	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENG
IRF4	Interferon Regulatory Factor 4	Protein Coding	42	GC06P000391	8.261472	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRF4
UBE2L3	Ubiquitin Conjugating Enzyme E2 L3	Protein Coding	43	GC22P021549	8.220354	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBE2L3
P4HA2	Prolyl 4-Hydroxylase Subunit Alpha 2	Protein Coding	45	GC05M132191	8.194843	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P4HA2
TREM1	Triggering Receptor Expressed On Myeloid Cells 1	Protein Coding	40	GC06M041267	8.190091	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TREM1
LRBA	LPS Responsive Beige-Like Anchor Protein	Protein Coding	40	GC04M150264	8.170541	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRBA
LBR	Lamin B Receptor	Protein Coding	45	GC01M225401	8.169616	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LBR
LEP	Leptin	Protein Coding	45	GC07P128241	8.160183	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LEP
LCE3C	Late Cornified Envelope 3C	Protein Coding	27	GC01P152600	8.146751	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LCE3C

FGFR1	Fibroblast Growth Factor Receptor 1	Protein Coding	52	GC08M038400	8.140184	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGFR1
CYP2C9	Cytochrome P450 Family 2 Subfamily C Member 9	Protein Coding	46	GC10P094938	8.136342	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP2C9
LCE3B	Late Cornified Envelope 3B	Protein Coding	25	GC01P152613	8.135294	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LCE3B
MECP2	Methyl-CpG Binding Protein 2	Protein Coding	44	GC0XM154021	8.128887	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MECP2
PLA2G4A	Phospholipase A2 Group IVA	Protein Coding	47	GC01P186798	8.127202	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLA2G4A
IL6-AS1	IL6 Antisense RNA 1	RNA Gene	12	GC07M022728	8.120523	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL6-AS1
COL1A1	Collagen Type I Alpha 1 Chain	Protein Coding	48	GC17M050183	8.073373	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL1A1
ESR1	Estrogen Receptor 1	Protein Coding	50	GC06P151656	8.039339	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ESR1
GC	GC Vitamin D Binding Protein	Protein Coding	44	GC04M071741	8.032885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GC
CD14	CD14 Molecule	Protein Coding	44	GC05M140631	8.00914	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD14
IL4R	Interleukin 4 Receptor	Protein Coding	46	GC16P027992	7.993469	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL4R
JAZF1	JAZF Zinc Finger 1	Protein Coding	37	GC07M027830	7.976355	https://www.genecards.org/cgi-bin/carddisp.pl?gene=JAZF1
PRG4	Proteoglycan 4	Protein Coding	41	GC01P186296	7.910367	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRG4
SMAD3	SMAD Family Member 3	Protein Coding	48	GC15P067063	7.910223	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMAD3

						bin/carddisp.pl?gene=SMAD3
ADA2	Adenosine Deaminase 2	Protein Coding	33	GC22M017197	7.857287	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADA2
SERPINE1	Serpin Family E Member 1	Protein Coding	48	GC07P101127	7.806879	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPINE1
DKK1	Dickkopf WNT Signaling Pathway Inhibitor 1	Protein Coding	43	GC10P052314	7.773871	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DKK1
NFKB2	Nuclear Factor Kappa B Subunit 2	Protein Coding	49	GC10P102394	7.757963	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NFKB2
HLA-DRA	Major Histocompatibility Complex, Class II, DR Alpha	Protein Coding	45	GC06P032439	7.756925	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DRA
HJV	Hemojuvelin BMP Co-Receptor	Protein Coding	35	GC01M146846	7.719653	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HJV
DPP4	Dipeptidyl Peptidase 4	Protein Coding	48	GC02M161992	7.705974	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DPP4
IL5	Interleukin 5	Protein Coding	43	GC05M132541	7.693769	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL5
PRKCQ	Protein Kinase C Theta	Protein Coding	47	GC10M006526	7.68408	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKCQ
NAT2	N-Acetyltransferase 2	Protein Coding	41	GC08P018391	7.676551	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NAT2
FGF2	Fibroblast Growth Factor 2	Protein Coding	44	GC04P122826	7.660335	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGF2
DCLRE1C	DNA Cross-Link Repair 1C	Protein Coding	42	GC10M014897	7.638009	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DCLRE1C
NOS3	Nitric Oxide Synthase 3	Protein Coding	49	GC07P150990	7.567809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOS3

MS4A1	Membrane Spanning 4-Domains A1	Protein Coding	45	GC11P060512	7.549659	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MS4A1
HLA-G	Major Histocompatibility Complex, Class I, G	Protein Coding	42	GC06P083645	7.544229	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-G
CCN1	Cellular Communication Network Factor 1	Protein Coding	29	GC01P085581	7.528159	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCN1
CD8A	CD8a Molecule	Protein Coding	44	GC02M086784	7.513724	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD8A
TH	Tyrosine Hydroxylase	Protein Coding	49	GC11M002163	7.499124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TH
COL11A2	Collagen Type XI Alpha 2 Chain	Protein Coding	42	GC06M033162	7.498151	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL11A2
HIF1A	Hypoxia Inducible Factor 1 Subunit Alpha	Protein Coding	45	GC14P061695	7.455225	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HIF1A
IGF1	Insulin Like Growth Factor 1	Protein Coding	46	GC12M102395	7.454007	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGF1
POMC	Proopiomelanocortin	Protein Coding	46	GC02M025160	7.414512	https://www.genecards.org/cgi-bin/carddisp.pl?gene=POMC
ADRB2	Adrenoceptor Beta 2	Protein Coding	47	GC05P148825	7.395474	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADRB2
MMP15	Matrix Metalloproteinase 15	Protein Coding	44	GC16P058025	7.291743	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP15
FCER2	Fc Epsilon Receptor II	Protein Coding	42	GC19M007689	7.287531	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCER2
CDK6	Cyclin Dependent Kinase 6	Protein Coding	50	GC07M092604	7.238047	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDK6
XDH	Xanthine Dehydrogenase	Protein Coding	45	GC02M031334	7.18777	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XDH

						bin/caddisp.pl?gene=XDH
IGHG2	Immunoglobulin Heavy Constant Gamma 2 (G2m Marker)	Protein Coding	30	GC14M112709	7.169412	https://www.genecards.org/cgi-bin/caddisp.pl?gene=IGHG2
IL10RB	Interleukin 10 Receptor Subunit Beta	Protein Coding	42	GC21P033266	7.163627	https://www.genecards.org/cgi-bin/caddisp.pl?gene=IL10RB
TYK2	Tyrosine Kinase 2	Protein Coding	50	GC19M010350	7.14624	https://www.genecards.org/cgi-bin/caddisp.pl?gene=TYK2
IL1RL1	Interleukin 1 Receptor Like 1	Protein Coding	40	GC02P102294	7.121621	https://www.genecards.org/cgi-bin/caddisp.pl?gene=IL1RL1
FN1	Fibronectin 1	Protein Coding	48	GC02M215360	7.120795	https://www.genecards.org/cgi-bin/caddisp.pl?gene=FN1
JAK2	Janus Kinase 2	Protein Coding	50	GC09P004985	7.1167	https://www.genecards.org/cgi-bin/caddisp.pl?gene=JAK2
CFLAR	CASP8 And FADD Like Apoptosis Regulator	Protein Coding	43	GC02P201117	7.103952	https://www.genecards.org/cgi-bin/caddisp.pl?gene=CFLAR
CARD14	Caspase Recruitment Domain Family Member 14	Protein Coding	41	GC17P080170	7.082204	https://www.genecards.org/cgi-bin/caddisp.pl?gene=CARD14
VIM	Vimentin	Protein Coding	48	GC10P017227	7.064986	https://www.genecards.org/cgi-bin/caddisp.pl?gene=VIM
OPRM1	Opioid Receptor Mu 1	Protein Coding	46	GC06P154075	7.063599	https://www.genecards.org/cgi-bin/caddisp.pl?gene=OPRM1
AFF3	AF4/FMR2 Family Member 3	Protein Coding	37	GC02M099545	7.046799	https://www.genecards.org/cgi-bin/caddisp.pl?gene=AFF3
IGHM	Immunoglobulin Heavy Constant Mu	Protein Coding	36	GC14M112722	7.043907	https://www.genecards.org/cgi-bin/caddisp.pl?gene=IGHM
BSG	Basigin (Ok Blood Group)	Protein Coding	42	GC19P000571	7.027616	https://www.genecards.org/cgi-bin/caddisp.pl?gene=BSG

PPP1CA	Protein Phosphatase 1 Catalytic Subunit Alpha	Protein Coding	45	GC11M089964	6.98515	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPP1CA
CD274	CD274 Molecule	Protein Coding	42	GC09P005450	6.985113	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD274
SOD1	Superoxide Dismutase 1	Protein Coding	50	GC21P031659	6.984756	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOD1
TGFBR2	Transforming Growth Factor Beta Receptor 2	Protein Coding	49	GC03P030623	6.981699	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TGFBR2
CP	Ceruloplasmin	Protein Coding	48	GC03M149162	6.978659	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CP
TNFSF13	TNF Superfamily Member 13	Protein Coding	43	GC17P007558	6.969742	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFSF13
ADAMTS5	ADAM Metallopeptidase With Thrombospondin Type 1 Motif 5	Protein Coding	43	GC21M026918	6.961925	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAMTS5
P2RX7	Purinergic Receptor P2X 7	Protein Coding	45	GC12P126220	6.924053	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RX7
KIF5A	Kinesin Family Member 5A	Protein Coding	44	GC12P057549	6.896127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIF5A
IRF1	Interferon Regulatory Factor 1	Protein Coding	45	GC05M132440	6.884698	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRF1
CALR	Calreticulin	Protein Coding	49	GC19P012938	6.875739	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CALR
TNFRSF14	TNF Receptor Superfamily Member 14	Protein Coding	41	GC01P003935	6.871451	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF14
IL19	Interleukin 19	Protein Coding	38	GC01P206770	6.866909	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL19
BPI	Bactericidal Permeability Increasing Protein	Protein Coding	41	GC20P038304	6.862829	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BPI

						bin/carddisp.pl?gene=BPI
AGER	Advanced Glycosylation End-Product Specific Receptor	Protein Coding	44	GC06M032180	6.844262	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AGER
HSPA8	Heat Shock Protein Family A (Hsp70) Member 8	Protein Coding	46	GC11M123057	6.773395	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPA8
TRPV1	Transient Receptor Potential Cation Channel Subfamily V Member 1	Protein Coding	45	GC17M003565	6.770291	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRPV1
RUNX1	RUNX Family Transcription Factor 1	Protein Coding	46	GC21M034787	6.767153	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RUNX1
CD226	CD226 Molecule	Protein Coding	41	GC18M069831	6.742834	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD226
BCL2L1	BCL2 Like 1	Protein Coding	45	GC20M031664	6.736197	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCL2L1
IFNA1	Interferon Alpha 1	Protein Coding	38	GC09P021593	6.710809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFNA1
CD19	CD19 Molecule	Protein Coding	48	GC16P040925	6.688719	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD19
CCL11	C-C Motif Chemokine Ligand 11	Protein Coding	41	GC17P034285	6.646458	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL11
CD5	CD5 Molecule	Protein Coding	40	GC11P061114	6.610099	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD5
GDF5	Growth Differentiation Factor 5	Protein Coding	45	GC20M035433	6.588206	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GDF5
REN	Renin	Protein Coding	47	GC01M204154	6.565386	https://www.genecards.org/cgi-bin/carddisp.pl?gene=REN
TTC7A	Tetratricopeptide Repeat Domain 7A	Protein Coding	37	GC02P046906	6.552021	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TTC7A

CXCR2	C-X-C Motif Chemokine Receptor 2	Protein Coding	48	GC02P218125	6.54776	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCR2
RAB27A	RAB27A, Member RAS Oncogene Family	Protein Coding	47	GC15M055202	6.525616	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAB27A
PPP1CB	Protein Phosphatase 1 Catalytic Subunit Beta	Protein Coding	45	GC02P028752	6.52534	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPP1CB
ABCG2	ATP Binding Cassette Subfamily G Member 2 (Junior Blood Group)	Protein Coding	48	GC04M088090	6.523985	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCG2
HRH2	Histamine Receptor H2	Protein Coding	42	GC05P175659	6.494742	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HRH2
MTRR	5-Methyltetrahydrofolate-Homocysteine Methyltransferase Reductase	Protein Coding	42	GC05P007851	6.485223	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTRR
ATM	ATM Serine/Threonine Kinase	Protein Coding	50	GC11P108222	6.477387	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATM
ATRIP	ATR Interacting Protein	Protein Coding	41	GC03P048964	6.474064	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATRIP
ATRIP-TREX1	ATRIP-TREX1 Readthrough	RNA Gene	6	GC03P048966	6.474064	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATRIP-TREX1
SLC17A5	Solute Carrier Family 17 Member 5	Protein Coding	42	GC06M073593	6.462096	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC17A5
SUMO4	Small Ubiquitin Like Modifier 4	Protein Coding	38	GC06P149401	6.445432	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SUMO4
CXCL11	C-X-C Motif Chemokine Ligand 11	Protein Coding	39	GC04M076033	6.439353	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCL11
SQSTM1	Sequestosome 1	Protein Coding	46	GC05P179806	6.422469	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SQSTM1
C3	Complement C3	Protein Coding	46	GC19M006677	6.418372	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=C3
HLA-DRB4	Major Histocompatibility Complex, Class II, DR Beta 4	Protein Coding	29	GC06M003851	6.408561	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DRB4
WIPF1	WAS/WASL Interacting Protein Family Member 1	Protein Coding	42	GC02M174559	6.408106	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WIPF1
ENPP1	Ectonucleotide Pyrophosphatase/Phosphodiesterase 1	Protein Coding	47	GC06P131808	6.387311	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENPP1
HMOX1	Heme Oxygenase 1	Protein Coding	49	GC22P035380	6.37917	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HMOX1
MTR	5-Methyltetrahydrofolate-Homocysteine Methyltransferase	Protein Coding	46	GC01P236795	6.375112	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTR
OLIG3	Oligodendrocyte Transcription Factor 3	Protein Coding	37	GC06M137492	6.364253	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OLIG3
PTX3	Pentraxin 3	Protein Coding	41	GC03P157436	6.361873	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTX3
GSTP1	Glutathione S-Transferase Pi 1	Protein Coding	48	GC11P067583	6.341878	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GSTP1
CD27	CD27 Molecule	Protein Coding	44	GC12P021037	6.311881	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD27
FCAR	Fc Alpha Receptor	Protein Coding	41	GC19P067387	6.284546	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCAR
HAVCR2	Hepatitis A Virus Cellular Receptor 2	Protein Coding	44	GC05M157063	6.249082	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HAVCR2
ICAM3	Intercellular Adhesion Molecule 3	Protein Coding	41	GC19M010405	6.227779	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ICAM3
LOC100287329	Uncharacterized LOC100287329	RNA Gene	12	GC06M065958	6.225444	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC100287329

MTHFD1	Methylenetetrahydrofolate Dehydrogenase, Cyclohydrolase And Formyltetrahydrofolate Synthetase 1	Protein Coding	45	GC14P064388	6.218381	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTHFD1
TNFSF15	TNF Superfamily Member 15	Protein Coding	42	GC09M114784	6.201623	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFSF15
MMEL1	Membrane Metalloendopeptidase Like 1	Protein Coding	36	GC01M002590	6.187993	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMEL1
APOE	Apolipoprotein E	Protein Coding	48	GC19P066879	6.18077	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APOE
HLA-DQA2	Major Histocompatibility Complex, Class II, DQ Alpha 2	Protein Coding	36	GC06P032741	6.169909	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DQA2
SELP	Selectin P	Protein Coding	44	GC01M169558	6.164362	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SELP
PPARA	Peroxisome Proliferator Activated Receptor Alpha	Protein Coding	44	GC22P046150	6.159652	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPARA
JAK3	Janus Kinase 3	Protein Coding	49	GC19M017824	6.12565	https://www.genecards.org/cgi-bin/carddisp.pl?gene=JAK3
EPO	Erythropoietin	Protein Coding	40	GC07P100720	6.119741	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EPO
CXCL16	C-X-C Motif Chemokine Ligand 16	Protein Coding	38	GC17M004733	6.098456	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCL16
CCR4	C-C Motif Chemokine Receptor 4	Protein Coding	43	GC03P032951	6.09411	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCR4
TAPBP	TAP Binding Protein	Protein Coding	44	GC06M033299	6.079946	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAPBP
CASP3	Caspase 3	Protein Coding	47	GC04M184627	6.066989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CASP3

PNP	Purine Nucleoside Phosphorylase	Protein Coding	45	GC14P020468	6.061817	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PNP
CASP8	Caspase 8	Protein Coding	49	GC02P201233	6.056796	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CASP8
TRPV4	Transient Receptor Potential Cation Channel Subfamily V Member 4	Protein Coding	48	GC12M109783	6.025859	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRPV4
CD83	CD83 Molecule	Protein Coding	38	GC06P014117	6.022503	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD83
CCL19	C-C Motif Chemokine Ligand 19	Protein Coding	39	GC09M034698	6.020863	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL19
TGFBR1	Transforming Growth Factor Beta Receptor 1	Protein Coding	50	GC09P099104	5.994832	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TGFBR1
CALCR	Calcitonin Receptor	Protein Coding	46	GC07M093424	5.985188	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CALCR
FOS	Fos Proto-Oncogene, AP-1 Transcription Factor Subunit	Protein Coding	49	GC14P075278	5.979385	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOS
COL9A3	Collagen Type IX Alpha 3 Chain	Protein Coding	41	GC20P062816	5.978811	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL9A3
ITGA2	Integrin Subunit Alpha 2	Protein Coding	45	GC05P052989	5.968368	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGA2
TLR7	Toll Like Receptor 7	Protein Coding	46	GC0XP012867	5.958578	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLR7
TRIM21	Tripartite Motif Containing 21	Protein Coding	41	GC11M004384	5.957069	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIM21
B3GAT1	Beta-1,3-Glucuronyltransferase 1	Protein Coding	42	GC11M134378	5.942695	https://www.genecards.org/cgi-bin/carddisp.pl?gene=B3GAT1
GATA3	GATA Binding Protein 3	Protein Coding	47	GC10P008045	5.924076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GATA3

						bin/carddisp.pl?gene=GATA3
MMP17	Matrix Metalloproteinase 17	Protein Coding	42	GC12P131828	5.905069	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP17
ITGA4	Integrin Subunit Alpha 4	Protein Coding	46	GC02P181456	5.899445	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGA4
SERPINA3	Serpin Family A Member 3	Protein Coding	42	GC14P094612	5.893335	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPINA3
XIAP	X-Linked Inhibitor Of Apoptosis	Protein Coding	46	GC0XP123859	5.88182	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XIAP
IRAK4	Interleukin 1 Receptor Associated Kinase 4	Protein Coding	45	GC12P043758	5.876334	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRAK4
VIP	Vasoactive Intestinal Peptide	Protein Coding	43	GC06P152750	5.874033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VIP
ASPN	Asporin	Protein Coding	41	GC09M094207	5.865178	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ASPN
AKT1	AKT Serine/Threonine Kinase 1	Protein Coding	50	GC14M104769	5.835953	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AKT1
EGF	Epidermal Growth Factor	Protein Coding	49	GC04P109912	5.833037	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EGF
BMP4	Bone Morphogenetic Protein 4	Protein Coding	46	GC14M053949	5.830775	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BMP4
SERPINA1	Serpin Family A Member 1	Protein Coding	47	GC14M094376	5.826702	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPINA1
ANGPT1	Angiotensinogen 1	Protein Coding	44	GC08M107246	5.818006	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANGPT1
TNFSF10	TNF Superfamily Member 10	Protein Coding	42	GC03M172505	5.817306	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFSF10

CD163	CD163 Molecule	Protein Coding	42	GC12M007819	5.807335	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD163
ITGB1	Integrin Subunit Beta 1	Protein Coding	48	GC10M033116	5.803552	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGB1
SOST	Sclerostin	Protein Coding	42	GC17M043753	5.798334	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOST
SRC	SRC Proto-Oncogene, Non-Receptor Tyrosine Kinase	Protein Coding	49	GC20P037344	5.788343	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SRC
MUC5B	Mucin 5B, Oligomeric Mucus/Gel-Forming	Protein Coding	41	GC11P001831	5.763791	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MUC5B
SOCS3	Suppressor Of Cytokine Signaling 3	Protein Coding	41	GC17M078356	5.740062	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOCS3
TRB	T Cell Receptor Beta Locus	Protein Coding	19	GC07P148690	5.738567	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRB
PRKCH	Protein Kinase C Eta	Protein Coding	48	GC14P061187	5.737882	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKCH
FPGS	Folylpolyglutamate Synthase	Protein Coding	41	GC09P127794	5.735916	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FPGS
PTEN	Phosphatase And Tensin Homolog	Protein Coding	50	GC10P092487	5.722382	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTEN
MTOR	Mechanistic Target Of Rapamycin Kinase	Protein Coding	51	GC01M011106	5.715071	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTOR
PIK3R1	Phosphoinositide-3-Kinase Regulatory Subunit 1	Protein Coding	49	GC05P068215	5.710825	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIK3R1
SH2B3	SH2B Adaptor Protein 3	Protein Coding	45	GC12P111405	5.707057	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SH2B3
F3	Coagulation Factor III, Tissue Factor	Protein Coding	44	GC01M094590	5.683108	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=F3
GGH	Gamma-Glutamyl Hydrolase	Protein Coding	42	GC08M063014	5.675788	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GGH
IL7R	Interleukin 7 Receptor	Protein Coding	44	GC05P035852	5.666647	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL7R
NPY	Neuropeptide Y	Protein Coding	44	GC07P024290	5.647635	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NPY
IMPDH2	Inosine Monophosphate Dehydrogenase 2	Protein Coding	46	GC03M051162	5.643008	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IMPDH2
SOCS1	Suppressor Of Cytokine Signaling 1	Protein Coding	42	GC16M012261	5.640675	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOCS1
SLC22A5	Solute Carrier Family 22 Member 5	Protein Coding	46	GC05P132369	5.637074	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC22A5
GSTT1	Glutathione S-Transferase Theta 1	Protein Coding	33	GC22Mi00270	5.630356	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GSTT1
MATN1	Matrilin 1	Protein Coding	40	GC01M030711	5.624109	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MATN1
KITLG	KIT Ligand	Protein Coding	43	GC12M088492	5.614833	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KITLG
THBD	Thrombomodulin	Protein Coding	44	GC20M023026	5.603651	https://www.genecards.org/cgi-bin/carddisp.pl?gene=THBD
CNR2	Cannabinoid Receptor 2	Protein Coding	44	GC01M023870	5.572924	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNR2
DEFB4A	Defensin Beta 4A	Protein Coding	34	GC08P007895	5.548926	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DEFB4A
AIF1	Allograft Inflammatory Factor 1	Protein Coding	37	GC06P083694	5.534014	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AIF1

SOD2	Superoxide Dismutase 2	Protein Coding	48	GC06M159669	5.532454	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOD2
NFKBIE	NFKB Inhibitor Epsilon	Protein Coding	38	GC06M044258	5.517525	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NFKBIE
PRDM1	PR/SET Domain 1	Protein Coding	43	GC06P105993	5.491177	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRDM1
CYP2C19	Cytochrome P450 Family 2 Subfamily C Member 19	Protein Coding	46	GC10P094762	5.480085	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP2C19
TNFRSF25	TNF Receptor Superfamily Member 25	Protein Coding	40	GC01M006460	5.475738	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF25
F2RL1	F2R Like Trypsin Receptor 1	Protein Coding	44	GC05P076818	5.467809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=F2RL1
PLAUR	Plasminogen Activator, Urokinase Receptor	Protein Coding	42	GC19M043646	5.436357	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLAUR
EDN1	Endothelin 1	Protein Coding	46	GC06P012256	5.424318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EDN1
PTPN11	Protein Tyrosine Phosphatase Non-Receptor Type 11	Protein Coding	50	GC12P112418	5.418618	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPN11
ZAP70	Zeta Chain Of T Cell Receptor Associated Protein Kinase 70	Protein Coding	49	GC02P097753	5.417872	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZAP70
RNASEH2B	Ribonuclease H2 Subunit B	Protein Coding	36	GC13P050909	5.408074	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNASEH2B
TEK	TEK Receptor Tyrosine Kinase	Protein Coding	49	GC09P027109	5.394337	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TEK
H2AC18	H2A Clustered Histone 18	Protein Coding	26	GC01M152015	5.390277	https://www.genecards.org/cgi-bin/carddisp.pl?gene=H2AC18
ZFP36	ZFP36 Ring Finger Protein	Protein Coding	37	GC19P039406	5.38878	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=ZFP36
RBPJ	Recombination Signal Binding Protein For Immunoglobulin Kappa J Region	Protein Coding	45	GC04P026105	5.386807	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RBPJ
HAVCR1	Hepatitis A Virus Cellular Receptor 1	Protein Coding	41	GC05M157028	5.377156	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HAVCR1
GZMA	Granzyme A	Protein Coding	42	GC05P055102	5.359779	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GZMA
TAC1	Tachykinin Precursor 1	Protein Coding	41	GC07P097731	5.356418	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAC1
RNPC3	RNA Binding Region (RNP1, RRM) Containing 3	Protein Coding	35	GC01P103525	5.353688	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNPC3
ITPA	Inosine Triphosphatase	Protein Coding	44	GC20P004250	5.335377	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITPA
ATXN2	Ataxin 2	Protein Coding	41	GC12M111443	5.328629	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATXN2
HTR2A	5-Hydroxytryptamine Receptor 2A	Protein Coding	46	GC13M046831	5.319273	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HTR2A
FCGR1A	Fc Gamma Receptor Ia	Protein Coding	40	GC01P150197	5.309157	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCGR1A
CD55	CD55 Molecule (Cromer Blood Group)	Protein Coding	45	GC01P207321	5.290905	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD55
PLAT	Plasminogen Activator, Tissue Type	Protein Coding	48	GC08M042174	5.276639	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLAT
KLRK1	Killer Cell Lectin Like Receptor K1	Protein Coding	40	GC12M021107	5.271939	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLRK1
PLAU	Plasminogen Activator, Urokinase	Protein Coding	50	GC10P073909	5.263295	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLAU

IL9	Interleukin 9	Protein Coding	41	GC05M135891	5.260829	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL9
TNFRSF17	TNF Receptor Superfamily Member 17	Protein Coding	42	GC16P011965	5.259591	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF17
GAS5	Growth Arrest Specific 5	RNA Gene	24	GC01M173947	5.258753	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GAS5
LRP5	LDL Receptor Related Protein 5	Protein Coding	47	GC11P068298	5.258183	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRP5
IBSP	Integrin Binding Sialoprotein	Protein Coding	37	GC04P087799	5.229711	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IBSP
IL20	Interleukin 20	Protein Coding	37	GC01P206866	5.205414	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL20
LEPQTL1	Leptin, Serum Levels Of	Genetic Locus	3	GC02U903086	5.204472	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LEPQTL1
PTGER4	Prostaglandin E Receptor 4	Protein Coding	45	GC05P040679	5.203375	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTGER4
INPP5E	Inositol Polyphosphate-5-Phosphatase E	Protein Coding	40	GC09M136428	5.197738	https://www.genecards.org/cgi-bin/carddisp.pl?gene=INPP5E
MIR140	MicroRNA 140	RNA Gene	24	GC16P069934	5.193281	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR140
CDKN1A	Cyclin Dependent Kinase Inhibitor 1A	Protein Coding	46	GC06P083850	5.184971	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDKN1A
AR	Androgen Receptor	Protein Coding	50	GC0XP067544	5.17087	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AR
NGF	Nerve Growth Factor	Protein Coding	47	GC01M115285	5.167191	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NGF
PSMB8	Proteasome 20S Subunit Beta 8	Protein Coding	48	GC06M032840	5.164179	https://www.genecards.org/cgi-

						bin/caddisp.pl?gene=PSMB8
ASAH1	N-Acylsphingosine Amidohydrolase 1	Protein Coding	45	GC08M018055	5.158409	https://www.genecards.org/cgi-bin/caddisp.pl?gene=ASAH1
EGFR	Epidermal Growth Factor Receptor	Protein Coding	51	GC07P055019	5.122825	https://www.genecards.org/cgi-bin/caddisp.pl?gene=EGFR
NPPB	Natriuretic Peptide B	Protein Coding	42	GC01M011858	5.110035	https://www.genecards.org/cgi-bin/caddisp.pl?gene=NPPB
TACR1	Tachykinin Receptor 1	Protein Coding	44	GC02M075112	5.092575	https://www.genecards.org/cgi-bin/caddisp.pl?gene=TACR1
IGFBP1	Insulin Like Growth Factor Binding Protein 1	Protein Coding	41	GC07P047770	5.092317	https://www.genecards.org/cgi-bin/caddisp.pl?gene=IGFBP1
NOTCH4	Notch Receptor 4	Protein Coding	44	GC06M065988	5.078926	https://www.genecards.org/cgi-bin/caddisp.pl?gene=NOTCH4
COL9A2	Collagen Type IX Alpha 2 Chain	Protein Coding	42	GC01M040300	5.077526	https://www.genecards.org/cgi-bin/caddisp.pl?gene=COL9A2
ESR2	Estrogen Receptor 2	Protein Coding	47	GC14M064084	5.073864	https://www.genecards.org/cgi-bin/caddisp.pl?gene=ESR2
SPRED2	Sprouty Related EVH1 Domain Containing 2	Protein Coding	41	GC02M065307	5.062191	https://www.genecards.org/cgi-bin/caddisp.pl?gene=SPRED2
LPIN2	Lipin 2	Protein Coding	41	GC18M002916	5.054539	https://www.genecards.org/cgi-bin/caddisp.pl?gene=LPIN2
CCL13	C-C Motif Chemokine Ligand 13	Protein Coding	36	GC17P034356	5.029807	https://www.genecards.org/cgi-bin/caddisp.pl?gene=CCL13
UBASH3A	Ubiquitin Associated And SH3 Domain Containing A	Protein Coding	38	GC21P042403	5.027813	https://www.genecards.org/cgi-bin/caddisp.pl?gene=UBASH3A
STING1	Stimulator Of Interferon Response CGAMP Interactor 1	Protein Coding	32	GC05M139476	5.005392	https://www.genecards.org/cgi-bin/caddisp.pl?gene=STING1

APOM	Apolipoprotein M	Protein Coding	40	GC06P083702	5.000204	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APOM
CST3	Cystatin C	Protein Coding	42	GC20M023667	4.991611	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CST3
DHFR	Dihydrofolate Reductase	Protein Coding	47	GC05M080626	4.982999	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DHFR
CD2	CD2 Molecule	Protein Coding	42	GC01P116754	4.977384	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD2
ELN	Elastin	Protein Coding	43	GC07P074027	4.954332	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ELN
MIR223	MicroRNA 223	RNA Gene	22	GC0XP066018	4.915719	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR223
STAT6	Signal Transducer And Activator Of Transcription 6	Protein Coding	48	GC12M057095	4.905521	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STAT6
TNXB	Tenascin XB	Protein Coding	43	GC06M065977	4.873197	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNXB
IRF8	Interferon Regulatory Factor 8	Protein Coding	44	GC16P085898	4.869159	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRF8
PARP1	Poly(ADP-Ribose) Polymerase 1	Protein Coding	47	GC01M226360	4.865338	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PARP1
NOD1	Nucleotide Binding Oligomerization Domain Containing 1	Protein Coding	42	GC07M030424	4.851906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOD1
MIR21	MicroRNA 21	RNA Gene	24	GC17P059841	4.831304	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR21
AMPD1	Adenosine Monophosphate Deaminase 1	Protein Coding	45	GC01M114673	4.829415	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AMPD1
F2	Coagulation Factor II, Thrombin	Protein Coding	48	GC11P046720	4.828295	https://www.genecards.org/cgi-bin/carddisp.pl?gene=F2

						bin/carddisp.pl?gene=F2
IL21R	Interleukin 21 Receptor	Protein Coding	41	GC16P027995	4.82569	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL21R
DDX41	DEAD-Box Helicase 41	Protein Coding	43	GC05M177511	4.806009	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDX41
STAT5B	Signal Transducer And Activator Of Transcription 5B	Protein Coding	47	GC17M042199	4.797704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STAT5B
IL27	Interleukin 27	Protein Coding	36	GC16M036923	4.790442	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL27
TBX21	T-Box Transcription Factor 21	Protein Coding	44	GC17P047733	4.768191	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TBX21
FGFR2	Fibroblast Growth Factor Receptor 2	Protein Coding	52	GC10M121478	4.751418	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGFR2
MDM2	MDM2 Proto-Oncogene	Protein Coding	51	GC12P068808	4.748178	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MDM2
APOA1	Apolipoprotein A1	Protein Coding	46	GC11M116835	4.745225	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APOA1
PDPN	Podoplanin	Protein Coding	40	GC01P013583	4.719225	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDPN
HLA-DOA	Major Histocompatibility Complex, Class II, DO Alpha	Protein Coding	39	GC06M033004	4.718634	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DOA
MIR125A	MicroRNA 125a	RNA Gene	22	GC19P067235	4.701859	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR125A
S100A4	S100 Calcium Binding Protein A4	Protein Coding	43	GC01M153543	4.697592	https://www.genecards.org/cgi-bin/carddisp.pl?gene=S100A4
BRD2	Bromodomain Containing 2	Protein Coding	43	GC06P083733	4.694026	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BRD2

FLT1	Fms Related Receptor Tyrosine Kinase 1	Protein Coding	49	GC13M028300	4.670346	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FLT1
ADAR	Adenosine Deaminase RNA Specific	Protein Coding	43	GC01M154582	4.662095	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAR
CNDP2	Carnosine Dipeptidase 2	Protein Coding	41	GC18P074495	4.65285	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNDP2
CAV1	Caveolin 1	Protein Coding	46	GC07P116524	4.651944	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAV1
CYP1A2	Cytochrome P450 Family 1 Subfamily A Member 2	Protein Coding	45	GC15P074748	4.650348	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP1A2
NTRK1	Neurotrophic Receptor Tyrosine Kinase 1	Protein Coding	46	GC01P156815	4.650138	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NTRK1
LGALS3	Galectin 3	Protein Coding	43	GC14P055124	4.642893	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LGALS3
PIP4K2C	Phosphatidylinositol-5-Phosphate 4-Kinase Type 2 Gamma	Protein Coding	37	GC12P057591	4.636696	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIP4K2C
COX5A	Cytochrome C Oxidase Subunit 5A	Protein Coding	42	GC15M074919	4.629854	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COX5A
IGFBP3	Insulin Like Growth Factor Binding Protein 3	Protein Coding	44	GC07M045912	4.626127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGFBP3
IL1RL2	Interleukin 1 Receptor Like 2	Protein Coding	41	GC02P102186	4.623078	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL1RL2
LGALS9	Galectin 9	Protein Coding	38	GC17P027629	4.622476	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LGALS9
H3C14	H3 Clustered Histone 14	Protein Coding	27	GC01M152021	4.616464	https://www.genecards.org/cgi-bin/carddisp.pl?gene=H3C14
RAD51B	RAD51 Paralog B	Protein Coding	36	GC14P067819	4.597606	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAD51B

						bin/carddisp.pl?gene=RAD51B
JAK1	Janus Kinase 1	Protein Coding	51	GC01M064833	4.586927	https://www.genecards.org/cgi-bin/carddisp.pl?gene=JAK1
MIR499A	MicroRNA 499a	RNA Gene	22	GC20P034990	4.585382	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR499A
BLTP1	Bridge-Like Lipid Transfer Protein Family Member 1	Protein Coding	26	GC04P122154	4.580682	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BLTP1
CD81	CD81 Molecule	Protein Coding	44	GC11P002532	4.570866	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD81
ADORA3	Adenosine A3 Receptor	Protein Coding	44	GC01M111499	4.561628	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADORA3
CA2	Carbonic Anhydrase 2	Protein Coding	49	GC08P085463	4.554908	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CA2
KIR2DS2	Killer Cell Immunoglobulin Like Receptor, Two Ig Domains And Short Cytoplasmic Tail 2	Protein Coding	25	GC19M R00122	4.553277	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIR2DS2
RO60	Ro60, Y RNA Binding Protein	Protein Coding	29	GC01P193059	4.552504	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RO60
LTB	Lymphotoxin Beta	Protein Coding	38	GC06M065959	4.551324	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LTB
COL1A2	Collagen Type I Alpha 2 Chain	Protein Coding	46	GC07P094394	4.538369	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL1A2
COL10A1	Collagen Type X Alpha 1 Chain	Protein Coding	41	GC06M116118	4.536696	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL10A1
DCN	Decorin	Protein Coding	45	GC12M091140	4.536048	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DCN
PECAM1	Platelet And Endothelial Cell Adhesion Molecule 1	Protein Coding	40	GC17M064319	4.526588	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PECAM1

						bin/carddisp.pl?gene=PECAM1
HLA-DQB2	Major Histocompatibility Complex, Class II, DQ Beta 2	Protein Coding	38	GC06M032756	4.519013	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DQB2
ACP1	Acid Phosphatase 1	Protein Coding	42	GC02P000344	4.517788	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACP1
CYP19A1	Cytochrome P450 Family 19 Subfamily A Member 1	Protein Coding	47	GC15M051208	4.512114	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP19A1
CFHR2	Complement Factor H Related 2	Protein Coding	38	GC01P196943	4.511574	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CFHR2
IL12RB1	Interleukin 12 Receptor Subunit Beta 1	Protein Coding	42	GC19M018058	4.509627	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL12RB1
FTH1	Ferritin Heavy Chain 1	Protein Coding	48	GC11M061959	4.501761	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FTH1
IKBKE	Inhibitor Of Nuclear Factor Kappa B Kinase Subunit Epsilon	Protein Coding	44	GC01P206470	4.484868	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IKBKE
MIR143	MicroRNA 143	RNA Gene	25	GC05P149410	4.473273	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR143
LBP	Lipopolysaccharide Binding Protein	Protein Coding	42	GC20P038346	4.469586	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LBP
DDR2	Discoidin Domain Receptor Tyrosine Kinase 2	Protein Coding	49	GC01P162631	4.465885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDR2
CARD10	Caspase Recruitment Domain Family Member 10	Protein Coding	39	GC22M057585	4.451181	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CARD10
CCL17	C-C Motif Chemokine Ligand 17	Protein Coding	38	GC16P057414	4.444296	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL17
SPTAN1	Spectrin Alpha, Non-Erythrocytic 1	Protein Coding	46	GC09P128552	4.438413	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPTAN1

BDNF	Brain Derived Neurotrophic Factor	Protein Coding	46	GC11M027654	4.437177	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BDNF
NFATC1	Nuclear Factor Of Activated T Cells 1	Protein Coding	45	GC18P079395	4.426399	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NFATC1
IL34	Interleukin 34	Protein Coding	37	GC16P071585	4.412497	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL34
EEF1A1	Eukaryotic Translation Elongation Factor 1 Alpha 1	Protein Coding	42	GC06M073515	4.397603	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EEF1A1
APRT	Adenine Phosphoribosyltransferase	Protein Coding	45	GC16M088810	4.397479	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APRT
SUMO1	Small Ubiquitin Like Modifier 1	Protein Coding	44	GC02M202206	4.394073	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SUMO1
TSBP1	Testis Expressed Basic Protein 1	Protein Coding	24	GC06M032288	4.390658	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSBP1
HLA-DRB5	Major Histocompatibility Complex, Class II, DR Beta 5	Protein Coding	39	GC06M066002	4.381423	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DRB5
FGF1	Fibroblast Growth Factor 1	Protein Coding	45	GC05M142555	4.375101	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGF1
IL17D	Interleukin 17D	Protein Coding	36	GC13P020702	4.367647	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL17D
CENPB	Centromere Protein B	Protein Coding	36	GC20M003783	4.356783	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CENPB
ATG5	Autophagy Related 5	Protein Coding	42	GC06M106045	4.350111	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATG5
CFH	Complement Factor H	Protein Coding	45	GC01P196621	4.343126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CFH
RORC	RAR Related Orphan Receptor C	Protein Coding	43	GC01M151806	4.32893	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RORC

						bin/carddisp.pl?gene=RORC
CD209	CD209 Molecule	Protein Coding	42	GC19M007739	4.326128	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD209
FCN2	Ficolin 2	Protein Coding	42	GC09P134864	4.325276	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCN2
CD68	CD68 Molecule	Protein Coding	38	GC17P007579	4.32193	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD68
SLC2A9	Solute Carrier Family 2 Member 9	Protein Coding	44	GC04M009772	4.316371	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC2A9
COG6	Component Of Oligomeric Golgi Complex 6	Protein Coding	38	GC13P039655	4.313921	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COG6
TLR8	Toll Like Receptor 8	Protein Coding	46	GC0XP012924	4.307923	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLR8
SIRT1	Sirtuin 1	Protein Coding	46	GC10P067884	4.305996	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SIRT1
GSN	Gelsolin	Protein Coding	46	GC09P121201	4.298401	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GSN
GGT1	Gamma-Glutamyltransferase 1	Protein Coding	48	GC22P024583	4.295577	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GGT1
IDO1	Indoleamine 2,3-Dioxygenase 1	Protein Coding	43	GC08P039891	4.293201	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IDO1
ADAM10	ADAM Metallopeptidase Domain 10	Protein Coding	50	GC15M058588	4.287847	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAM10
IFNA2	Interferon Alpha 2	Protein Coding	41	GC09M021384	4.281237	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFNA2
KDR	Kinase Insert Domain Receptor	Protein Coding	51	GC04M055078	4.277594	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KDR

IGHE	Immunoglobulin Heavy Constant Epsilon	Protein Coding	30	GC14M112707	4.276135	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGHE
DNTT	DNA Nucleotidylexotransferase	Protein Coding	40	GC10P096304	4.272124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNTT
CD70	CD70 Molecule	Protein Coding	41	GC19M006647	4.270958	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD70
CCL22	C-C Motif Chemokine Ligand 22	Protein Coding	36	GC16P057359	4.266844	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL22
PRDX5	Peroxiredoxin 5	Protein Coding	43	GC11P064370	4.266634	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRDX5
TSLP	Thymic Stromal Lymphopoietin	Protein Coding	37	GC05P111070	4.266327	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSLP
NAGLU	N-Acetyl-Alpha-Glucosaminidase	Protein Coding	41	GC17P055669	4.265631	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NAGLU
ADAD1	Adenosine Deaminase Domain Containing 1	Protein Coding	36	GC04P122378	4.263219	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAD1
SERPINC1	Serpin Family C Member 1	Protein Coding	47	GC01M174559	4.260211	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPINC1
EPCAM	Epithelial Cell Adhesion Molecule	Protein Coding	46	GC02P047345	4.25868	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EPCAM
CSN1S1	Casein Alpha S1	Protein Coding	36	GC04P069932	4.255772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSN1S1
IL15RA	Interleukin 15 Receptor Subunit Alpha	Protein Coding	39	GC10M005943	4.250093	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL15RA
IL24	Interleukin 24	Protein Coding	39	GC01P206897	4.243191	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL24
CCR8	C-C Motif Chemokine Receptor 8	Protein Coding	41	GC03P039886	4.226926	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=CCR8
UBA1	Ubiquitin Like Modifier Activating Enzyme 1	Protein Coding	45	GC0XP047190	4.226644	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBA1
ALOX15	Arachidonate 15-Lipoxygenase	Protein Coding	44	GC17M004630	4.225246	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALOX15
CFB	Complement Factor B	Protein Coding	45	GC06P031945	4.203203	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CFB
LSM2	LSM2 Homolog, U6 Small Nuclear RNA And MRNA Degradation Associated	Protein Coding	38	GC06M065974	4.192565	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LSM2
TYR	Tyrosinase	Protein Coding	46	GC11P089177	4.188845	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TYR
CD1D	CD1d Molecule	Protein Coding	42	GC01P158178	4.188049	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD1D
PVT1	Pvt1 Oncogene	RNA Gene	26	GC08P127869	4.187071	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PVT1
RARRES2	Retinoic Acid Receptor Responder 2	Protein Coding	38	GC07M150333	4.179746	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RARRES2
ATOD1	Dermatitis, Atopic	Genetic Locus	2	GC03U902187	4.165978	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATOD1
ATOD3	Dermatitis, Atopic, 3	Genetic Locus	2	GC20U990080	4.165978	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATOD3
ATOD5	Dermatitis, Atopic, 5	Genetic Locus	2	GC13U900216	4.165978	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATOD5
ATOD6	Dermatitis, Atopic, 6	Genetic Locus	2	GC05U990174	4.165978	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATOD6
DPEP1	Dipeptidase 1	Protein Coding	41	GC16P089613	4.158097	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DPEP1

GBA	Glucosylceramidase Beta	Protein Coding	48	GC01M155234	4.15247	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GBA
HRH4	Histamine Receptor H4	Protein Coding	44	GC18P024460	4.148339	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HRH4
NEAT1	Nuclear Paraspeckle Assembly Transcript 1	RNA Gene	24	GC11P069943	4.134098	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NEAT1
THBS1	Thrombospondin 1	Protein Coding	44	GC15P039581	4.133282	https://www.genecards.org/cgi-bin/carddisp.pl?gene=THBS1
PDGFB	Platelet Derived Growth Factor Subunit B	Protein Coding	47	GC22M058085	4.116092	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDGFB
CCL26	C-C Motif Chemokine Ligand 26	Protein Coding	36	GC07M075769	4.114658	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL26
MEG3	Maternally Expressed 3	RNA Gene	29	GC14P109962	4.104683	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MEG3
ADAMTS12	ADAM Metallopeptidase With Thrombospondin Type 1 Motif 12	Protein Coding	40	GC05M033524	4.10342	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAMTS12
TNFRSF8	TNF Receptor Superfamily Member 8	Protein Coding	41	GC01P012063	4.098128	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF8
CHUK	Component Of Inhibitor Of Nuclear Factor Kappa B Kinase Complex	Protein Coding	49	GC10M100188	4.098116	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHUK
LGALS2	Galectin 2	Protein Coding	40	GC22M037570	4.093354	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LGALS2
ABCC1	ATP Binding Cassette Subfamily C Member 1	Protein Coding	47	GC16P015949	4.084396	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCC1
ADGRE5	Adhesion G Protein-Coupled Receptor E5	Protein Coding	38	GC19P014392	4.077285	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADGRE5

YDJC	YdjC Chitooligosaccharide Deacetylase Homolog	Protein Coding	32	GC22M 021628	4.067 303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=YDJC
TPO	Thyroid Peroxidase	Protein Coding	47	GC02P 001374	4.065 034	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TPO
CXCR1	C-X-C Motif Chemokine Receptor 1	Protein Coding	41	GC02M 218162	4.063 628	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCR1
COL5A2	Collagen Type V Alpha 2 Chain	Protein Coding	42	GC02M 189031	4.055 742	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL5A2
NT5E	5'-Nucleotidase Ecto	Protein Coding	49	GC06P 085449	4.054 715	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NT5E
GTF2I	General Transcription Factor Iii	Protein Coding	40	GC07P 075448	4.054 162	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GTF2I
LBH	LBH Regulator Of WNT Signaling Pathway	Protein Coding	34	GC02P 030231	4.052 624	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LBH
POU3F1	POU Class 3 Homeobox 1	Protein Coding	37	GC01M 038095	4.051 453	https://www.genecards.org/cgi-bin/carddisp.pl?gene=POU3F1
ANPEP	Alanyl Aminopeptidase, Membrane	Protein Coding	48	GC15M 089784	4.039 893	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANPEP
LCK	LCK Proto-Oncogene, Src Family Tyrosine Kinase	Protein Coding	50	GC01P 032251	4.039 072	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LCK
B3GNT2	UDP-GlcNAc:BetaGal Beta-1,3-N- Acetylglucosaminyltransfe rase 2	Protein Coding	38	GC02P 062196	4.034 41	https://www.genecards.org/cgi-bin/carddisp.pl?gene=B3GNT2
IGF1R	Insulin Like Growth Factor 1 Receptor	Protein Coding	52	GC15P 098648	4.034 027	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGF1R
ADRB3	Adrenoceptor Beta 3	Protein Coding	43	GC08M 037962	4.005 707	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADRB3
WDFY4	WDFY Family Member 4	Protein Coding	34	GC10P 048684	4.004 28	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WDFY4

						bin/carddisp.pl?gene=WDFY4
PTPN12	Protein Tyrosine Phosphatase Non-Receptor Type 12	Protein Coding	46	GC07P077537	4.002909	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPN12
RHOA	Ras Homolog Family Member A	Protein Coding	46	GC03M049359	3.999915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RHOA
PGF	Placental Growth Factor	Protein Coding	41	GC14M074941	3.988466	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PGF
COL9A1	Collagen Type IX Alpha 1 Chain	Protein Coding	41	GC06M070215	3.982416	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL9A1
CD38	CD38 Molecule	Protein Coding	44	GC04P018197	3.981544	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD38
PDGFRB	Platelet Derived Growth Factor Receptor Beta	Protein Coding	52	GC05M150113	3.979126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDGFRB
IFI16	Interferon Gamma Inducible Protein 16	Protein Coding	41	GC01P158969	3.950812	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFI16
MBP	Myelin Basic Protein	Protein Coding	44	GC18M076978	3.950043	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MBP
MET	MET Proto-Oncogene, Receptor Tyrosine Kinase	Protein Coding	51	GC07P116672	3.946303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MET
TIMP3	TIMP Metallopeptidase Inhibitor 3	Protein Coding	43	GC22P036985	3.945199	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TIMP3
GJB6	Gap Junction Protein Beta 6	Protein Coding	42	GC13M020221	3.939862	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GJB6
CREM	CAMP Responsive Element Modulator	Protein Coding	40	GC10P035126	3.939312	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CREM
FADD	Fas Associated Via Death Domain	Protein Coding	44	GC11P070203	3.923491	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FADD

SAAL1	Serum Amyloid A Like 1	Protein Coding	32	GC11M018069	3.923332	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAAL1
SMAD2	SMAD Family Member 2	Protein Coding	48	GC18M047809	3.923233	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMAD2
C5AR1	Complement C5a Receptor 1	Protein Coding	42	GC19P047290	3.919319	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C5AR1
SPARC	Secreted Protein Acidic And Cysteine Rich	Protein Coding	48	GC05M151661	3.917453	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPARC
RPA3	Replication Protein A3	Protein Coding	40	GC07M008189	3.91256	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPA3
TDRKH	Tudor And KH Domain Containing	Protein Coding	38	GC01M152176	3.91256	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TDRKH
CSK	C-Terminal Src Kinase	Protein Coding	45	GC15P074782	3.907964	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSK
PGR	Progesterone Receptor	Protein Coding	47	GC11M101030	3.907366	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PGR
COMT	Catechol-O-Methyltransferase	Protein Coding	49	GC22P019941	3.90366	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COMT
HNRNPA2B1	Heterogeneous Nuclear Ribonucleoprotein A2/B1	Protein Coding	44	GC07M026174	3.90366	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HNRNPA2B1
XBP1	X-Box Binding Protein 1	Protein Coding	44	GC22M028794	3.90287	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XBP1
TCF3	Transcription Factor 3	Protein Coding	43	GC19M001609	3.902445	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TCF3
F13A1	Coagulation Factor XIII A Chain	Protein Coding	45	GC06M006144	3.898983	https://www.genecards.org/cgi-bin/carddisp.pl?gene=F13A1
TGFB2	Transforming Growth Factor Beta 2	Protein Coding	49	GC01P218345	3.89617	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=TGFB2
NFE2L2	NFE2 Like BZIP Transcription Factor 2	Protein Coding	48	GC02M177227	3.889893	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NFE2L2
LINC01104	Long Intergenic Non-Protein Coding RNA 1104	RNA Gene	14	GC02P100208	3.885221	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01104
TEC	Tec Protein Tyrosine Kinase	Protein Coding	44	GC04M048150	3.884967	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TEC
FAM167A	Family With Sequence Similarity 167 Member A	Protein Coding	34	GC08M011421	3.88454	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAM167A
KIR2DL3	Killer Cell Immunoglobulin Like Receptor, Two Ig Domains And Long Cytoplasmic Tail 3	Protein Coding	36	GC19P068014	3.877167	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIR2DL3
DUSP1	Dual Specificity Phosphatase 1	Protein Coding	45	GC05M172768	3.876289	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DUSP1
LIN54	Lin-54 DREAM MuvB Core Complex Component	Protein Coding	36	GC04M082909	3.87335	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LIN54
ZNF354A	Zinc Finger Protein 354A	Protein Coding	36	GC05M178711	3.87335	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF354A
USP50	Ubiquitin Specific Peptidase 50	Protein Coding	32	GC15M050493	3.87335	https://www.genecards.org/cgi-bin/carddisp.pl?gene=USP50
FRG2C	FSHD Region Gene 2 Family Member C	Protein Coding	24	GC03P075664	3.87335	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FRG2C
IRF2BP2	Interferon Regulatory Factor 2 Binding Protein 2	Protein Coding	36	GC01M234604	3.86865	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRF2BP2
AIS2	Autoimmune Susceptibility 2	Genetic Locus	2	GC07U901482	3.86865	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AIS2
AIS3	Autoimmune Susceptibility 3 (Vitiligo Specific)	Genetic Locus	2	GC08U900492	3.86865	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AIS3

ELMO1	Engulfment And Cell Motility 1	Protein Coding	39	GC07M036860	3.834863	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ELMO1
TRPS1	Transcriptional Repressor GATA Binding 1	Protein Coding	45	GC08M115408	3.828751	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRPS1
SLC22A12	Solute Carrier Family 22 Member 12	Protein Coding	43	GC11P064609	3.827631	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC22A12
F5	Coagulation Factor V	Protein Coding	45	GC01M169511	3.820146	https://www.genecards.org/cgi-bin/carddisp.pl?gene=F5
IFNGR2	Interferon Gamma Receptor 2	Protein Coding	42	GC21P033402	3.816897	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFNGR2
AICDA	Activation Induced Cytidine Deaminase	Protein Coding	42	GC12M008602	3.806782	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AICDA
TMSB4X	Thymosin Beta 4 X-Linked	Protein Coding	39	GC0XP012975	3.805577	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMSB4X
FRZB	Frizzled Related Protein	Protein Coding	40	GC02M182833	3.797774	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FRZB
CDK2	Cyclin Dependent Kinase 2	Protein Coding	49	GC12P055966	3.792599	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDK2
MAPK10	Mitogen-Activated Protein Kinase 10	Protein Coding	48	GC04M085990	3.789578	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAPK10
EP300	E1A Binding Protein P300	Protein Coding	49	GC22P041091	3.78847	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EP300
BACH2	BTB Domain And CNC Homolog 2	Protein Coding	42	GC06M089926	3.787713	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BACH2
LGALS3BP	Galectin 3 Binding Protein	Protein Coding	41	GC17M078971	3.787081	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LGALS3BP
MIR17	MicroRNA 17	RNA Gene	20	GC13P091350	3.77556	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=MIR17
BMP7	Bone Morphogenetic Protein 7	Protein Coding	44	GC20M057168	3.773507	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BMP7
ARL15	ADP Ribosylation Factor Like GTPase 15	Protein Coding	34	GC05M053883	3.772785	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARL15
GAST	Gastrin	Protein Coding	38	GC17P041712	3.769227	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GAST
CD276	CD276 Molecule	Protein Coding	40	GC15P073683	3.767734	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD276
ADORA2A	Adenosine A2a Receptor	Protein Coding	44	GC22P024417	3.764112	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADORA2A
MAP3K14	Mitogen-Activated Protein Kinase Kinase Kinase 14	Protein Coding	42	GC17M045263	3.763119	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP3K14
PSORS1C1	Psoriasis Susceptibility 1 Candidate 1	Protein Coding	30	GC06P031114	3.762619	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSORS1C1
CTSL	Cathepsin L	Protein Coding	45	GC09P087725	3.761764	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTSL
PTH1H	Parathyroid Hormone Like Hormone	Protein Coding	45	GC12M027959	3.761654	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTH1H
CXCL2	C-X-C Motif Chemokine Ligand 2	Protein Coding	38	GC04M074097	3.75755	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCL2
ARID5B	AT-Rich Interaction Domain 5B	Protein Coding	40	GC10P061901	3.745826	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARID5B
TNPO3	Transportin 3	Protein Coding	40	GC07M128954	3.745826	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNPO3
SSB	Small RNA Binding Exonuclease Protection Factor La	Protein Coding	41	GC02P169791	3.73923	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SSB

MCL1	MCL1 Apoptosis Regulator, BCL2 Family Member	Protein Coding	45	GC01M152066	3.725513	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MCL1
VAV1	Vav Guanine Nucleotide Exchange Factor 1	Protein Coding	44	GC19P006772	3.723102	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VAV1
PLD4	Phospholipase D Family Member 4	Protein Coding	38	GC14P104924	3.722507	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLD4
HDAC1	Histone Deacetylase 1	Protein Coding	47	GC01P032292	3.696424	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HDAC1
KLRD1	Killer Cell Lectin Like Receptor D1	Protein Coding	41	GC12P010226	3.693325	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLRD1
FCN3	Ficolin 3	Protein Coding	44	GC01M027843	3.692076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCN3
MIR221	MicroRNA 221	RNA Gene	21	GC0XM045746	3.690581	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR221
GSR	Glutathione-Disulfide Reductase	Protein Coding	48	GC08M030678	3.690055	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GSR
KLF12	Kruppel Like Factor 12	Protein Coding	37	GC13M073686	3.678336	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLF12
AIM2	Absent In Melanoma 2	Protein Coding	40	GC01M159062	3.673544	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AIM2
LINC02656	Long Intergenic Non-Protein Coding RNA 2656	RNA Gene	10	GC10P006350	3.67322	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02656
ADM	Adrenomedullin	Protein Coding	43	GC11P010304	3.673102	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADM
HSPG2	Heparan Sulfate Proteoglycan 2	Protein Coding	46	GC01M021822	3.671193	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPG2
DNMT1	DNA Methyltransferase 1	Protein Coding	49	GC19M010133	3.66986	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=DNMT1
PPBP	Pro-Platelet Basic Protein	Protein Coding	41	GC04M073986	3.669165	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPBP
EGR1	Early Growth Response 1	Protein Coding	42	GC05P138465	3.668759	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EGR1
SAMHD1	SAM And HD Domain Containing Deoxynucleoside Triphosphate Triphosphohydrolase 1	Protein Coding	41	GC20M036890	3.6658	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAMHD1
LPA	Lipoprotein(A)	Protein Coding	40	GC06M160531	3.664589	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LPA
THPO	Thrombopoietin	Protein Coding	42	GC03M184371	3.663482	https://www.genecards.org/cgi-bin/carddisp.pl?gene=THPO
TGIF1	TGFB Induced Factor Homeobox 1	Protein Coding	44	GC18P003411	3.663274	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TGIF1
LGALS1	Galectin 1	Protein Coding	41	GC22P037675	3.658767	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LGALS1
MAPKAPK2	MAPK Activated Protein Kinase 2	Protein Coding	46	GC01P206684	3.656003	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAPKAPK2
CREB1	CAMP Responsive Element Binding Protein 1	Protein Coding	47	GC02P207529	3.655792	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CREB1
ERBB3	Erb-B2 Receptor Tyrosine Kinase 3	Protein Coding	51	GC12P057264	3.653791	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ERBB3
MIR22	MicroRNA 22	RNA Gene	21	GC17M001713	3.651958	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR22
CDK4	Cyclin Dependent Kinase 4	Protein Coding	50	GC12M057743	3.645252	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDK4
FGFR3	Fibroblast Growth Factor Receptor 3	Protein Coding	52	GC04P001795	3.64524	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGFR3

						bin/carddisp.pl?gene=FGFR3
PHTF1	Putative Homeodomain Transcription Factor 1	Protein Coding	34	GC01M113696	3.634562	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PHTF1
MAP2K4	Mitogen-Activated Protein Kinase Kinase 4	Protein Coding	45	GC17P012020	3.628612	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP2K4
AHSG	Alpha 2-HS Glycoprotein	Protein Coding	42	GC03P186629	3.618032	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AHSG
BAX	BCL2 Associated X, Apoptosis Regulator	Protein Coding	47	GC19P048954	3.615888	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BAX
UNC13D	Unc-13 Homolog D	Protein Coding	43	GC17M075827	3.613799	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UNC13D
TIE1	Tyrosine Kinase With Immunoglobulin Like And EGF Like Domains 1	Protein Coding	42	GC01P043300	3.609891	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TIE1
RIPK2	Receptor Interacting Serine/Threonine Kinase 2	Protein Coding	44	GC08P089804	3.609241	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RIPK2
IREB2	Iron Responsive Element Binding Protein 2	Protein Coding	43	GC15P078437	3.606062	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IREB2
CHRM3	Cholinergic Receptor Muscarinic 3	Protein Coding	47	GC01P239386	3.602444	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHRM3
ETS2	ETS Proto-Oncogene 2, Transcription Factor	Protein Coding	40	GC21P038805	3.601353	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ETS2
KIR2DL2	Killer Cell Immunoglobulin Like Receptor, Two Ig Domains And Long Cytoplasmic Tail 2	Protein Coding	25	GC19Mr00108	3.60015	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIR2DL2
SDC3	Syndecan 3	Protein Coding	41	GC01M030869	3.591435	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SDC3
SLCO1B1	Solute Carrier Organic Anion Transporter Family Member 1B1	Protein Coding	46	GC12P021653	3.590797	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=SLCO1B1
CHST11	Carbohydrate Sulfotransferase 11	Protein Coding	41	GC12P104455	3.585589	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHST11
AHR	Aryl Hydrocarbon Receptor	Protein Coding	47	GC07P016916	3.584531	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AHR
IL18RAP	Interleukin 18 Receptor Accessory Protein	Protein Coding	37	GC02P102418	3.584322	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL18RAP
CAMP	Cathelicidin Antimicrobial Peptide	Protein Coding	39	GC03P048954	3.583385	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAMP
ANGPTL4	Angiopoietin Like 4	Protein Coding	43	GC19P008363	3.579341	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANGPTL4
SLAMF7	SLAM Family Member 7	Protein Coding	41	GC01P160740	3.577115	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLAMF7
MIR34A	MicroRNA 34a	RNA Gene	23	GC01M009151	3.575555	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR34A
BMP5	Bone Morphogenetic Protein 5	Protein Coding	41	GC06M055753	3.572934	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BMP5
MMP11	Matrix Metalloproteinase 11	Protein Coding	44	GC22P023768	3.569426	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP11
VEGFC	Vascular Endothelial Growth Factor C	Protein Coding	45	GC04M176683	3.562657	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VEGFC
PPIA	Peptidylprolyl Isomerase A	Protein Coding	45	GC07P044807	3.559993	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPIA
TRAF2	TNF Receptor Associated Factor 2	Protein Coding	42	GC09P136881	3.556872	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRAF2
LILRB1	Leukocyte Immunoglobulin Like Receptor B1	Protein Coding	42	GC19P067376	3.553421	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LILRB1

RSBN1	Round Spermatid Basic Protein 1	Protein Coding	32	GC01M113761	3.551713	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RSBN1
FCGRT	Fc Gamma Receptor And Transporter	Protein Coding	42	GC19P049506	3.550697	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCGRT
MAP3K7	Mitogen-Activated Protein Kinase Kinase Kinase 7	Protein Coding	48	GC06M090513	3.54487	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP3K7
GP1BB	Glycoprotein Ib Platelet Subunit Beta	Protein Coding	42	GC22P035810	3.544345	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GP1BB
KRT5	Keratin 5	Protein Coding	45	GC12M052514	3.5425	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KRT5
ADAM15	ADAM Metallopeptidase Domain 15	Protein Coding	42	GC01P155050	3.540148	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAM15
MAP3K1	Mitogen-Activated Protein Kinase Kinase Kinase 1	Protein Coding	47	GC05P056815	3.538762	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP3K1
MIR126	MicroRNA 126	RNA Gene	22	GC09P136670	3.526884	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR126
GUSB	Glucuronidase Beta	Protein Coding	46	GC07M065960	3.524533	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GUSB
CLEC3B	C-Type Lectin Domain Family 3 Member B	Protein Coding	39	GC03P046742	3.52183	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLEC3B
TERT	Telomerase Reverse Transcriptase	Protein Coding	49	GC05M001253	3.517506	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TERT
ANXA2	Annexin A2	Protein Coding	46	GC15M060347	3.517336	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANXA2
CCL7	C-C Motif Chemokine Ligand 7	Protein Coding	41	GC17P034270	3.515968	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL7
IFNL1	Interferon Lambda 1	Protein Coding	33	GC19P039296	3.509798	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=IFNL1
SALL3	Spalt Like Transcription Factor 3	Protein Coding	35	GC18P078980	3.507736	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SALL3
CXCR6	C-X-C Motif Chemokine Receptor 6	Protein Coding	38	GC03P046765	3.505186	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCR6
MIR30A	MicroRNA 30a	RNA Gene	20	GC06M071403	3.503458	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR30A
TNFRSF12A	TNF Receptor Superfamily Member 12A	Protein Coding	41	GC16P003018	3.499381	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF12A
AKT2	AKT Serine/Threonine Kinase 2	Protein Coding	51	GC19M040230	3.491042	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AKT2
PFKM	Phosphofructokinase, Muscle	Protein Coding	48	GC12P048105	3.490663	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PFKM
LERFS	LncRNA Negative Regulator Of Fibroblast-Like Synoviocyte Migration, SYNCRIP Interacting	RNA Gene	9	GC09M062859	3.490208	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LERFS
BCL6	BCL6 Transcription Repressor	Protein Coding	43	GC03M187721	3.487766	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCL6
APOB	Apolipoprotein B	Protein Coding	45	GC02M020956	3.4875	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APOB
KIR2DL1	Killer Cell Immunoglobulin Like Receptor, Two Ig Domains And Long Cytoplasmic Tail 1	Protein Coding	36	GC19P067381	3.486579	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIR2DL1
CYBC1	Cytochrome B-245 Chaperone 1	Protein Coding	25	GC17M082443	3.481138	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYBC1
HNRNPC	Heterogeneous Nuclear Ribonucleoprotein C	Protein Coding	40	GC14M022503	3.476026	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HNRNPC
KRT18	Keratin 18	Protein Coding	46	GC12P052948	3.469151	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KRT18

						bin/carddisp.pl?gene=KRT18
HLA-DPA1	Major Histocompatibility Complex, Class II, DP Alpha 1	Protein Coding	40	GC06M033064	3.46679	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DPA1
GOLGB1	Golgin B1	Protein Coding	36	GC03M121663	3.465222	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GOLGB1
ITGAX	Integrin Subunit Alpha X	Protein Coding	44	GC16P041137	3.465128	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGAX
ICAM2	Intercellular Adhesion Molecule 2	Protein Coding	42	GC17M064002	3.453012	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ICAM2
LGALS8	Galectin 8	Protein Coding	40	GC01P236518	3.446825	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LGALS8
IFNG-AS1	IFNG Antisense RNA 1	RNA Gene	18	GC12P067989	3.44533	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFNG-AS1
MSN	Moesin	Protein Coding	45	GC0XP065588	3.428742	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MSN
GHSR	Growth Hormone Secretagogue Receptor	Protein Coding	45	GC03M172443	3.424213	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GHSR
MAP2K6	Mitogen-Activated Protein Kinase Kinase 6	Protein Coding	44	GC17P069414	3.418328	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP2K6
RAC1	Rac Family Small GTPase 1	Protein Coding	47	GC07P006377	3.405939	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAC1
SHMT1	Serine Hydroxymethyltransferase 1	Protein Coding	44	GC17M025713	3.405916	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SHMT1
XRCC1	X-Ray Repair Cross Complementing 1	Protein Coding	43	GC19M043543	3.405916	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XRCC1
MSH5	MutS Homolog 5	Protein Coding	40	GC06P083709	3.405401	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MSH5

YWHAH	Tyrosine 3-Monooxygenase/Tryptophan 5-Monooxygenase Activation Protein Eta	Protein Coding	45	GC22P031944	3.397234	https://www.genecards.org/cgi-bin/carddisp.pl?gene=YWHAH
ENO2	Enolase 2	Protein Coding	45	GC12P006913	3.397164	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENO2
ITLN1	Intelectin 1	Protein Coding	38	GC01M160876	3.395515	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITLN1
TLR6	Toll Like Receptor 6	Protein Coding	42	GC04M038828	3.38742	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLR6
LAG3	Lymphocyte Activating 3	Protein Coding	38	GC12P021074	3.384944	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LAG3
HDAC4	Histone Deacetylase 4	Protein Coding	49	GC02M239048	3.382961	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HDAC4
CARD9	Caspase Recruitment Domain Family Member 9	Protein Coding	42	GC09M136364	3.378241	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CARD9
CEBPB	CCAAT Enhancer Binding Protein Beta	Protein Coding	42	GC20P050190	3.374365	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEBPB
GPX3	Glutathione Peroxidase 3	Protein Coding	41	GC05P150997	3.369219	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPX3
CYP1A1	Cytochrome P450 Family 1 Subfamily A Member 1	Protein Coding	46	GC15M074719	3.366565	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP1A1
FPR2	Formyl Peptide Receptor 2	Protein Coding	44	GC19P051752	3.365879	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FPR2
TAC3	Tachykinin Precursor 3	Protein Coding	43	GC12M057009	3.365708	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAC3
PLCL2	Phospholipase C Like 2	Protein Coding	37	GC03P017121	3.365654	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLCL2
A2M	Alpha-2-Macroglobulin	Protein Coding	43	GC12M009067	3.359872	https://www.genecards.org/cgi-bin/carddisp.pl?gene=A2M

						bin/carddisp.pl?gene=A2M
VTN	Vitronectin	Protein Coding	42	GC17M035135	3.35919	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VTN
SLAMF6	SLAM Family Member 6	Protein Coding	39	GC01M160454	3.356922	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLAMF6
MIR16-1	MicroRNA 16-1	RNA Gene	21	GC13M050048	3.355897	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR16-1
IRAK3	Interleukin 1 Receptor Associated Kinase 3	Protein Coding	45	GC12P066278	3.355262	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRAK3
IKZF3	IKAROS Family Zinc Finger 3	Protein Coding	41	GC17M042354	3.352949	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IKZF3
RNASE3	Ribonuclease A Family Member 3	Protein Coding	40	GC14P020891	3.351332	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNASE3
MTNR1B	Melatonin Receptor 1B	Protein Coding	44	GC11P092969	3.349228	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTNR1B
CYP17A1	Cytochrome P450 Family 17 Subfamily A Member 1	Protein Coding	47	GC10M102830	3.347181	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP17A1
ANXA3	Annexin A3	Protein Coding	41	GC04P078551	3.345737	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANXA3
FAM107A	Family With Sequence Similarity 107 Member A	Protein Coding	36	GC03M058741	3.345737	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAM107A
CYP2D6	Cytochrome P450 Family 2 Subfamily D Member 6	Protein Coding	46	GC22M042126	3.341916	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP2D6
CCL8	C-C Motif Chemokine Ligand 8	Protein Coding	37	GC17P034319	3.340772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL8
ITGA5	Integrin Subunit Alpha 5	Protein Coding	47	GC12M054899	3.33706	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGA5

RPL7	Ribosomal Protein L7	Protein Coding	41	GC08M073290	3.335141	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL7
SUOX	Sulfite Oxidase	Protein Coding	44	GC12P055997	3.330769	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SUOX
TXNDC5	Thioredoxin Domain Containing 5	Protein Coding	37	GC06M007893	3.32913	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TXNDC5
CYP3A4	Cytochrome P450 Family 3 Subfamily A Member 4	Protein Coding	49	GC07M099759	3.326074	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP3A4
MB	Myoglobin	Protein Coding	42	GC22M035606	3.325997	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MB
PROCR	Protein C Receptor	Protein Coding	41	GC20P035171	3.325412	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PROCR
TSPO	Translocator Protein	Protein Coding	43	GC22P043151	3.324191	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSPO
MIR145	MicroRNA 145	RNA Gene	22	GC05P149430	3.322383	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR145
COL5A1	Collagen Type V Alpha 1 Chain	Protein Coding	45	GC09P134641	3.315518	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL5A1
LCN2	Lipocalin 2	Protein Coding	43	GC09P128149	3.315227	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LCN2
GLA	Galactosidase Alpha	Protein Coding	47	GC0XM101393	3.312398	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GLA
TNFRSF18	TNF Receptor Superfamily Member 18	Protein Coding	40	GC01M001203	3.311267	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF18
WNT1	Wnt Family Member 1	Protein Coding	44	GC12P049348	3.305258	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WNT1
PADI6	Peptidyl Arginine Deiminase 6	Protein Coding	37	GC01P017851	3.304638	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PADI6

						bin/carddisp.pl?gene=PADI6
SULT1A3	Sulfotransferase Family 1A Member 3	Protein Coding	37	GC16P030199	3.301711	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SULT1A3
PDE2A	Phosphodiesterase 2A	Protein Coding	46	GC11M072576	3.296451	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDE2A
PRKCB	Protein Kinase C Beta	Protein Coding	45	GC16P024288	3.296451	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKCB
ZNF774	Zinc Finger Protein 774	Protein Coding	28	GC15P090352	3.296451	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF774
MPIG6B	Megakaryocyte And Platelet Inhibitory Receptor G6b	Protein Coding	30	GC06P085586	3.293161	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MPIG6B
ELAVL1	ELAV Like RNA Binding Protein 1	Protein Coding	40	GC19M007958	3.292305	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ELAVL1
FADS1	Fatty Acid Desaturase 1	Protein Coding	43	GC11M061799	3.286213	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FADS1
LEPR	Leptin Receptor	Protein Coding	48	GC01P065421	3.283623	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LEPR
CALCRL	Calcitonin Receptor Like Receptor	Protein Coding	44	GC02M187341	3.278847	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CALCRL
TXN	Thioredoxin	Protein Coding	44	GC09M110243	3.277952	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TXN
CD59	CD59 Molecule (CD59 Blood Group)	Protein Coding	44	GC11M033704	3.277409	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD59
HAS2	Hyaluronan Synthase 2	Protein Coding	40	GC08M121594	3.272159	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HAS2
ADAMTS7	ADAM Metallopeptidase With Thrombospondin Type 1 Motif 7	Protein Coding	40	GC15M078759	3.27092	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAMTS7

FCN1	Ficolin 1	Protein Coding	40	GC09M135133	3.267613	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCN1
SHBG	Sex Hormone Binding Globulin	Protein Coding	40	GC17P007613	3.265517	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SHBG
IL1F10	Interleukin 1 Family Member 10	Protein Coding	37	GC02P113067	3.26474	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL1F10
TGFA	Transforming Growth Factor Alpha	Protein Coding	44	GC02M070447	3.262326	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TGFA
TNFRSF10B	TNF Receptor Superfamily Member 10b	Protein Coding	48	GC08M023020	3.261706	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF10B
VTCN1	V-Set Domain Containing T Cell Activation Inhibitor 1	Protein Coding	39	GC01M117143	3.25684	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VTCN1
IAPP	Islet Amyloid Polypeptide	Protein Coding	41	GC12P021354	3.253519	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IAPP
GPSM3	G Protein Signaling Modulator 3	Protein Coding	33	GC06M065987	3.252458	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPSM3
GRN	Granulin Precursor	Protein Coding	46	GC17P044345	3.248304	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GRN
CASP7	Caspase 7	Protein Coding	47	GC10P113679	3.247452	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CASP7
MIR483	MicroRNA 483	RNA Gene	20	GC11M003297	3.240749	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR483
CYP21A2	Cytochrome P450 Family 21 Subfamily A Member 2	Protein Coding	44	GC06P083719	3.234226	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP21A2
CYP21A1P	Cytochrome P450 Family 21 Subfamily A Member 1, Pseudogene	Pseudo gene	16	GC06P032005	3.233522	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP21A1P
KLRC1	Killer Cell Lectin Like Receptor C1	Protein Coding	41	GC12M021112	3.232145	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLRC1

						bin/carddisp.pl?gene=KLRC1
NCF2	Neutrophil Cytosolic Factor 2	Protein Coding	45	GC01M183555	3.229803	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCF2
ARHGEF3	Rho Guanine Nucleotide Exchange Factor 3	Protein Coding	40	GC03M056736	3.229774	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARHGEF3
RFC1	Replication Factor C Subunit 1	Protein Coding	46	GC04M039291	3.227977	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RFC1
LPL	Lipoprotein Lipase	Protein Coding	48	GC08P019901	3.224157	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LPL
MIR27A	MicroRNA 27a	RNA Gene	23	GC19M014484	3.223328	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR27A
IL20RB	Interleukin 20 Receptor Subunit Beta	Protein Coding	36	GC03P136946	3.222666	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL20RB
FOXO1	Forkhead Box O1	Protein Coding	47	GC13M040555	3.217533	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOXO1
CD22	CD22 Molecule	Protein Coding	44	GC19P035319	3.214668	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD22
PF4	Platelet Factor 4	Protein Coding	39	GC04M073980	3.210268	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PF4
AXL	AXL Receptor Tyrosine Kinase	Protein Coding	50	GC19P041219	3.205276	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AXL
FOXO3	Forkhead Box O3	Protein Coding	44	GC06P108559	3.204709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOXO3
DNMT3A	DNA Methyltransferase 3 Alpha	Protein Coding	49	GC02M025228	3.195729	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNMT3A
DUSP22	Dual Specificity Phosphatase 22	Protein Coding	38	GC06P000302	3.19063	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DUSP22

ALOX5AP	Arachidonate 5-Lipoxygenase Activating Protein	Protein Coding	42	GC13P030713	3.185986	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALOX5AP
CYCS	Cytochrome C, Somatic	Protein Coding	46	GC07M025118	3.182876	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYCS
FLNB	Filamin B	Protein Coding	46	GC03P058008	3.182026	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FLNB
C1QA	Complement C1q A Chain	Protein Coding	45	GC01P022636	3.180901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C1QA
IKBKG	Inhibitor Of Nuclear Factor Kappa B Kinase Regulatory Subunit Gamma	Protein Coding	46	GC0XP154541	3.180798	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IKBKG
HLA-E	Major Histocompatibility Complex, Class I, E	Protein Coding	41	GC06P083670	3.179679	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-E
HTR3A	5-Hydroxytryptamine Receptor 3A	Protein Coding	45	GC11P113974	3.176747	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HTR3A
MIR124-1	MicroRNA 124-1	RNA Gene	21	GC08M009903	3.164538	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR124-1
TAB2	TGF-Beta Activated Kinase 1 (MAP3K7) Binding Protein 2	Protein Coding	46	GC06P149218	3.163508	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAB2
WNT5A	Wnt Family Member 5A	Protein Coding	48	GC03M055465	3.161349	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WNT5A
FAP	Fibroblast Activation Protein Alpha	Protein Coding	44	GC02M162170	3.161313	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAP
CDKN3	Cyclin Dependent Kinase Inhibitor 3	Protein Coding	42	GC14P054398	3.154123	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDKN3
BRAF	B-Raf Proto-Oncogene, Serine/Threonine Kinase	Protein Coding	50	GC07M140737	3.152922	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BRAF
MC4R	Melanocortin 4 Receptor	Protein Coding	44	GC18M060371	3.149513	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MC4R

						bin/carddisp.pl?gene=MC4R
VIPR1	Vasoactive Intestinal Peptide Receptor 1	Protein Coding	44	GC03P042490	3.148824	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VIPR1
PHRF1	PHD And Ring Finger Domains 1	Protein Coding	34	GC11P001742	3.148697	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PHRF1
PDE4A	Phosphodiesterase 4A	Protein Coding	44	GC19P010416	3.147764	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDE4A
CFTR	CF Transmembrane Conductance Regulator	Protein Coding	49	GC07P117287	3.143525	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CFTR
GAS6	Growth Arrest Specific 6	Protein Coding	44	GC13M113820	3.141688	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GAS6
ENPP2	Ectonucleotide Pyrophosphatase/Phosphodiesterase 2	Protein Coding	43	GC08M119556	3.138681	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENPP2
SPHK1	Sphingosine Kinase 1	Protein Coding	45	GC17P076376	3.133767	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPHK1
PLG	Plasminogen	Protein Coding	48	GC06P160702	3.132704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLG
RPS12P4	Ribosomal Protein S12 Pseudogene 4	Pseudo gene	9	GC02M041850	3.132163	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS12P4
RNASEH2A	Ribonuclease H2 Subunit A	Protein Coding	42	GC19P014276	3.127436	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNASEH2A
ABCC2	ATP Binding Cassette Subfamily C Member 2	Protein Coding	46	GC10P099782	3.125788	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCC2
CCL3L1	C-C Motif Chemokine Ligand 3 Like 1	Protein Coding	28	GC17Mj00250	3.120484	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL3L1
SEMA3C	Semaphorin 3C	Protein Coding	43	GC07M080742	3.116683	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEMA3C

SOD3	Superoxide Dismutase 3	Protein Coding	41	GC04P024798	3.111549	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOD3
TCN1	Transcobalamin 1	Protein Coding	41	GC11M089510	3.111306	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TCN1
EZH2	Enhancer Of Zeste 2 Polycomb Repressive Complex 2 Subunit	Protein Coding	52	GC07M148807	3.109519	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EZH2
CCL15	C-C Motif Chemokine Ligand 15	Protein Coding	34	GC17M035996	3.106022	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL15
OSCAR	Osteoclast Associated Ig-Like Receptor	Protein Coding	37	GC19M054094	3.10577	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OSCAR
ATG16L1	Autophagy Related 16 Like 1	Protein Coding	41	GC02P233253	3.103968	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATG16L1
HLA-DRB9	Major Histocompatibility Complex, Class II, DR Beta 9 (Pseudogene)	Pseudo gene	13	GC06M066001	3.103507	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DRB9
RNASEH2C	Ribonuclease H2 Subunit C	Protein Coding	38	GC11M065714	3.099708	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNASEH2C
CNR1	Cannabinoid Receptor 1	Protein Coding	45	GC06M088139	3.099246	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNR1
CHRNA7	Cholinergic Receptor Nicotinic Alpha 7 Subunit	Protein Coding	44	GC15P031923	3.095434	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHRNA7
MMP16	Matrix Metalloproteinase 16	Protein Coding	43	GC08M088032	3.094251	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP16
APLN	Apelin	Protein Coding	36	GC0XM129645	3.088194	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APLN
TIRAP	TIR Domain Containing Adaptor Protein	Protein Coding	41	GC11P126284	3.084987	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TIRAP
NRP1	Neuropilin 1	Protein Coding	45	GC10M033177	3.081483	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=NRP1
EFEMP1	EGF Containing Fibulin Extracellular Matrix Protein 1	Protein Coding	44	GC02M055865	3.081483	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EFEMP1
QPCT	Glutaminy1-Peptide Cyclotransferase	Protein Coding	43	GC02P037344	3.078385	https://www.genecards.org/cgi-bin/carddisp.pl?gene=QPCT
CD200R1	CD200 Receptor 1	Protein Coding	38	GC03M112921	3.073316	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD200R1
MAP2K3	Mitogen-Activated Protein Kinase Kinase 3	Protein Coding	46	GC17P054789	3.073071	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP2K3
SLC17A1	Solute Carrier Family 17 Member 1	Protein Coding	39	GC06M025723	3.072752	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC17A1
SERPINF1	Serpin Family F Member 1	Protein Coding	44	GC17P001761	3.071793	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPINF1
PFKFB3	6-Phosphofructo-2-Kinase/Fructose-2,6-Biphosphatase 3	Protein Coding	43	GC10P006144	3.069526	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PFKFB3
BMS1P20	BMS1 Pseudogene 20	Pseudo gene	16	GC22P022298	3.069526	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BMS1P20
YY1	YY1 Transcription Factor	Protein Coding	46	GC14P100238	3.066354	https://www.genecards.org/cgi-bin/carddisp.pl?gene=YY1
KLRB1	Killer Cell Lectin Like Receptor B1	Protein Coding	39	GC12M021098	3.063033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLRB1
EBI3	Epstein-Barr Virus Induced 3	Protein Coding	37	GC19P004233	3.062869	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EBI3
TIA1	TIA1 Cytotoxic Granule Associated RNA Binding Protein	Protein Coding	42	GC02M070209	3.062519	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TIA1
HDAC9	Histone Deacetylase 9	Protein Coding	46	GC07P018086	3.061987	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HDAC9

IL17RC	Interleukin 17 Receptor C	Protein Coding	38	GC03P009917	3.061243	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL17RC
BAG6	BAG Cochaperone 6	Protein Coding	36	GC06M031639	3.060708	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BAG6
STAT5A	Signal Transducer And Activator Of Transcription 5A	Protein Coding	45	GC17P042287	3.055726	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STAT5A
HSP90AB1	Heat Shock Protein 90 Alpha Family Class B Member 1	Protein Coding	46	GC06P044246	3.052162	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSP90AB1
DNASE2	Deoxyribonuclease 2, Lysosomal	Protein Coding	39	GC19M012875	3.051737	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNASE2
IL36A	Interleukin 36 Alpha	Protein Coding	36	GC02P113005	3.050442	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL36A
TNC	Tenascin C	Protein Coding	47	GC09M115019	3.050395	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNC
TNFSF18	TNF Superfamily Member 18	Protein Coding	37	GC01M173009	3.046634	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFSF18
MAP2K7	Mitogen-Activated Protein Kinase Kinase 7	Protein Coding	44	GC19P007903	3.045817	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP2K7
PYCARD	PYD And CARD Domain Containing	Protein Coding	40	GC16M031201	3.041759	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PYCARD
HOXD13	Homeobox D13	Protein Coding	41	GC02P176092	3.039764	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HOXD13
MIR222	MicroRNA 222	RNA Gene	21	GC0XM045747	3.037139	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR222
RTKN2	Rhotekin 2	Protein Coding	35	GC10M062183	3.036466	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RTKN2
MAPK3	Mitogen-Activated Protein Kinase 3	Protein Coding	46	GC16M037120	3.034573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAPK3

						bin/carddisp.pl?gene=MAPK3
SLAMF1	Signaling Lymphocytic Activation Molecule Family Member 1	Protein Coding	40	GC01M160608	3.02949	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLAMF1
ADAMTSL1	ADAMTS Like 1	Protein Coding	41	GC09P017906	3.028688	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAMTSL1
USH2A	Usherin	Protein Coding	38	GC01M215622	3.026695	https://www.genecards.org/cgi-bin/carddisp.pl?gene=USH2A
ADSL	Adenylosuccinate Lyase	Protein Coding	46	GC22P040346	3.019983	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADSL
PSENEN	Presenilin Enhancer, Gamma-Secretase Subunit	Protein Coding	42	GC19P066549	3.014358	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSENEN
SCGB1A1	Secretoglobin Family 1A Member 1	Protein Coding	39	GC11P062405	3.013911	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SCGB1A1
FCGR2C	Fc Gamma Receptor IIc (Gene/Pseudogene)	Protein Coding	35	GC01P161718	3.01309	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCGR2C
BAD	BCL2 Associated Agonist Of Cell Death	Protein Coding	43	GC11M089708	3.011511	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BAD
SYNGR1	Synaptogyrin 1	Protein Coding	40	GC22P039350	3.009294	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SYNGR1
ALDH2	Aldehyde Dehydrogenase 2 Family Member	Protein Coding	49	GC12P111766	3.007002	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALDH2
SLPI	Secretory Leukocyte Peptidase Inhibitor	Protein Coding	39	GC20M045252	3.006694	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLPI
IL31	Interleukin 31	Protein Coding	34	GC12M122295	3.000791	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL31
RBP4	Retinol Binding Protein 4	Protein Coding	44	GC10M093591	2.99993	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RBP4

ICA1	Islet Cell Autoantigen 1	Protein Coding	40	GC07M008206	2.99347	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ICA1
PLOD2	Procollagen-Lysine,2-Oxoglutarate 5-Dioxygenase 2	Protein Coding	44	GC03M146069	2.993037	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLOD2
SEMA4D	Semaphorin 4D	Protein Coding	45	GC09M089360	2.992128	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEMA4D
APP	Amyloid Beta Precursor Protein	Protein Coding	49	GC21M025880	2.991846	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APP
CCL1	C-C Motif Chemokine Ligand 1	Protein Coding	36	GC17M035584	2.991845	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL1
FNDC1	Fibronectin Type III Domain Containing 1	Protein Coding	34	GC06P160538	2.985362	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FNDC1
MIR99B	MicroRNA 99b	RNA Gene	20	GC19P051692	2.9807	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR99B
BCL2L11	BCL2 Like 11	Protein Coding	42	GC02P111119	2.978083	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCL2L11
BST2	Bone Marrow Stromal Cell Antigen 2	Protein Coding	38	GC19M017403	2.977444	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BST2
IL12RB2	Interleukin 12 Receptor Subunit Beta 2	Protein Coding	42	GC01P067307	2.975707	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL12RB2
ATF2	Activating Transcription Factor 2	Protein Coding	44	GC02M175072	2.975466	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATF2
NCF4	Neutrophil Cytosolic Factor 4	Protein Coding	46	GC22P036860	2.973231	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCF4
CISH	Cytokine Inducible SH2 Containing Protein	Protein Coding	44	GC03M051268	2.971012	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CISH
FOXJ1	Forkhead Box J1	Protein Coding	37	GC17M076136	2.969518	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=FOXJ1
MAPK9	Mitogen-Activated Protein Kinase 9	Protein Coding	46	GC05M180254	2.965781	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAPK9
MMP20	Matrix Metalloproteinase 20	Protein Coding	44	GC11M102576	2.964606	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP20
PERP	P53 Apoptosis Effector Related To PMP22	Protein Coding	40	GC06M138088	2.95774	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PERP
DDX58	DEXD/H-Box Helicase 58	Protein Coding	45	GC09M032455	2.956203	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDX58
C1S	Complement C1s	Protein Coding	47	GC12P021098	2.955665	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C1S
SDC1	Syndecan 1	Protein Coding	41	GC02M020200	2.952341	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SDC1
RNGTT	RNA Guanylyltransferase And 5'-Phosphatase	Protein Coding	41	GC06M088609	2.947067	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNGTT
GHR	Growth Hormone Receptor	Protein Coding	44	GC05P042429	2.943426	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GHR
UGDH	UDP-Glucose 6-Dehydrogenase	Protein Coding	44	GC04M039502	2.939529	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UGDH
CYP27B1	Cytochrome P450 Family 27 Subfamily B Member 1	Protein Coding	46	GC12M057757	2.937761	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP27B1
PFKL	Phosphofructokinase, Liver Type	Protein Coding	44	GC21P044300	2.932446	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PFKL
CD101	CD101 Molecule	Protein Coding	38	GC01P117001	2.932446	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD101
TAX1BP1	Tax1 Binding Protein 1	Protein Coding	38	GC07P027739	2.932446	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAX1BP1

FCRL4	Fc Receptor Like 4	Protein Coding	37	GC01M157543	2.932446	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCRL4
PHACTR3	Phosphatase And Actin Regulator 3	Protein Coding	36	GC20P059577	2.932446	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PHACTR3
TRHDE	Thyrotropin Releasing Hormone Degrading Enzyme	Protein Coding	36	GC12P072087	2.932446	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRHDE
C5-OT1	C5 3' UTR Overlapping Transcript 1	RNA Gene	8	GC09M120944	2.932446	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C5-OT1
ELP1	Elongator Acetyltransferase Complex Subunit 1	Protein Coding	34	GC09M108868	2.930565	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ELP1
PSORS1C3	Psoriasis Susceptibility 1 Candidate 3	RNA Gene	21	GC06M065907	2.92977	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSORS1C3
ALPK1	Alpha Kinase 1	Protein Coding	40	GC04P112285	2.929518	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALPK1
ARAP1	ArfGAP With RhoGAP Domain, Ankyrin Repeat And PH Domain 1	Protein Coding	40	GC11M090324	2.922596	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARAP1
PCNA	Proliferating Cell Nuclear Antigen	Protein Coding	48	GC20M005114	2.920493	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PCNA
KEAP1	Kelch Like ECH Associated Protein 1	Protein Coding	46	GC19M010486	2.919772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KEAP1
FLT4	Fms Related Receptor Tyrosine Kinase 4	Protein Coding	49	GC05M180607	2.912264	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FLT4
TACR3	Tachykinin Receptor 3	Protein Coding	48	GC04M103586	2.910977	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TACR3
BAK1	BCL2 Antagonist/Killer 1	Protein Coding	42	GC06M033572	2.909388	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BAK1
CD1A	CD1a Molecule	Protein Coding	40	GC01P158255	2.903334	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=CD1A
TGFB3	Transforming Growth Factor Beta 3	Protein Coding	45	GC14M075958	2.90309	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TGFB3
TAB1	TGF-Beta Activated Kinase 1 (MAP3K7) Binding Protein 1	Protein Coding	40	GC22P039429	2.902945	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAB1
DDR1	Discoidin Domain Receptor Tyrosine Kinase 1	Protein Coding	45	GC06P083678	2.898831	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDR1
MAP3K2	Mitogen-Activated Protein Kinase Kinase Kinase 2	Protein Coding	44	GC02M127298	2.898114	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP3K2
CASP9	Caspase 9	Protein Coding	45	GC01M015491	2.897199	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CASP9
ZBP2	Zona Pellucida Binding Protein 2	Protein Coding	34	GC17P055526	2.894372	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZBP2
PTK2B	Protein Tyrosine Kinase 2 Beta	Protein Coding	47	GC08P027311	2.893253	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTK2B
TIMELESS	Timeless Circadian Regulator	Protein Coding	38	GC12M056416	2.887687	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TIMELESS
BCR	BCR Activator Of RhoGEF And GTPase	Protein Coding	50	GC22P023179	2.884006	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCR
MLKL	Mixed Lineage Kinase Domain Like Pseudokinase	Protein Coding	40	GC16M074672	2.880919	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MLKL
IRX1	Iroquois Homeobox 1	Protein Coding	38	GC05P003596	2.878638	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRX1
TRD	T Cell Receptor Delta Locus	Protein Coding	13	GC14P032626	2.8778	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRD
NOTCH1	Notch Receptor 1	Protein Coding	49	GC09M137524	2.872792	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOTCH1

GATA4	GATA Binding Protein 4	Protein Coding	46	GC08P011676	2.871077	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GATA4
TXNRD1	Thioredoxin Reductase 1	Protein Coding	45	GC12P104215	2.870043	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TXNRD1
SNRNP70	Small Nuclear Ribonucleoprotein U1 Subunit 70	Protein Coding	37	GC19P049085	2.866608	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNRNP70
SLC22A7	Solute Carrier Family 22 Member 7	Protein Coding	41	GC06P083920	2.865655	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC22A7
CLEC7A	C-Type Lectin Domain Containing 7A	Protein Coding	44	GC12M021105	2.862968	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLEC7A
MAPK13	Mitogen-Activated Protein Kinase 13	Protein Coding	46	GC06P083842	2.860585	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAPK13
CCL27	C-C Motif Chemokine Ligand 27	Protein Coding	34	GC09M034662	2.859911	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL27
CASR	Calcium Sensing Receptor	Protein Coding	49	GC03P122183	2.859241	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CASR
SST	Somatostatin	Protein Coding	40	GC03M187668	2.85444	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SST
EZR	Ezrin	Protein Coding	43	GC06M158765	2.85079	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EZR
CD34	CD34 Molecule	Protein Coding	42	GC01M207880	2.845316	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD34
NFKBIB	NFKB Inhibitor Beta	Protein Coding	40	GC19P038899	2.841966	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NFKBIB
KLRC2	Killer Cell Lectin Like Receptor C2	Protein Coding	36	GC12M021111	2.841174	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLRC2
TYMP	Thymidine Phosphorylase	Protein Coding	45	GC22M050525	2.838929	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=TYMP
NGFR	Nerve Growth Factor Receptor	Protein Coding	44	GC17P049495	2.835482	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NGFR
LAIR1	Leukocyte Associated Immunoglobulin Like Receptor 1	Protein Coding	41	GC19M054351	2.834127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LAIR1
HNF4A	Hepatocyte Nuclear Factor 4 Alpha	Protein Coding	48	GC20P044355	2.831234	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HNF4A
SEMA3A	Semaphorin 3A	Protein Coding	44	GC07M083955	2.830889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEMA3A
CCK	Cholecystokinin	Protein Coding	41	GC03M042274	2.829787	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCK
CTSC	Cathepsin C	Protein Coding	46	GC11M090619	2.82807	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTSC
IL1R2	Interleukin 1 Receptor Type 2	Protein Coding	44	GC02P101991	2.823656	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL1R2
INPP5B	Inositol Polyphosphate-5-Phosphatase B	Protein Coding	41	GC01M037860	2.822069	https://www.genecards.org/cgi-bin/carddisp.pl?gene=INPP5B
FMOD	Fibromodulin	Protein Coding	41	GC01M203340	2.820914	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FMOD
LPAR1	Lysophosphatidic Acid Receptor 1	Protein Coding	44	GC09M110873	2.819573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LPAR1
AGTR1	Angiotensin II Receptor Type 1	Protein Coding	48	GC03P148697	2.818228	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AGTR1
CLEC12A	C-Type Lectin Domain Family 12 Member A	Protein Coding	38	GC12P009951	2.817895	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLEC12A
MIR204	MicroRNA 204	RNA Gene	24	GC09M070809	2.816488	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR204

MIR146B	MicroRNA 146b	RNA Gene	21	GC10P102436	2.813499	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR146B
GYPC	Glycophorin C (Gerbich Blood Group)	Protein Coding	42	GC02P126655	2.80901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GYPC
KIR3DL1	Killer Cell Immunoglobulin Like Receptor, Three Ig Domains And Long Cytoplasmic Tail 1	Protein Coding	39	GC19P067384	2.806866	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIR3DL1
TCF7L2	Transcription Factor 7 Like 2	Protein Coding	45	GC10P112950	2.806362	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TCF7L2
PDGFRA	Platelet Derived Growth Factor Receptor Alpha	Protein Coding	51	GC04P054229	2.805772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDGFRA
AFP	Alpha Fetoprotein	Protein Coding	45	GC04P073431	2.804905	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AFP
RUNX2	RUNX Family Transcription Factor 2	Protein Coding	45	GC06P083940	2.801021	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RUNX2
CEACAM8	CEA Cell Adhesion Molecule 8	Protein Coding	38	GC19M042580	2.800923	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEACAM8
AOX1	Aldehyde Oxidase 1	Protein Coding	44	GC02P200585	2.792653	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AOX1
TRA	T Cell Receptor Alpha Locus	Protein Coding	19	GC14P021621	2.79131	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRA
KL	Klotho	Protein Coding	45	GC13P033016	2.787392	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KL
C1R	Complement C1r	Protein Coding	46	GC12M007750	2.784245	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C1R
MST1	Macrophage Stimulating 1	Protein Coding	45	GC03M049683	2.776713	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MST1

OS9	OS9 Endoplasmic Reticulum Lectin	Protein Coding	40	GC12P057693	2.776713	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OS9
UCN	Urocortin	Protein Coding	36	GC02M027308	2.776207	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UCN
TLR10	Toll Like Receptor 10	Protein Coding	38	GC04M038773	2.775997	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLR10
MITF	Melanocyte Inducing Transcription Factor	Protein Coding	46	GC03P069788	2.774539	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MITF
PABIR2	PABIR Family Member 2	Protein Coding	24	GC0XM134826	2.774215	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PABIR2
IRF7	Interferon Regulatory Factor 7	Protein Coding	46	GC11M000612	2.773942	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRF7
LALBA	Lactalbumin Alpha	Protein Coding	38	GC12M048567	2.772724	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LALBA
CYP2E1	Cytochrome P450 Family 2 Subfamily E Member 1	Protein Coding	44	GC10P133520	2.772125	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP2E1
LTB4R	Leukotriene B4 Receptor	Protein Coding	43	GC14P024311	2.771675	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LTB4R
CHIT1	Chitinase 1	Protein Coding	43	GC01M203213	2.769509	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHIT1
PROC	Protein C, Inactivator Of Coagulation Factors Va And VIIIa	Protein Coding	48	GC02P127418	2.768957	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PROC
PDCD5	Programmed Cell Death 5	Protein Coding	38	GC19P032581	2.767897	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDCD5
WDR26	WD Repeat Domain 26	Protein Coding	40	GC01M224385	2.766876	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WDR26

CPEB4	Cytoplasmic Polyadenylation Element Binding Protein 4	Protein Coding	36	GC05P173888	2.766876	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CPEB4
MOB3B	MOB Kinase Activator 3B	Protein Coding	34	GC09M028330	2.766743	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MOB3B
GDF15	Growth Differentiation Factor 15	Protein Coding	40	GC19P066244	2.766581	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GDF15
SPRY2	Sprouty RTK Signaling Antagonist 2	Protein Coding	44	GC13M080335	2.758616	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPRY2
PLA2G5	Phospholipase A2 Group V	Protein Coding	41	GC01P020028	2.757529	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLA2G5
CMKLR1	Chemerin Chemokine-Like Receptor 1	Protein Coding	40	GC12M108288	2.747658	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CMKLR1
MIR212	MicroRNA 212	RNA Gene	20	GC17M002050	2.747593	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR212
E2F2	E2F Transcription Factor 2	Protein Coding	40	GC01M023656	2.746572	https://www.genecards.org/cgi-bin/carddisp.pl?gene=E2F2
PRKDC	Protein Kinase, DNA-Activated, Catalytic Subunit	Protein Coding	48	GC08M047773	2.745072	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKDC
BATF	Basic Leucine Zipper ATF-Like Transcription Factor	Protein Coding	40	GC14P075523	2.737839	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BATF
GGT6	Gamma-Glutamyltransferase 6	Protein Coding	34	GC17M004559	2.735911	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GGT6
SMTNL2	Smoothelin Like 2	Protein Coding	32	GC17P004583	2.735911	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMTNL2
SIRT4	Sirtuin 4	Protein Coding	39	GC12P120291	2.729069	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SIRT4

IGES	Immunoglobulin E Concentration, Serum	Genetic Locus	4	GC05U990033	2.727148	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGES
CYB5A	Cytochrome B5 Type A	Protein Coding	42	GC18M074250	2.726281	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYB5A
OPTN	Optineurin	Protein Coding	43	GC10P013099	2.717163	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OPTN
SERPINF2	Serpin Family F Member 2	Protein Coding	44	GC17P001742	2.708069	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPINF2
ITGA1	Integrin Subunit Alpha 1	Protein Coding	42	GC05P052788	2.707134	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGA1
HARS1	Histidyl-TRNA Synthetase 1	Protein Coding	34	GC05M140673	2.701486	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HARS1
GIN1	Gypsy Retrotransposon Integrase 1	Protein Coding	32	GC05M103086	2.701116	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GIN1
KIR2DS1	Killer Cell Immunoglobulin Like Receptor, Two Ig Domains And Short Cytoplasmic Tail 1	Protein Coding	24	GC19Mr00063	2.699276	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIR2DS1
XIST	X Inactive Specific Transcript	RNA Gene	25	GC0XM073820	2.692909	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XIST
RPLP1	Ribosomal Protein Lateral Stalk Subunit P1	Protein Coding	38	GC15P117548	2.692557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPLP1
VPS37C	VPS37C Subunit Of ESCRT-I	Protein Coding	34	GC11M061130	2.692076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VPS37C
SMIM21	Small Integral Membrane Protein 21	Protein Coding	26	GC18M075409	2.692076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMIM21
EPHB1	EPH Receptor B1	Protein Coding	45	GC03P134795	2.691434	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EPHB1

EOMES	Eomesodermin	Protein Coding	42	GC03M027715	2.686572	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EOMES
OLR1	Oxidized Low Density Lipoprotein Receptor 1	Protein Coding	41	GC12M021106	2.685989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OLR1
RAC2	Rac Family Small GTPase 2	Protein Coding	49	GC22M057489	2.681681	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAC2
RAMP2	Receptor Activity Modifying Protein 2	Protein Coding	41	GC17P042758	2.677371	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAMP2
HSD11B2	Hydroxysteroid 11-Beta Dehydrogenase 2	Protein Coding	45	GC16P067433	2.675774	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSD11B2
CHD7	Chromodomain Helicase DNA Binding Protein 7	Protein Coding	44	GC08P060678	2.674856	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHD7
HBEGF	Heparin Binding EGF Like Growth Factor	Protein Coding	41	GC05M140332	2.668864	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HBEGF
ENTPD1	Ectonucleoside Triphosphate Diphosphohydrolase 1	Protein Coding	46	GC10P095711	2.668351	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENTPD1
BMX	BMX Non-Receptor Tyrosine Kinase	Protein Coding	44	GC0XP015392	2.667382	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BMX
MIR451A	MicroRNA 451a	RNA Gene	19	GC17M028861	2.665875	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR451A
MALT1	MALT1 Paracaspase	Protein Coding	45	GC18P058671	2.664839	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MALT1
C1QC	Complement C1q C Chain	Protein Coding	44	GC01P022643	2.663178	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C1QC
C1QB	Complement C1q B Chain	Protein Coding	43	GC01P022652	2.663178	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C1QB

HSPA1A	Heat Shock Protein Family A (Hsp70) Member 1A	Protein Coding	44	GC06P083713	2.660803	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPA1A
FLI1	Fli-1 Proto-Oncogene, ETS Transcription Factor	Protein Coding	46	GC11P128686	2.660119	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FLI1
JDP2	Jun Dimerization Protein 2	Protein Coding	39	GC14P075427	2.660119	https://www.genecards.org/cgi-bin/carddisp.pl?gene=JDP2
CCL23	C-C Motif Chemokine Ligand 23	Protein Coding	33	GC17M036013	2.658659	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL23
FABP4	Fatty Acid Binding Protein 4	Protein Coding	43	GC08M081478	2.658094	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FABP4
CLEC4A	C-Type Lectin Domain Family 4 Member A	Protein Coding	37	GC12P021118	2.65647	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLEC4A
FADS2	Fatty Acid Desaturase 2	Protein Coding	43	GC11P061792	2.655647	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FADS2
CD46	CD46 Molecule	Protein Coding	45	GC01P207752	2.653578	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD46
HPX	Hemopexin	Protein Coding	40	GC11M006578	2.652345	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HPX
CDKAL1	CDK5 Regulatory Subunit Associated Protein 1 Like 1	Protein Coding	38	GC06P020534	2.650796	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDKAL1
PDLIM4	PDZ And LIM Domain 4	Protein Coding	39	GC05P132257	2.64983	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDLIM4
MAP3K5	Mitogen-Activated Protein Kinase Kinase Kinase 5	Protein Coding	45	GC06M136557	2.6483	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP3K5
FAAH	Fatty Acid Amide Hydrolase	Protein Coding	46	GC01P046394	2.647988	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAAH

TPR	Translocated Promoter Region, Nuclear Basket Protein	Protein Coding	42	GC01M186319	2.644225	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TPR
WARS1	Tryptophanyl-TRNA Synthetase 1	Protein Coding	36	GC14M101280	2.642249	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WARS1
CDSN	Corneodesmosin	Protein Coding	41	GC06M031115	2.635215	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDSN
VPREB1	V-Set Pre-B Cell Surrogate Light Chain 1	Protein Coding	38	GC22P022244	2.633273	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VPREB1
COL3A1	Collagen Type III Alpha 1 Chain	Protein Coding	45	GC02P188974	2.632158	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL3A1
CDKN2A	Cyclin Dependent Kinase Inhibitor 2A	Protein Coding	48	GC09M021967	2.632003	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDKN2A
MTNR1A	Melatonin Receptor 1A	Protein Coding	41	GC04M186533	2.6285	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTNR1A
RNF182	Ring Finger Protein 182	Protein Coding	36	GC06P013924	2.625268	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNF182
GABARAPL3	GABA Type A Receptor Associated Protein Like 3 Pseudogene	Pseudo gene	20	GC15M090346	2.625268	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GABARAPL3
PDE3A	Phosphodiesterase 3A	Protein Coding	48	GC12P021516	2.625078	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDE3A
SLCO1C1	Solute Carrier Organic Anion Transporter Family Member 1C1	Protein Coding	38	GC12P020695	2.625078	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLCO1C1
FTL	Ferritin Light Chain	Protein Coding	45	GC19P048965	2.623077	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FTL
HLA-DRB3	Major Histocompatibility Complex, Class II, DR Beta 3	Protein Coding	29	GC06Mn03715	2.621905	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DRB3
CGAS	Cyclic GMP-AMP Synthase	Protein Coding	29	GC06M073414	2.619544	https://www.genecards.org/cgi-

S100A1	S100 Calcium Binding Protein A1	Protein Coding	40	GC01P153627	2.59816	https://www.genecards.org/cgi-bin/carddisp.pl?gene=S100A1
TPSAB1	Tryptase Alpha/Beta 1	Protein Coding	43	GC16P001240	2.598006	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TPSAB1
MIR141	MicroRNA 141	RNA Gene	22	GC12P021095	2.593911	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR141
ACTR2	Actin Related Protein 2	Protein Coding	42	GC02P065227	2.593283	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACTR2
KCNIP4	Potassium Voltage-Gated Channel Interacting Protein 4	Protein Coding	38	GC04M020728	2.582652	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KCNIP4
LRP1	LDL Receptor Related Protein 1	Protein Coding	46	GC12P057128	2.5737	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRP1
NRM	Nurim	Protein Coding	33	GC06M065880	2.569693	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NRM
CASTOR1	Cytosolic Arginine Sensor For MTORC1 Subunit 1	Protein Coding	23	GC22M057166	2.567595	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CASTOR1
SIRT6	Sirtuin 6	Protein Coding	43	GC19M004174	2.565393	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SIRT6
CNTF	Ciliary Neurotrophic Factor	Protein Coding	39	GC11P058622	2.56464	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNTF
MIR210	MicroRNA 210	RNA Gene	21	GC11M003193	2.556592	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR210
TANK	TRAF Family Member Associated NFKB Activator	Protein Coding	41	GC02P161136	2.555561	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TANK
MIR129-1	MicroRNA 129-1	RNA Gene	18	GC07P128207	2.552329	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR129-1
SMO	Smoothened, Frizzled Class Receptor	Protein Coding	47	GC07P131934	2.549778	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=SMO
CTHRC1	Collagen Triple Helix Repeat Containing 1	Protein Coding	40	GC08P103371	2.548314	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTHRC1
ABCA1	ATP Binding Cassette Subfamily A Member 1	Protein Coding	46	GC09M104781	2.548271	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCA1
PTPRT	Protein Tyrosine Phosphatase Receptor Type T	Protein Coding	43	GC20M042072	2.544767	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPRT
MERTK	MER Proto-Oncogene, Tyrosine Kinase	Protein Coding	49	GC02P111898	2.538073	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MERTK
TACR2	Tachykinin Receptor 2	Protein Coding	41	GC10M069403	2.537549	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TACR2
LSP1	Lymphocyte Specific Protein 1	Protein Coding	40	GC11P001878	2.530858	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LSP1
ZNRD2	Zinc Ribbon Domain Containing 2	Protein Coding	28	GC11P069991	2.530775	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNRD2
LINC00426	Long Intergenic Non-Protein Coding RNA 426	RNA Gene	16	GC13M030377	2.530775	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC00426
CXCR2P1	C-X-C Motif Chemokine Receptor 2 Pseudogene 1	Pseudo gene	14	GC02M218059	2.530775	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCR2P1
LINC02384	Long Intergenic Non-Protein Coding RNA 2384	RNA Gene	13	GC12M068334	2.530775	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02384
CD160	CD160 Molecule	Protein Coding	38	GC01P145719	2.527282	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD160
TYROBP	Transmembrane Immune Signaling Adaptor TYROBP	Protein Coding	42	GC19M035904	2.523565	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TYROBP
VSIG4	V-Set And Immunoglobulin Domain Containing 4	Protein Coding	36	GC0XM066021	2.520731	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VSIG4

ADIPOR1	Adiponectin Receptor 1	Protein Coding	43	GC01M202940	2.518602	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADIPOR1
MIR214	MicroRNA 214	RNA Gene	22	GC01M172234	2.517413	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR214
RDX	Radixin	Protein Coding	46	GC11M109864	2.515399	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RDX
TNFRSF10C	TNF Receptor Superfamily Member 10c	Protein Coding	37	GC08P023102	2.511104	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF10C
GMCL2	Germ Cell-Less 2, Spermatogenesis Associated	Protein Coding	19	GC05M178189	2.509099	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GMCL2
MIR346	MicroRNA 346	RNA Gene	21	GC10M086264	2.506927	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR346
LILRA3	Leukocyte Immunoglobulin Like Receptor A3	Protein Coding	31	GC19Mp00270	2.505285	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LILRA3
S1PR1	Sphingosine-1-Phosphate Receptor 1	Protein Coding	42	GC01P101236	2.504356	https://www.genecards.org/cgi-bin/carddisp.pl?gene=S1PR1
PGK1	Phosphoglycerate Kinase 1	Protein Coding	47	GC0XP077994	2.502916	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PGK1
GLI3	GLI Family Zinc Finger 3	Protein Coding	46	GC07M041960	2.501774	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GLI3
GAPDH	Glyceraldehyde-3-Phosphate Dehydrogenase	Protein Coding	47	GC12P021056	2.501425	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GAPDH
FOSL1	FOS Like 1, AP-1 Transcription Factor Subunit	Protein Coding	43	GC11M089830	2.501411	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOSL1
SIL1	SIL1 Nucleotide Exchange Factor	Protein Coding	40	GC05M138957	2.498796	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SIL1
POU2F1	POU Class 2 Homeobox 1	Protein Coding	42	GC01P167190	2.49787	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=POU2F1
KRT18P39	Keratin 18 Pseudogene 39	Pseudo gene	9	GC02M203765	2.49787	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KRT18P39
PSMG2	Proteasome Assembly Chaperone 2	Protein Coding	37	GC18P017449	2.496347	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMG2
TNFSF8	TNF Superfamily Member 8	Protein Coding	36	GC09M114893	2.495427	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFSF8
ITGB3	Integrin Subunit Beta 3	Protein Coding	49	GC17P055923	2.493982	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGB3
MIR518A1	MicroRNA 518a-1	RNA Gene	18	GC19P067345	2.491659	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR518A1
RASGRP4	RAS Guanyl Releasing Protein 4	Protein Coding	36	GC19M038409	2.490752	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RASGRP4
VEGFD	Vascular Endothelial Growth Factor D	Protein Coding	32	GC0XM015345	2.487922	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VEGFD
PTGER2	Prostaglandin E Receptor 2	Protein Coding	46	GC14P052314	2.478814	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTGER2
KCNJ11	Potassium Inwardly Rectifying Channel Subfamily J Member 11	Protein Coding	46	GC11M017592	2.473814	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KCNJ11
CYLD	CYLD Lysine 63 Deubiquitinase	Protein Coding	47	GC16P050742	2.469159	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYLD
TMPO	Thymopoietin	Protein Coding	44	GC12P098515	2.466669	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMPO
HSPA1L	Heat Shock Protein Family A (Hsp70) Member 1 Like	Protein Coding	44	GC06M031809	2.465886	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPA1L
WEE1	WEE1 G2 Checkpoint Kinase	Protein Coding	45	GC11P009573	2.461549	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WEE1

GPX1	Glutathione Peroxidase 1	Protein Coding	45	GC03M051185	2.459566	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPX1
PTPN3	Protein Tyrosine Phosphatase Non-Receptor Type 3	Protein Coding	44	GC09M109375	2.457529	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPN3
TRG	T Cell Receptor Gamma Locus	Protein Coding	13	GC07M038240	2.456943	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRG
RAP1A	RAP1A, Member Of RAS Oncogene Family	Protein Coding	43	GC01P111542	2.454115	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAP1A
NRP2	Neuropilin 2	Protein Coding	44	GC02P205681	2.450089	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NRP2
SEMA3F	Semaphorin 3F	Protein Coding	41	GC03P050360	2.450089	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEMA3F
SPI1	Spi-1 Proto-Oncogene	Protein Coding	42	GC11M089364	2.447559	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPI1
ATP1A1	ATPase Na ⁺ /K ⁺ Transporting Subunit Alpha 1	Protein Coding	48	GC01P116372	2.441431	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP1A1
C1QBP	Complement C1q Binding Protein	Protein Coding	43	GC17M005432	2.441431	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C1QBP
MED1	Mediator Complex Subunit 1	Protein Coding	40	GC17M039404	2.441431	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MED1
AQP5	Aquaporin 5	Protein Coding	45	GC12P049961	2.440441	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AQP5
SSNA1	SS Nuclear Autoantigen 1	Protein Coding	35	GC09P137188	2.440441	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SSNA1
FGF23	Fibroblast Growth Factor 23	Protein Coding	44	GC12M004368	2.439505	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGF23

HLA-S	Major Histocompatibility Complex, Class I, S (Pseudogene)	Pseudo gene	9	GC06M031381	2.431741	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-S
LOC111365141	NOS2 5' Regulatory Region	Biological Region	3	GC17P027800	2.429671	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC111365141
XCL1	X-C Motif Chemokine Ligand 1	Protein Coding	35	GC01P168576	2.429318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XCL1
AQP1	Aquaporin 1 (Colton Blood Group)	Protein Coding	45	GC07P030911	2.423884	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AQP1
HSP90B1	Heat Shock Protein 90 Beta Family Member 1	Protein Coding	45	GC12P103930	2.41881	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSP90B1
CYBA	Cytochrome B-245 Alpha Chain	Protein Coding	46	GC16M088643	2.417008	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYBA
PPAT	Phosphoribosyl Pyrophosphate Amidotransferase	Protein Coding	43	GC04M056393	2.416131	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPAT
LTB4R2	Leukotriene B4 Receptor 2	Protein Coding	41	GC14P032722	2.416099	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LTB4R2
LY6G6E	Lymphocyte Antigen 6 Family Member G6E	Pseudo gene	24	GC06M065966	2.414783	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LY6G6E
C1orf141	Chromosome 1 Open Reading Frame 141	Protein Coding	28	GC01M067092	2.414706	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C1orf141
PLAA	Phospholipase A2 Activating Protein	Protein Coding	43	GC09M026903	2.41254	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLAA
BBC3	BCL2 Binding Component 3	Protein Coding	38	GC19M047220	2.411876	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BBC3
SOX9	SRY-Box Transcription Factor 9	Protein Coding	44	GC17P072121	2.411608	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOX9
OGG1	8-Oxoguanine DNA Glycosylase	Protein Coding	45	GC03P012414	2.408346	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OGG1

						bin/carddisp.pl?gene=OGG1
CUL1	Cullin 1	Protein Coding	42	GC07P148697	2.408346	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CUL1
PRRT1	Proline Rich Transmembrane Protein 1	Protein Coding	32	GC06M065984	2.408346	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRRT1
CTNNB1	Catenin Beta 1	Protein Coding	50	GC03P041236	2.405236	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTNNB1
TGM2	Transglutaminase 2	Protein Coding	46	GC20M038127	2.405123	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TGM2
MIR18A	MicroRNA 18a	RNA Gene	18	GC13P091560	2.404482	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR18A
GRP	Gastrin Releasing Peptide	Protein Coding	39	GC18P059220	2.402391	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GRP
SIRT3	Sirtuin 3	Protein Coding	45	GC11M000215	2.399146	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SIRT3
SPN	Sialophorin	Protein Coding	38	GC16P029662	2.392903	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPN
GSDMB	Gasdermin B	Protein Coding	36	GC17M039904	2.392119	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GSDMB
C6orf47	Chromosome 6 Open Reading Frame 47	Protein Coding	29	GC06M065961	2.392119	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C6orf47
HTRA2	HtrA Serine Peptidase 2	Protein Coding	44	GC02P074529	2.389671	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HTRA2
CHGA	Chromogranin A	Protein Coding	43	GC14P092944	2.38497	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHGA
ABCC11	ATP Binding Cassette Subfamily C Member 11	Protein Coding	42	GC16M048166	2.38497	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCC11

MSRA	Methionine Sulfoxide Reductase A	Protein Coding	41	GC08P010054	2.38497	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MSRA
MPG	N-Methylpurine DNA Glycosylase	Protein Coding	39	GC16P011593	2.38497	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MPG
TIMD4	T Cell Immunoglobulin And Mucin Domain Containing 4	Protein Coding	36	GC05M156919	2.38497	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TIMD4
GSK3B	Glycogen Synthase Kinase 3 Beta	Protein Coding	47	GC03M119821	2.380347	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GSK3B
DCAF5	DDB1 And CUL4 Associated Factor 5	Protein Coding	33	GC14M069050	2.380035	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DCAF5
SLC46A1	Solute Carrier Family 46 Member 1	Protein Coding	41	GC17M035136	2.379748	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC46A1
MIR338	MicroRNA 338	RNA Gene	18	GC17M081126	2.370824	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR338
IL9R	Interleukin 9 Receptor	Protein Coding	35	GC0XP155997	2.370452	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL9R
VCP	Valosin Containing Protein	Protein Coding	48	GC09M035056	2.368829	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VCP
CTSD	Cathepsin D	Protein Coding	50	GC11M001752	2.368061	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTSD
GRM5	Glutamate Metabotropic Receptor 5	Protein Coding	46	GC11M088504	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GRM5
DDX6	DEAD-Box Helicase 6	Protein Coding	44	GC11M118748	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDX6
PTPRM	Protein Tyrosine Phosphatase Receptor Type M	Protein Coding	43	GC18P007557	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPRM
CDK5RAP2	CDK5 Regulatory Subunit Associated Protein 2	Protein Coding	41	GC09M120388	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDK5RAP2

						bin/carddisp.pl?gene=CDK5RAP2
CEP57	Centrosomal Protein 57	Protein Coding	41	GC11P095789	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEP57
STAG1	Stromal Antigen 1	Protein Coding	41	GC03M136336	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STAG1
MTF1	Metal Regulatory Transcription Factor 1	Protein Coding	40	GC01M037810	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTF1
PTTG1	PTTG1 Regulator Of Sister Chromatid Separation, Securin	Protein Coding	40	GC05P160422	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTTG1
TPD52	Tumor Protein D52	Protein Coding	40	GC08M080034	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TPD52
TREH	Trehalase	Protein Coding	40	GC11M118657	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TREH
GRHL2	Grainyhead Like Transcription Factor 2	Protein Coding	39	GC08P101492	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GRHL2
ABHD6	Abhydrolase Domain Containing 6, Acylglycerol Lipase	Protein Coding	38	GC03P058238	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABHD6
RABEP1	Rabaptin, RAB GTPase Binding Effector Protein 1	Protein Coding	38	GC17P005282	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RABEP1
CLYBL	Citramalyl-CoA Lyase	Protein Coding	37	GC13P099606	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLYBL
FADS3	Fatty Acid Desaturase 3	Protein Coding	36	GC11M061873	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FADS3
PPIL4	Peptidylprolyl Isomerase Like 4	Protein Coding	36	GC06M149504	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPIL4
PPM1L	Protein Phosphatase, Mg ²⁺ /Mn ²⁺ Dependent 1L	Protein Coding	36	GC03P160755	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPM1L

YPEL5	Yippee Like 5	Protein Coding	36	GC02P030108	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=YPEL5
CLNK	Cytokine Dependent Hematopoietic Cell Linker	Protein Coding	35	GC04M010491	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLNK
FAM124A	Family With Sequence Similarity 124 Member A	Protein Coding	34	GC13P051222	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAM124A
RPP14	Ribonuclease P/MRP Subunit P14	Protein Coding	34	GC03P058295	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPP14
TXNDC11	Thioredoxin Domain Containing 11	Protein Coding	34	GC16M011679	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TXNDC11
DDA1	DET1 And DDB1 Associated 1	Protein Coding	33	GC19P066218	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDA1
ACOXL	Acyl-CoA Oxidase Like	Protein Coding	32	GC02P110732	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACOXL
AHNAK2	AHNAK Nucleoprotein 2	Protein Coding	32	GC14M104937	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AHNAK2
ANO8	Anoctamin 8	Protein Coding	32	GC19M017324	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANO8
GUCY1B2	Guanylate Cyclase 1 Soluble Subunit Beta 2 (Pseudogene)	Pseudo gene	31	GC13M050994	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GUCY1B2
ARL14	ADP Ribosylation Factor Like GTPase 14	Protein Coding	30	GC03P160677	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARL14
ZNF438	Zinc Finger Protein 438	Protein Coding	30	GC10M030820	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF438
TMEM187	Transmembrane Protein 187	Protein Coding	28	GC0XP153972	2.367877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMEM187

FLACC1	Flagellum Associated Containing Coiled-Coil Domains 1	Protein Coding	26	GC02M 201423	2.367 877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FLACC1
DRAIC	Downregulated RNA In Cancer, Inhibitor Of Cell Invasion And Migration	RNA Gene	15	GC15P 117547	2.367 877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DRAIC
LOC100506023	Uncharacterized LOC100506023	RNA Gene	11	GC01M 173235	2.367 877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC100506023
LOC100506403	Uncharacterized LOC100506403	RNA Gene	10	GC21M 035372	2.367 877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC100506403
RPL17P2 2	Ribosomal Protein L17 Pseudogene 22	Pseudo gene	8	GC05P 056136	2.367 877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL17P22
FNIP1	Folliculin Interacting Protein 1	Protein Coding	37	GC05M 131641	2.362 982	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FNIP1
PREP	Prolyl Endopeptidase	Protein Coding	41	GC06M 105277	2.361 022	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PREP
SHH	Sonic Hedgehog Signaling Molecule	Protein Coding	48	GC07M 155799	2.360 765	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SHH
FOLR1	Folate Receptor Alpha	Protein Coding	46	GC11P 072190	2.360 765	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOLR1
PIN1	Peptidylprolyl Cis/Trans Isomerase, NIMA-Interacting 1	Protein Coding	45	GC19P 009835	2.360 765	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIN1
RB1	RB Transcriptional Corepressor 1	Protein Coding	45	GC13P 048303	2.360 765	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RB1
NKIRAS 1	NFKB Inhibitor Interacting Ras Like 1	Protein Coding	35	GC03M 024218	2.360 765	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NKIRAS1
MIR410	MicroRNA 410	RNA Gene	18	GC14P 109990	2.360 765	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR410
PTGER3	Prostaglandin E Receptor 3	Protein Coding	45	GC01M 070852	2.358 193	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=PTGER3
DEFA1	Defensin Alpha 1	Protein Coding	40	GC08M006977	2.354609	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DEFA1
PRELP	Proline And Arginine Rich End Leucine Rich Repeat Protein	Protein Coding	41	GC01P203475	2.349858	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRELP
GAL	Galanin And GMAP Prepropeptide	Protein Coding	43	GC11P070219	2.349816	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GAL
IGFBP5	Insulin Like Growth Factor Binding Protein 5	Protein Coding	41	GC02M216672	2.349499	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGFBP5
FNDC5	Fibronectin Type III Domain Containing 5	Protein Coding	33	GC01M033185	2.348042	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FNDC5
MIR199A1	MicroRNA 199a-1	RNA Gene	20	GC19M010817	2.348042	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR199A1
IFI44L	Interferon Induced Protein 44 Like	Protein Coding	33	GC01P078619	2.345003	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFI44L
ABHD16A	Abhydrolase Domain Containing 16A, Phospholipase	Protein Coding	34	GC06M065964	2.341229	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABHD16A
CYBB	Cytochrome B-245 Beta Chain	Protein Coding	46	GC0XP037780	2.334452	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYBB
EXOSC10	Exosome Component 10	Protein Coding	37	GC01M011067	2.327669	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EXOSC10
G3BP1	G3BP Stress Granule Assembly Factor 1	Protein Coding	39	GC05P151771	2.326586	https://www.genecards.org/cgi-bin/carddisp.pl?gene=G3BP1
MYDGF	Myeloid Derived Growth Factor	Protein Coding	32	GC19M004641	2.326419	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MYDGF
PLA2G7	Phospholipase A2 Group VII	Protein Coding	48	GC06M046704	2.323493	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLA2G7

MDK	Midkine	Protein Coding	42	GC11P046380	2.320974	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MDK
DNAH8	Dynein Axonemal Heavy Chain 8	Protein Coding	37	GC06P083874	2.320009	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNAH8
DHX9	DExH-Box Helicase 9	Protein Coding	40	GC01P182839	2.319866	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DHX9
AREG	Amphiregulin	Protein Coding	41	GC04P074445	2.319048	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AREG
PTH1R	Parathyroid Hormone 1 Receptor	Protein Coding	47	GC03P046877	2.318319	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTH1R
EPHA2	EPH Receptor A2	Protein Coding	50	GC01M016124	2.317036	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EPHA2
DSPP	Dentin Sialophosphoprotein	Protein Coding	38	GC04P087608	2.315514	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DSPP
FBXL19	F-Box And Leucine Rich Repeat Protein 19	Protein Coding	34	GC16P041107	2.315316	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FBXL19
CYP11B2	Cytochrome P450 Family 11 Subfamily B Member 2	Protein Coding	46	GC08M142910	2.315202	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP11B2
IFN1@	Interferon, Type 1, Cluster	Gene Cluster	4	GC09U990039	2.312373	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFN1%40
XK	X-Linked Kx Blood Group	Protein Coding	40	GC0XP037685	2.310287	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XK
RPS6KA4	Ribosomal Protein S6 Kinase A4	Protein Coding	45	GC11P064372	2.30478	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS6KA4
RPS6KA5	Ribosomal Protein S6 Kinase A5	Protein Coding	44	GC14M090847	2.30478	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS6KA5

PIBF1	Progesterone Immunomodulatory Binding Factor 1	Protein Coding	40	GC13P072782	2.304326	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIBF1
BRD4	Bromodomain Containing 4	Protein Coding	46	GC19M015236	2.29945	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BRD4
PMEL	Premelanosome Protein	Protein Coding	39	GC12M055954	2.299239	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PMEL
RAF1	Raf-1 Proto-Oncogene, Serine/Threonine Kinase	Protein Coding	52	GC03M012583	2.297447	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAF1
DHCR7	7-Dehydrocholesterol Reductase	Protein Coding	45	GC11M071428	2.296626	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DHCR7
NCAM1	Neural Cell Adhesion Molecule 1	Protein Coding	45	GC11P112961	2.296626	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCAM1
CDH13	Cadherin 13	Protein Coding	43	GC16P082626	2.296626	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDH13
MIR125B1	MicroRNA 125b-1	RNA Gene	21	GC11M122100	2.296583	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR125B1
PLA2G3	Phospholipase A2 Group III	Protein Coding	37	GC22M057204	2.296221	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLA2G3
P2RX4	Purinergic Receptor P2X 4	Protein Coding	44	GC12P126222	2.293557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RX4
NTF3	Neurotrophin 3	Protein Coding	41	GC12P021021	2.293143	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NTF3
RAD23A	RAD23 Homolog A, Nucleotide Excision Repair Protein	Protein Coding	41	GC19P014288	2.291109	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAD23A
IHH	Indian Hedgehog Signaling Molecule	Protein Coding	45	GC02M219054	2.290858	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IHH
SP1	Sp1 Transcription Factor	Protein Coding	44	GC12P053380	2.289666	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=SP1
MIR671	MicroRNA 671	RNA Gene	18	GC07P151238	2.284522	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR671
GABPA	GA Binding Protein Transcription Factor Subunit Alpha	Protein Coding	40	GC21P025734	2.281812	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GABPA
AARS1	Alanyl-TRNA Synthetase 1	Protein Coding	36	GC16M070726	2.280768	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AARS1
RBM5	RNA Binding Motif Protein 5	Protein Coding	38	GC03P050340	2.280638	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RBM5
ERBB2	Erb-B2 Receptor Tyrosine Kinase 2	Protein Coding	52	GC17P039687	2.276579	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ERBB2
CCR9	C-C Motif Chemokine Receptor 9	Protein Coding	39	GC03P046762	2.276031	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCR9
NR1H2	Nuclear Receptor Subfamily 1 Group H Member 2	Protein Coding	45	GC19P050329	2.275399	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR1H2
FTO	FTO Alpha-Ketoglutarate Dependent Dioxygenase	Protein Coding	44	GC16P053832	2.27202	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FTO
HSP90A A1	Heat Shock Protein 90 Alpha Family Class A Member 1	Protein Coding	46	GC14M102080	2.271402	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSP90AA1
FCRLA	Fc Receptor Like A	Protein Coding	36	GC01P161712	2.270361	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCRLA
HLA-DOB	Major Histocompatibility Complex, Class II, DO Beta	Protein Coding	39	GC06M066021	2.267646	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DOB
FLT3	Fms Related Receptor Tyrosine Kinase 3	Protein Coding	50	GC13M028003	2.267602	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FLT3
ORM1	Orosomucoid 1	Protein Coding	40	GC09P114323	2.265629	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ORM1

CD24	CD24 Molecule	Protein Coding	34	GC06M106969	2.262617	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD24
MIR23A	MicroRNA 23a	RNA Gene	21	GC19M014485	2.262336	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR23A
HSD11B1	Hydroxysteroid 11-Beta Dehydrogenase 1	Protein Coding	49	GC01P209686	2.259933	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSD11B1
LOX	Lysyl Oxidase	Protein Coding	45	GC05M122063	2.259019	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOX
XRCC4	X-Ray Repair Cross Complementing 4	Protein Coding	42	GC05P083077	2.258352	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XRCC4
C9orf72	C9orf72-SMCR8 Complex Subunit	Protein Coding	40	GC09M028335	2.254973	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C9orf72
CCL16	C-C Motif Chemokine Ligand 16	Protein Coding	36	GC17M035976	2.254636	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL16
CLEC4E	C-Type Lectin Domain Family 4 Member E	Protein Coding	36	GC12M008535	2.252613	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLEC4E
HSPB8	Heat Shock Protein Family B (Small) Member 8	Protein Coding	43	GC12P119173	2.251756	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPB8
STATH	Statherin	Protein Coding	32	GC04P069995	2.251756	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STATH
SDHB	Succinate Dehydrogenase Complex Iron Sulfur Subunit B	Protein Coding	46	GC01M018063	2.249802	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SDHB
FURIN	Furin, Paired Basic Amino Acid Cleaving Enzyme	Protein Coding	44	GC15P090868	2.248796	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FURIN
XRCC6	X-Ray Repair Cross Complementing 6	Protein Coding	43	GC22P041622	2.248682	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XRCC6
CD200	CD200 Molecule	Protein Coding	39	GC03P112332	2.247104	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=CD200
CRYGD	Crystallin Gamma D	Protein Coding	40	GC02M208121	2.243869	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CRYGD
SMAD7	SMAD Family Member 7	Protein Coding	42	GC18M048919	2.243227	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMAD7
KCNQ1	Potassium Voltage-Gated Channel Subfamily Q Member 1	Protein Coding	48	GC11P002444	2.241961	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KCNQ1
MSMB	Microseminoprotein Beta	Protein Coding	40	GC10M046033	2.241961	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MSMB
F2R	Coagulation Factor II Thrombin Receptor	Protein Coding	45	GC05P076716	2.241956	https://www.genecards.org/cgi-bin/carddisp.pl?gene=F2R
GCG	Glucagon	Protein Coding	40	GC02M162142	2.241231	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GCG
ID1	Inhibitor Of DNA Binding 1, HLH Protein	Protein Coding	40	GC20P031605	2.23832	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ID1
XCR1	X-C Motif Chemokine Receptor 1	Protein Coding	36	GC03M046016	2.236719	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XCR1
EFNB1	Ephrin B1	Protein Coding	44	GC0XP068828	2.236017	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EFNB1
EPHB4	EPH Receptor B4	Protein Coding	50	GC07M101954	2.235579	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EPHB4
SPHK2	Sphingosine Kinase 2	Protein Coding	42	GC19P048619	2.233071	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPHK2
RPS19	Ribosomal Protein S19	Protein Coding	47	GC19P066764	2.23246	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS19
TMPRSS6	Transmembrane Serine Protease 6	Protein Coding	44	GC22M057362	2.231264	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMPRSS6

PTN	Pleiotrophin	Protein Coding	41	GC07M137227	2.230502	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTN
IL17C	Interleukin 17C	Protein Coding	36	GC16P088638	2.229349	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL17C
AMH	Anti-Mullerian Hormone	Protein Coding	43	GC19P002938	2.229279	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AMH
PNOC	Prepronociceptin	Protein Coding	37	GC08P028316	2.22883	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PNOC
HEXB	Hexosaminidase Subunit Beta	Protein Coding	47	GC05P074640	2.227483	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HEXB
NOTCH2	Notch Receptor 2	Protein Coding	48	GC01M119911	2.224988	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOTCH2
PIK3R2	Phosphoinositide-3-Kinase Regulatory Subunit 2	Protein Coding	48	GC19P018153	2.224885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIK3R2
GNB3	G Protein Subunit Beta 3	Protein Coding	45	GC12P006839	2.224885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GNB3
SOCS2	Suppressor Of Cytokine Signaling 2	Protein Coding	42	GC12P093569	2.224885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOCS2
APOA4	Apolipoprotein A4	Protein Coding	40	GC11M116820	2.224885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APOA4
FGF21	Fibroblast Growth Factor 21	Protein Coding	37	GC19P067053	2.224885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGF21
MST1R	Macrophage Stimulating 1 Receptor	Protein Coding	47	GC03M051216	2.224122	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MST1R
EPHA1	EPH Receptor A1	Protein Coding	45	GC07M143390	2.224122	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EPHA1
THY1	Thy-1 Cell Surface Antigen	Protein Coding	41	GC11M119417	2.220407	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=THY1
HSPA1B	Heat Shock Protein Family A (Hsp70) Member 1B	Protein Coding	39	GC06P083712	2.2197	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPA1B
NR2F2	Nuclear Receptor Subfamily 2 Group F Member 2	Protein Coding	48	GC15P096325	2.218796	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR2F2
SMPD1	Sphingomyelin Phosphodiesterase 1	Protein Coding	47	GC11P006390	2.215846	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMPD1
CBL	Cbl Proto-Oncogene	Protein Coding	49	GC11P119206	2.212377	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CBL
GPBAR1	G Protein-Coupled Bile Acid Receptor 1	Protein Coding	39	GC02P218259	2.208249	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPBAR1
CCND1	Cyclin D1	Protein Coding	49	GC11P069641	2.206554	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCND1
FECH	Ferrochelatase	Protein Coding	45	GC18M057544	2.202175	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FECH
CRYAA	Crystallin Alpha A	Protein Coding	44	GC21P043169	2.202175	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CRYAA
PON2	Paraoxonase 2	Protein Coding	43	GC07M095404	2.202175	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PON2
CPVL	Carboxypeptidase Vitellogenic Like	Protein Coding	40	GC07M028995	2.202175	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CPVL
SERPINB2	Serpin Family B Member 2	Protein Coding	42	GC18P063871	2.199308	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPINB2
NQO1	NAD(P)H Quinone Dehydrogenase 1	Protein Coding	46	GC16M069706	2.196864	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NQO1
CA3	Carbonic Anhydrase 3	Protein Coding	41	GC08P085373	2.194562	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CA3

LCAT	Lecithin-Cholesterol Acyltransferase	Protein Coding	46	GC16M067939	2.191862	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LCAT
TNNI3	Troponin I3, Cardiac Type	Protein Coding	47	GC19M055151	2.191213	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNNI3
CDH6	Cadherin 6	Protein Coding	41	GC05P031193	2.190388	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDH6
SENPI	SUMO Specific Peptidase 1	Protein Coding	42	GC12M048042	2.190304	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SENPI
MLN	Motilin	Protein Coding	34	GC06M033794	2.186746	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MLN
PLA2G6	Phospholipase A2 Group VI	Protein Coding	46	GC22M058815	2.1863	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLA2G6
MFAP4	Microfibril Associated Protein 4	Protein Coding	39	GC17M019383	2.18326	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MFAP4
TBX5	T-Box Transcription Factor 5	Protein Coding	45	GC12M114353	2.182817	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TBX5
BSN	Bassoon Presynaptic Cytomatrix Protein	Protein Coding	36	GC03P049554	2.174019	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BSN
PAX5	Paired Box 5	Protein Coding	45	GC09M036834	2.172556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PAX5
KNG1	Kininogen 1	Protein Coding	45	GC03P186717	2.170991	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KNG1
KIR2DS4	Killer Cell Immunoglobulin Like Receptor, Two Ig Domains And Short Cytoplasmic Tail 4	Protein Coding	32	GC19P067385	2.170483	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIR2DS4
POU2AF1	POU Class 2 Homeobox Associating Factor 1	Protein Coding	37	GC11M111352	2.169985	https://www.genecards.org/cgi-bin/carddisp.pl?gene=POU2AF1

CYP7B1	Cytochrome P450 Family 7 Subfamily B Member 1	Protein Coding	45	GC08M064587	2.169137	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP7B1
TIMMDC1	Translocase Of Inner Mitochondrial Membrane Domain Containing 1	Protein Coding	36	GC03P119498	2.166089	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TIMMDC1
IRS1	Insulin Receptor Substrate 1	Protein Coding	45	GC02M226731	2.165745	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRS1
ITGA9	Integrin Subunit Alpha 9	Protein Coding	42	GC03P037468	2.165147	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGA9
CSNK2B	Casein Kinase 2 Beta	Protein Coding	46	GC06P083698	2.163656	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSNK2B
LY6G5C	Lymphocyte Antigen 6 Family Member G5C	Protein Coding	26	GC06M031676	2.163656	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LY6G5C
AOC3	Amine Oxidase Copper Containing 3	Protein Coding	44	GC17P042851	2.160178	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AOC3
HSPE1	Heat Shock Protein Family E (Hsp10) Member 1	Protein Coding	41	GC02P197501	2.159625	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPE1
SCARB1	Scavenger Receptor Class B Member 1	Protein Coding	45	GC12M124776	2.158652	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SCARB1
SLC35D1	Solute Carrier Family 35 Member D1	Protein Coding	40	GC01M066999	2.158569	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC35D1
LIFR	LIF Receptor Subunit Alpha	Protein Coding	45	GC05M038475	2.15737	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LIFR
MC3R	Melanocortin 3 Receptor	Protein Coding	41	GC20P056248	2.156837	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MC3R
TTN	Titin	Protein Coding	45	GC02M178525	2.156324	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TTN

MIR98	MicroRNA 98	RNA Gene	19	GC0XM053636	2.155567	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR98
IL36B	Interleukin 36 Beta	Protein Coding	33	GC02M113022	2.155266	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL36B
SERPINA6	Serpin Family A Member 6	Protein Coding	44	GC14M101180	2.1537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPINA6
FLNA	Filamin A	Protein Coding	46	GC0XM154348	2.15173	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FLNA
MIR9-1	MicroRNA 9-1	RNA Gene	21	GC01M156420	2.150877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR9-1
IL2RG	Interleukin 2 Receptor Subunit Gamma	Protein Coding	45	GC0XM071108	2.150013	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL2RG
RNASE2	Ribonuclease A Family Member 2	Protein Coding	39	GC14P032471	2.146551	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNASE2
PLD1	Phospholipase D1	Protein Coding	47	GC03M171600	2.145625	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLD1
SNRPD3	Small Nuclear Ribonucleoprotein D3 Polypeptide	Protein Coding	35	GC22P024555	2.145243	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNRPD3
GP6	Glycoprotein VI Platelet	Protein Coding	44	GC19M055013	2.143559	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GP6
GAB2	GRB2 Associated Binding Protein 2	Protein Coding	42	GC11M078215	2.143083	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GAB2
ITGB5	Integrin Subunit Beta 5	Protein Coding	45	GC03M124761	2.142881	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGB5
PLA2G1B	Phospholipase A2 Group IB	Protein Coding	43	GC12M120322	2.142442	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLA2G1B
IRGM	Immunity Related GTPase M	Protein Coding	35	GC05P150846	2.142442	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRGM

						bin/carddisp.pl?gene=IRGM
SFTPA1	Surfactant Protein A1	Protein Coding	42	GC10P093438	2.142258	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SFTPA1
SFTPC	Surfactant Protein C	Protein Coding	41	GC08P022156	2.142258	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SFTPC
CTF1	Cardiotrophin 1	Protein Coding	37	GC16P041104	2.137983	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTF1
TNFRSF10D	TNF Receptor Superfamily Member 10d	Protein Coding	40	GC08M023135	2.133998	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF10D
ASIC1	Acid Sensing Ion Channel Subunit 1	Protein Coding	42	GC12P050057	2.133133	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ASIC1
CAPN2	Calpain 2	Protein Coding	45	GC01P223701	2.13271	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAPN2
HOXD9	Homeobox D9	Protein Coding	40	GC02P176122	2.128438	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HOXD9
MKNK1	MAPK Interacting Serine/Threonine Kinase 1	Protein Coding	45	GC01M046557	2.127274	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MKNK1
TP63	Tumor Protein P63	Protein Coding	46	GC03P189598	2.124065	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TP63
PSMA6	Proteasome 20S Subunit Alpha 6	Protein Coding	44	GC14P035278	2.119048	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMA6
EPRS1	Glutamyl-Prolyl-TRNA Synthetase 1	Protein Coding	35	GC01M219969	2.118319	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EPRS1
PRKN	Parkin RBR E3 Ubiquitin Protein Ligase	Protein Coding	37	GC06M161348	2.1134	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKN
PRKAA1	Protein Kinase AMP-Activated Catalytic Subunit Alpha 1	Protein Coding	45	GC05M040759	2.113122	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKAA1

REL-DT	REL Divergent Transcript	RNA Gene	13	GC02M060822	2.112596	https://www.genecards.org/cgi-bin/carddisp.pl?gene=REL-DT
RPL21P33	Ribosomal Protein L21 Pseudogene 33	Pseudo gene	8	GC02P060852	2.112596	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL21P33
HEXD	Hexosaminidase D	Protein Coding	25	GC17P082419	2.111394	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HEXD
PLEK	Pleckstrin	Protein Coding	39	GC02P068365	2.109304	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLEK
PSME3	Proteasome Activator Subunit 3	Protein Coding	40	GC17P042824	2.107673	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSME3
HNRNPD L	Heterogeneous Nuclear Ribonucleoprotein D Like	Protein Coding	40	GC04M082422	2.105206	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HNRNPDL
SEMA4A	Semaphorin 4A	Protein Coding	43	GC01P156147	2.105062	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEMA4A
PROK2	Prokineticin 2	Protein Coding	42	GC03M071771	2.10484	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PROK2
F8	Coagulation Factor VIII	Protein Coding	45	GC0X M154835	2.101871	https://www.genecards.org/cgi-bin/carddisp.pl?gene=F8
SETD2	SET Domain Containing 2, Histone Lysine Methyltransferase	Protein Coding	45	GC03M047033	2.099041	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SETD2
AMBP	Alpha-1-Microglobulin/Bikunin Precursor	Protein Coding	42	GC09M114060	2.097699	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AMBP
MIR15A	MicroRNA 15a	RNA Gene	17	GC13M050049	2.094632	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR15A
KIR2DS3	Killer Cell Immunoglobulin Like Receptor, Two Ig Domains And Short Cytoplasmic Tail 3	Protein Coding	24	GC19M E00037	2.093691	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIR2DS3

KIR3DS1	Killer Cell Immunoglobulin Like Receptor, Three Ig Domains And Short Cytoplasmic Tail 1	Protein Coding	24	GC19M R00058	2.093 691	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIR3DS1
SEC61A1	SEC61 Translocon Subunit Alpha 1	Protein Coding	41	GC03P 128051	2.091 11	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEC61A1
HLA-DRB6	Major Histocompatibility Complex, Class II, DR Beta 6 (Pseudogene)	Pseudo gene	16	GC06M 066005	2.090 073	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DRB6
HLA-DQB1-AS1	HLA-DQB1 Antisense RNA 1	RNA Gene	13	GC06P 032659	2.090 073	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DQB1-AS1
FBL	Fibrillarin	Protein Coding	41	GC19M 039834	2.081 807	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FBL
ILF3	Interleukin Enhancer Binding Factor 3	Protein Coding	38	GC19P 010655	2.080 433	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ILF3
HSPB1	Heat Shock Protein Family B (Small) Member 1	Protein Coding	49	GC07P 076302	2.078 754	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPB1
ACKR1	Atypical Chemokine Receptor 1 (Duffy Blood Group)	Protein Coding	36	GC01P 159203	2.074 645	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACKR1
IFNAR1	Interferon Alpha And Beta Receptor Subunit 1	Protein Coding	44	GC21P 033324	2.073 772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFNAR1
CD9	CD9 Molecule	Protein Coding	41	GC12P 021026	2.073 496	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD9
ANGPTL2	Angiopoietin Like 2	Protein Coding	37	GC09M 127087	2.072 181	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANGPTL2
ABCG5	ATP Binding Cassette Subfamily G Member 5	Protein Coding	44	GC02M 043806	2.070 686	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCG5
DSG1	Desmoglein 1	Protein Coding	42	GC18P 031318	2.069 865	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DSG1

KRAS	KRAS Proto-Oncogene, GTPase	Protein Coding	49	GC12M025204	2.069338	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KRAS
MRPL28	Mitochondrial Ribosomal Protein L28	Protein Coding	36	GC16M000366	2.068802	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MRPL28
CYP3A5	Cytochrome P450 Family 3 Subfamily A Member 5	Protein Coding	45	GC07M099648	2.068704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP3A5
LAT	Linker For Activation Of T Cells	Protein Coding	44	GC16P040930	2.068704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LAT
PTPN13	Protein Tyrosine Phosphatase Non-Receptor Type 13	Protein Coding	42	GC04P086594	2.068704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPN13
ACD	ACD Shelterin Complex Subunit And Telomerase Recruitment Factor	Protein Coding	41	GC16M067658	2.068704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACD
SERPINA7	Serpin Family A Member 7	Protein Coding	40	GC0XM106032	2.068704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPINA7
VIPR2	Vasoactive Intestinal Peptide Receptor 2	Protein Coding	42	GC07M159028	2.067124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VIPR2
CCN4	Cellular Communication Network Factor 4	Protein Coding	30	GC08P133192	2.066181	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCN4
ADAMTS13	ADAM Metallopeptidase With Thrombospondin Type 1 Motif 13	Protein Coding	47	GC09P133414	2.062452	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAMTS13
DSG3	Desmoglein 3	Protein Coding	40	GC18P031447	2.055178	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DSG3
CD6	CD6 Molecule	Protein Coding	41	GC11P060971	2.053894	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD6
PADI3	Peptidyl Arginine Deiminase 3	Protein Coding	40	GC01P017249	2.053202	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PADI3
MIR155HG	MIR155 Host Gene	RNA Gene	22	GC21P025589	2.052902	https://www.genecards.org/cgi-

						bin/cddisp.pl?gene=MIR155HG
DNMT3B	DNA Methyltransferase 3 Beta	Protein Coding	49	GC20P032762	2.052171	https://www.genecards.org/cgi-bin/cddisp.pl?gene=DNMT3B
TFF2	Trefoil Factor 2	Protein Coding	40	GC21M042346	2.048805	https://www.genecards.org/cgi-bin/cddisp.pl?gene=TFF2
PPARGC1B	PPARG Coactivator 1 Beta	Protein Coding	34	GC05P149730	2.048602	https://www.genecards.org/cgi-bin/cddisp.pl?gene=PPARGC1B
F2RL2	Coagulation Factor II Thrombin Receptor Like 2	Protein Coding	40	GC05M076615	2.047254	https://www.genecards.org/cgi-bin/cddisp.pl?gene=F2RL2
SLC25A28	Solute Carrier Family 25 Member 28	Protein Coding	37	GC10M099610	2.045891	https://www.genecards.org/cgi-bin/cddisp.pl?gene=SLC25A28
CXCL6	C-X-C Motif Chemokine Ligand 6	Protein Coding	38	GC04P073837	2.044777	https://www.genecards.org/cgi-bin/cddisp.pl?gene=CXCL6
PGLYRP1	Peptidoglycan Recognition Protein 1	Protein Coding	40	GC19M065951	2.043633	https://www.genecards.org/cgi-bin/cddisp.pl?gene=PGLYRP1
RUNX3	RUNX Family Transcription Factor 3	Protein Coding	42	GC01M024899	2.04232	https://www.genecards.org/cgi-bin/cddisp.pl?gene=RUNX3
ITCH	Itchy E3 Ubiquitin Protein Ligase	Protein Coding	44	GC20P034363	2.042234	https://www.genecards.org/cgi-bin/cddisp.pl?gene=ITCH
SEMA7A	Semaphorin 7A (John Milton Hagen Blood Group)	Protein Coding	42	GC15M074409	2.038297	https://www.genecards.org/cgi-bin/cddisp.pl?gene=SEMA7A
SIGIRR	Single Ig And TIR Domain Containing	Protein Coding	39	GC11M003183	2.038297	https://www.genecards.org/cgi-bin/cddisp.pl?gene=SIGIRR
BIRC3	Baculoviral IAP Repeat Containing 3	Protein Coding	45	GC11P102317	2.033995	https://www.genecards.org/cgi-bin/cddisp.pl?gene=BIRC3
ING4	Inhibitor Of Growth Family Member 4	Protein Coding	36	GC12M006650	2.033898	https://www.genecards.org/cgi-bin/cddisp.pl?gene=ING4

LDLR	Low Density Lipoprotein Receptor	Protein Coding	49	GC19P011091	2.031577	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LDLR
EPAS1	Endothelial PAS Domain Protein 1	Protein Coding	48	GC02P046293	2.031577	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EPAS1
CD3G	CD3 Gamma Subunit Of T-Cell Receptor Complex	Protein Coding	45	GC11P118344	2.031577	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD3G
AGFG1	ArfGAP With FG Repeats 1	Protein Coding	39	GC02P227473	2.031577	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AGFG1
MIR650	MicroRNA 650	RNA Gene	13	GC22P022822	2.031577	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR650
IGLV@	Immunoglobulin Lambda Variable Cluster	Gene Cluster	8	GC22U990033	2.031577	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGLV%40
FGFR4	Fibroblast Growth Factor Receptor 4	Protein Coding	49	GC05P177086	2.031178	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGFR4
LZTR1	Leucine Zipper Like Transcription Regulator 1	Protein Coding	42	GC22P035893	2.030736	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LZTR1
TOP3B	DNA Topoisomerase III Beta	Protein Coding	40	GC22M021957	2.030736	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TOP3B
THAP7	THAP Domain Containing 7	Protein Coding	32	GC22M020999	2.030736	https://www.genecards.org/cgi-bin/carddisp.pl?gene=THAP7
CAPZB	Capping Actin Protein Of Muscle Z-Line Subunit Beta	Protein Coding	40	GC01M019339	2.029269	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAPZB
PTGER1	Prostaglandin E Receptor 1	Protein Coding	40	GC19M014515	2.028983	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTGER1
MAP3K3	Mitogen-Activated Protein Kinase Kinase Kinase 3	Protein Coding	45	GC17P063622	2.027966	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP3K3
SH2D2A	SH2 Domain Containing 2A	Protein Coding	38	GC01M156917	2.026004	https://www.genecards.org/cgi-

						bin/caddisp.pl?gene=SH2D2A
MAPKAP1	MAPK Associated Protein 1	Protein Coding	41	GC09M125437	2.017874	https://www.genecards.org/cgi-bin/caddisp.pl?gene=MAPKAP1
NEDD9	Neural Precursor Cell Expressed, Developmentally Down-Regulated 9	Protein Coding	41	GC06M011183	2.017874	https://www.genecards.org/cgi-bin/caddisp.pl?gene=NEDD9
CAMLG	Calcium Modulating Ligand	Protein Coding	40	GC05P134738	2.017698	https://www.genecards.org/cgi-bin/caddisp.pl?gene=CAMLG
CNMD	Chondromodulin	Protein Coding	29	GC13M052704	2.014921	https://www.genecards.org/cgi-bin/caddisp.pl?gene=CNMD
SOX5	SRY-Box Transcription Factor 5	Protein Coding	44	GC12M023529	2.014562	https://www.genecards.org/cgi-bin/caddisp.pl?gene=SOX5
TPI1	Triosephosphate Isomerase 1	Protein Coding	45	GC12P006867	2.010789	https://www.genecards.org/cgi-bin/caddisp.pl?gene=TPI1
BRCA2	BRCA2 DNA Repair Associated	Protein Coding	46	GC13P032315	2.010146	https://www.genecards.org/cgi-bin/caddisp.pl?gene=BRCA2
IGFBP2	Insulin Like Growth Factor Binding Protein 2	Protein Coding	42	GC02P216632	2.007969	https://www.genecards.org/cgi-bin/caddisp.pl?gene=IGFBP2
MYOM2	Myomesin 2	Protein Coding	37	GC08P002045	2.007447	https://www.genecards.org/cgi-bin/caddisp.pl?gene=MYOM2
MCAM	Melanoma Cell Adhesion Molecule	Protein Coding	41	GC11M119308	2.006366	https://www.genecards.org/cgi-bin/caddisp.pl?gene=MCAM
RBP3	Retinol Binding Protein 3	Protein Coding	41	GC10P047348	2.001217	https://www.genecards.org/cgi-bin/caddisp.pl?gene=RBP3
SNRPD1	Small Nuclear Ribonucleoprotein D1 Polypeptide	Protein Coding	37	GC18P021612	1.999572	https://www.genecards.org/cgi-bin/caddisp.pl?gene=SNRPD1
ACTN1	Actinin Alpha 1	Protein Coding	47	GC14M068874	1.999129	https://www.genecards.org/cgi-bin/caddisp.pl?gene=ACTN1

NKX2-3	NK2 Homeobox 3	Protein Coding	38	GC10P099532	1.996514	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NKX2-3
HRAS	HRas Proto-Oncogene, GTPase	Protein Coding	50	GC11M003189	1.995996	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HRAS
MIR29A	MicroRNA 29a	RNA Gene	22	GC07M130876	1.995667	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR29A
GRB2	Growth Factor Receptor Bound Protein 2	Protein Coding	45	GC17M075318	1.9938	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GRB2
THBS2	Thrombospondin 2	Protein Coding	44	GC06M169215	1.993781	https://www.genecards.org/cgi-bin/carddisp.pl?gene=THBS2
MIR590	MicroRNA 590	RNA Gene	20	GC07P074191	1.993555	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR590
CHD4	Chromodomain Helicase DNA Binding Protein 4	Protein Coding	43	GC12M006570	1.993327	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHD4
MIR106A	MicroRNA 106a	RNA Gene	20	GC0XM134313	1.991832	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR106A
MIR192	MicroRNA 192	RNA Gene	22	GC11M064891	1.989437	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR192
PIK3CA	Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Alpha	Protein Coding	50	GC03P179148	1.987665	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIK3CA
HLA-DQB3	Major Histocompatibility Complex, Class II, DQ Beta 3	Protein Coding	12	GC06M066018	1.986088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DQB3
MTCO3P1	MT-CO3 Pseudogene 1	Pseudo gene	8	GC06M032706	1.986088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTCO3P1
NRXN1	Neurexin 1	Protein Coding	47	GC02M049918	1.984516	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NRXN1
VCL	Vinculin	Protein Coding	45	GC10P073995	1.984516	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VCL

						bin/carddisp.pl?gene=VCL
HEXA	Hexosaminidase Subunit Alpha	Protein Coding	45	GC15M072340	1.984349	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HEXA
PCSK9	Proprotein Convertase Subtilisin/Kexin Type 9	Protein Coding	49	GC01P055039	1.983996	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PCSK9
ETFA	Electron Transfer Flavoprotein Subunit Alpha	Protein Coding	44	GC15M090338	1.983996	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ETFA
HPSE	Heparanase	Protein Coding	43	GC04M083292	1.983996	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HPSE
COPS5	COP9 Signalosome Subunit 5	Protein Coding	41	GC08M067043	1.983996	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COPS5
QKI	QKI, KH Domain Containing RNA Binding	Protein Coding	41	GC06P163414	1.983996	https://www.genecards.org/cgi-bin/carddisp.pl?gene=QKI
MDGA2	MAM Domain Containing Glycosylphosphatidylinositol Anchor 2	Protein Coding	37	GC14M046839	1.983996	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MDGA2
ERV3-1	Endogenous Retrovirus Group 3 Member 1, Envelope	Protein Coding	31	GC07M065766	1.983996	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ERV3-1
MIR449A	MicroRNA 449a	RNA Gene	21	GC05M055171	1.983996	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR449A
MUTYH	MutY DNA Glycosylase	Protein Coding	44	GC01M045329	1.980473	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MUTYH
PIAS3	Protein Inhibitor Of Activated STAT 3	Protein Coding	39	GC01M145848	1.980473	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIAS3
SLC2A3	Solute Carrier Family 2 Member 3	Protein Coding	46	GC12M007919	1.979011	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC2A3
TNFSF9	TNF Superfamily Member 9	Protein Coding	35	GC19P006531	1.97866	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFSF9

MGP	Matrix Gla Protein	Protein Coding	41	GC12M021179	1.978456	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MGP
ZMIZ1	Zinc Finger MIZ-Type Containing 1	Protein Coding	41	GC10P079068	1.975965	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZMIZ1
CD72	CD72 Molecule	Protein Coding	38	GC09M035610	1.972569	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD72
CLEC5A	C-Type Lectin Domain Containing 5A	Protein Coding	34	GC07M141927	1.970131	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLEC5A
SLC29A1	Solute Carrier Family 29 Member 1 (Augustine Blood Group)	Protein Coding	46	GC06P044219	1.968774	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC29A1
MIR497	MicroRNA 497	RNA Gene	18	GC17M007022	1.963809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR497
ARNTL	Aryl Hydrocarbon Receptor Nuclear Translocator Like	Protein Coding	40	GC11P013276	1.963676	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARNTL
ARG1	Arginase 1	Protein Coding	47	GC06P131473	1.963675	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARG1
SIGLEC9	Sialic Acid Binding Ig Like Lectin 9	Protein Coding	36	GC19P067192	1.962502	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SIGLEC9
POLR3B	RNA Polymerase III Subunit B	Protein Coding	42	GC12P106357	1.962202	https://www.genecards.org/cgi-bin/carddisp.pl?gene=POLR3B
RPL36A-HNRNPH2	RPL36A-HNRNPH2 Readthrough	Protein Coding	17	GC0XP101390	1.960071	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL36A-HNRNPH2
IL11RA	Interleukin 11 Receptor Subunit Alpha	Protein Coding	44	GC09P047112	1.958033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL11RA
PPIL2	Peptidylprolyl Isomerase Like 2	Protein Coding	39	GC22P038720	1.957664	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPIL2
MIR31	MicroRNA 31	RNA Gene	20	GC09M021761	1.957645	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR31

						bin/carddisp.pl?gene=MIR31
GIMAP5	GTPase, IMAP Family Member 5	Protein Coding	38	GC07P150722	1.95636	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GIMAP5
EFNA5	Ephrin A5	Protein Coding	42	GC05M107376	1.956268	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EFNA5
SOCS6	Suppressor Of Cytokine Signaling 6	Protein Coding	40	GC18P070288	1.956268	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOCS6
LINC00638	Long Intergenic Non-Protein Coding RNA 638	RNA Gene	14	GC14P109735	1.956268	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC00638
ALDOA	Aldolase, Fructose-Bisphosphate A	Protein Coding	46	GC16P030064	1.955285	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALDOA
CASP4	Caspase 4	Protein Coding	45	GC11M104942	1.955285	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CASP4
NR1H3	Nuclear Receptor Subfamily 1 Group H Member 3	Protein Coding	45	GC11P047248	1.955285	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR1H3
MDM4	MDM4 Regulator Of P53	Protein Coding	43	GC01P204516	1.955285	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MDM4
DAXX	Death Domain Associated Protein	Protein Coding	41	GC06M033318	1.955285	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DAXX
C1QTNF6	C1q And TNF Related 6	Protein Coding	37	GC22M037180	1.950598	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C1QTNF6
JUNB	JunB Proto-Oncogene, AP-1 Transcription Factor Subunit	Protein Coding	40	GC19P012791	1.947224	https://www.genecards.org/cgi-bin/carddisp.pl?gene=JUNB
BID	BH3 Interacting Domain Death Agonist	Protein Coding	42	GC22M017734	1.946494	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BID
CD52	CD52 Molecule	Protein Coding	37	GC01P026317	1.944578	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD52

NTRK2	Neurotrophic Receptor Tyrosine Kinase 2	Protein Coding	51	GC09P084668	1.94275	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NTRK2
METAP2	Methionyl Aminopeptidase 2	Protein Coding	44	GC12P095473	1.942644	https://www.genecards.org/cgi-bin/carddisp.pl?gene=METAP2
HRH1	Histamine Receptor H1	Protein Coding	44	GC03P012473	1.937509	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HRH1
VASH1	Vasohibin 1	Protein Coding	36	GC14P076761	1.929318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VASH1
PAH	Phenylalanine Hydroxylase	Protein Coding	46	GC12M102836	1.928018	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PAH
SNRPN	Small Nuclear Ribonucleoprotein Polypeptide N	Protein Coding	42	GC15P024823	1.928018	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNRPN
PLK1	Polo Like Kinase 1	Protein Coding	48	GC16P024283	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLK1
HDAC3	Histone Deacetylase 3	Protein Coding	47	GC05M141583	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HDAC3
EIF2S3	Eukaryotic Translation Initiation Factor 2 Subunit Gamma	Protein Coding	44	GC0XP024054	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EIF2S3
NTN1	Netrin 1	Protein Coding	44	GC17P011249	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NTN1
HIPK2	Homeodomain Interacting Protein Kinase 2	Protein Coding	43	GC07M139561	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HIPK2
PSMA4	Proteasome 20S Subunit Alpha 4	Protein Coding	42	GC15P078540	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMA4
SNAI2	Snail Family Transcriptional Repressor 2	Protein Coding	42	GC08M048917	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNAI2
MYO3A	Myosin IIIA	Protein Coding	41	GC10P025934	1.927557	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=MYO3A
S100A11	S100 Calcium Binding Protein A11	Protein Coding	41	GC01M152032	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=S100A11
TNFAIP1	TNF Alpha Induced Protein 1	Protein Coding	41	GC17P028335	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFAIP1
AGXT2	Alanine--Glyoxylate Aminotransferase 2	Protein Coding	40	GC05M034998	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AGXT2
CD109	CD109 Molecule	Protein Coding	40	GC06P084244	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD109
EXOC5	Exocyst Complex Component 5	Protein Coding	40	GC14M057200	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EXOC5
IL13RA1	Interleukin 13 Receptor Subunit Alpha 1	Protein Coding	40	GC0XP118727	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL13RA1
SLC6A11	Solute Carrier Family 6 Member 11	Protein Coding	40	GC03P012471	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC6A11
UNC5B	Unc-5 Netrin Receptor B	Protein Coding	39	GC10P071212	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UNC5B
CD99	CD99 Molecule (Xg Blood Group)	Protein Coding	38	GC0XP002691	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD99
EXOC4	Exocyst Complex Component 4	Protein Coding	38	GC07P133253	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EXOC4
GSTM4	Glutathione S-Transferase Mu 4	Protein Coding	38	GC01P109657	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GSTM4
LMO4	LIM Domain Only 4	Protein Coding	38	GC01P087329	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LMO4
NHLH2	Nescient Helix-Loop-Helix 2	Protein Coding	38	GC01M115836	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NHLH2

NKIRAS2	NFKB Inhibitor Interacting Ras Like 2	Protein Coding	38	GC17P042011	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NKIRAS2
PPP1R9A	Protein Phosphatase 1 Regulatory Subunit 9A	Protein Coding	38	GC07P094907	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPP1R9A
RCHY1	Ring Finger And CHY Zinc Finger Domain Containing 1	Protein Coding	38	GC04M075479	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RCHY1
RIT2	Ras Like Without CAAX 2	Protein Coding	38	GC18M042743	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RIT2
CEP72	Centrosomal Protein 72	Protein Coding	37	GC05P000612	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEP72
GBP6	Guanylate Binding Protein Family Member 6	Protein Coding	37	GC01P089363	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GBP6
IFNK	Interferon Kappa	Protein Coding	37	GC09P027514	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFNK
SPSB1	SplA/Ryanodine Receptor Domain And SOCS Box Containing 1	Protein Coding	37	GC01P009292	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPSB1
TNIP2	TNFAIP3 Interacting Protein 2	Protein Coding	37	GC04M002741	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNIP2
ZNF175	Zinc Finger Protein 175	Protein Coding	37	GC19P051571	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF175
CST5	Cystatin D	Protein Coding	36	GC20M023875	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CST5
ENOX1	Ecto-NOX Disulfide-Thiol Exchanger 1	Protein Coding	36	GC13M043213	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENOX1
N4BP1	NEDD4 Binding Protein 1	Protein Coding	36	GC16M048538	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=N4BP1
SPA17	Sperm Autoantigenic Protein 17	Protein Coding	36	GC11P124673	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPA17

						bin/carddisp.pl?gene=SPA17
WFDC1	WAP Four-Disulfide Core Domain 1	Protein Coding	36	GC16P084328	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WFDC1
CCL24	C-C Motif Chemokine Ligand 24	Protein Coding	35	GC07M076814	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL24
LVRN	Laeverin	Protein Coding	35	GC05P115962	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LVRN
AHRR	Aryl Hydrocarbon Receptor Repressor	Protein Coding	34	GC05P000321	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AHRR
ZNF311	Zinc Finger Protein 311	Protein Coding	30	GC06M065802	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF311
CASC2	Cancer Susceptibility 2	RNA Gene	25	GC10P118046	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CASC2
MIR135B	MicroRNA 135b	RNA Gene	21	GC01M205448	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR135B
MIR375	MicroRNA 375	RNA Gene	20	GC02M219001	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR375
PRKG1-AS1	PRKG1 Antisense RNA 1	RNA Gene	15	GC10M052194	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKG1-AS1
SVIL-AS1	SVIL Antisense RNA 1	RNA Gene	14	GC10P029410	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SVIL-AS1
LINC02099	Long Intergenic Non-Protein Coding RNA 2099	RNA Gene	13	GC08P029787	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02099
PGM5P2	Phosphoglucomutase 5 Pseudogene 2	Pseudo gene	11	GC09M041006	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PGM5P2
VPS33B-DT	VPS33B Divergent Transcript	RNA Gene	11	GC15P118202	1.927557	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VPS33B-DT

PRODH	Proline Dehydrogenase 1	Protein Coding	45	GC22M018912	1.926246	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRODH
MASP2	MBL Associated Serine Protease 2	Protein Coding	44	GC01M011026	1.925959	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MASP2
CCN3	Cellular Communication Network Factor 3	Protein Coding	32	GC08P119416	1.925529	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCN3
MKKS	MKKS Centrosomal Shuttling Protein	Protein Coding	38	GC20M010424	1.919375	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MKKS
LY96	Lymphocyte Antigen 96	Protein Coding	41	GC08P073991	1.918517	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LY96
MIR23B	MicroRNA 23b	RNA Gene	21	GC09P095085	1.917947	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR23B
FCGBP	Fc Gamma Binding Protein	Protein Coding	35	GC19M039863	1.916951	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCGBP
NCF1	Neutrophil Cytosolic Factor 1	Protein Coding	45	GC07P075454	1.916344	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCF1
RECK	Reversion Inducing Cysteine Rich Protein With Kazal Motifs	Protein Coding	40	GC09P036036	1.913467	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RECK
BIRC2	Baculoviral IAP Repeat Containing 2	Protein Coding	44	GC11P102347	1.911999	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BIRC2
XRCC5	X-Ray Repair Cross Complementing 5	Protein Coding	42	GC02P216107	1.910465	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XRCC5
FCRL6	Fc Receptor Like 6	Protein Coding	34	GC01P159800	1.90864	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCRL6
AMPH	Amphiphysin	Protein Coding	42	GC07M039077	1.905197	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AMPH
PPL	Periplakin	Protein Coding	40	GC16M007350	1.905197	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPL

						bin/carddisp.pl?gene=PPL
EVPL	Envoplakin	Protein Coding	36	GC17M076004	1.905197	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EVPL
UGT1A1	UDP Glucuronosyltransferase Family 1 Member A1	Protein Coding	48	GC02P233760	1.894173	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UGT1A1
PRLR	Prolactin Receptor	Protein Coding	46	GC05M035048	1.890139	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRLR
TRPV2	Transient Receptor Potential Cation Channel Subfamily V Member 2	Protein Coding	40	GC17P016415	1.88929	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRPV2
PTK2	Protein Tyrosine Kinase 2	Protein Coding	45	GC08M140657	1.888314	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTK2
P2RY11	Purinergic Receptor P2Y11	Protein Coding	42	GC19P010454	1.887588	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RY11
HK2	Hexokinase 2	Protein Coding	45	GC02P074833	1.885739	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HK2
PTPN6	Protein Tyrosine Phosphatase Non-Receptor Type 6	Protein Coding	47	GC12P021091	1.885293	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPN6
VCAN	Versican	Protein Coding	46	GC05P083471	1.88336	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VCAN
NKX2-1	NK2 Homeobox 1	Protein Coding	44	GC14M036516	1.882484	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NKX2-1
MSTN	Myostatin	Protein Coding	45	GC02M190055	1.881957	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MSTN
PCDH15	Protocadherin Related 15	Protein Coding	40	GC10M053802	1.877976	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PCDH15
MIR326	MicroRNA 326	RNA Gene	22	GC11M075335	1.877976	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR326

MIR181A1	MicroRNA 181a-1	RNA Gene	20	GC01M198860	1.877976	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR181A1
IGHV1-69	Immunoglobulin Heavy Variable 1-69	Protein Coding	21	GC14M112841	1.872855	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGHV1-69
CEMIP	Cell Migration Inducing Hyaluronidase 1	Protein Coding	34	GC15P080779	1.870194	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEMIP
MMP26	Matrix Metalloproteinase 26	Protein Coding	34	GC11P004706	1.870128	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMP26
RIPK3	Receptor Interacting Serine/Threonine Kinase 3	Protein Coding	40	GC14M024336	1.869082	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RIPK3
TNNT2	Troponin T2, Cardiac Type	Protein Coding	46	GC01M201359	1.867014	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNNT2
TPH1	Tryptophan Hydroxylase 1	Protein Coding	42	GC11M018040	1.866312	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TPH1
PRG2	Proteoglycan 2, Pro Eosinophil Major Basic Protein	Protein Coding	39	GC11M057386	1.865162	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRG2
KCNN4	Potassium Calcium-Activated Channel Subfamily N Member 4	Protein Coding	47	GC19M065881	1.864761	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KCNN4
BMP3	Bone Morphogenetic Protein 3	Protein Coding	41	GC04P081030	1.864489	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BMP3
LILRA1	Leukocyte Immunoglobulin Like Receptor A1	Protein Coding	36	GC19P054593	1.862653	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LILRA1
DRD4	Dopamine Receptor D4	Protein Coding	45	GC11P001768	1.860697	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DRD4
VDAC1	Voltage Dependent Anion Channel 1	Protein Coding	45	GC05M133975	1.860697	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VDAC1
DSCAM	DS Cell Adhesion Molecule	Protein Coding	41	GC21M040010	1.860697	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DSCAM

						bin/carddisp.pl?gene=DSCAM
EIF2AK3	Eukaryotic Translation Initiation Factor 2 Alpha Kinase 3	Protein Coding	46	GC02M088556	1.857245	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EIF2AK3
ANXA4	Annexin A4	Protein Coding	42	GC02P069644	1.854004	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANXA4
SFRP5	Secreted Frizzled Related Protein 5	Protein Coding	38	GC10M097766	1.854004	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SFRP5
CIP2A	Cellular Inhibitor Of PP2A	Protein Coding	28	GC03M108573	1.854004	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CIP2A
CYSLTR2	Cysteinyl Leukotriene Receptor 2	Protein Coding	45	GC13P048653	1.850214	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYSLTR2
REV3L	REV3 Like, DNA Directed Polymerase Zeta Catalytic Subunit	Protein Coding	44	GC06M111299	1.850214	https://www.genecards.org/cgi-bin/carddisp.pl?gene=REV3L
DDAH2	Dimethylarginine Dimethylaminohydrolase 2	Protein Coding	42	GC06M031727	1.850214	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDAH2
VARs2	Valyl-TRNA Synthetase 2, Mitochondrial	Protein Coding	42	GC06P083680	1.850214	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VARs2
PPT2	Palmitoyl-Protein Thioesterase 2	Protein Coding	38	GC06P032153	1.850214	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPT2
IER3	Immediate Early Response 3	Protein Coding	37	GC06M030743	1.850214	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IER3
LY6G6C	Lymphocyte Antigen 6 Family Member G6C	Protein Coding	34	GC06M065967	1.850214	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LY6G6C
GPX4	Glutathione Peroxidase 4	Protein Coding	45	GC19P001103	1.847338	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPX4
SKIV2L	Ski2 Like RNA Helicase	Protein Coding	42	GC06P083717	1.842764	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SKIV2L

DICER1	Dicer 1, Ribonuclease III	Protein Coding	46	GC14M095086	1.842058	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DICER1
TG	Thyroglobulin	Protein Coding	43	GC08P132866	1.841997	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TG
FZD4	Frizzled Class Receptor 4	Protein Coding	48	GC11M086945	1.839318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FZD4
DEFB103B	Defensin Beta 103B	Protein Coding	28	GC08M007430	1.839135	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DEFB103B
RPS6KB1	Ribosomal Protein S6 Kinase B1	Protein Coding	46	GC17P059893	1.83789	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS6KB1
GFAP	Glial Fibrillary Acidic Protein	Protein Coding	45	GC17M044917	1.83789	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GFAP
MIR138-1	MicroRNA 138-1	RNA Gene	20	GC03P044115	1.83789	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR138-1
FLT3LG	Fms Related Receptor Tyrosine Kinase 3 Ligand	Protein Coding	38	GC19P067098	1.83133	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FLT3LG
PDCD1LG2	Programmed Cell Death 1 Ligand 2	Protein Coding	40	GC09P005510	1.830708	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDCD1LG2
WASF5P	WASP Family Member 5, Pseudogene	Pseudo gene	10	GC06M031287	1.830359	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WASF5P
MIR10A	MicroRNA 10a	RNA Gene	22	GC17M048579	1.829958	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR10A
LRP2	LDL Receptor Related Protein 2	Protein Coding	47	GC02M169127	1.827882	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRP2
KCNMA1	Potassium Calcium-Activated Channel Subfamily M Alpha 1	Protein Coding	48	GC10M076869	1.82622	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KCNMA1
CMA1	Chymase 1	Protein Coding	42	GC14M024506	1.822592	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CMA1

						bin/carddisp.pl?gene=CMA1
RAD50	RAD50 Double Strand Break Repair Protein	Protein Coding	48	GC05P132556	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAD50
AFF4	AF4/FMR2 Family Member 4	Protein Coding	41	GC05M132875	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AFF4
ZFP36L1	ZFP36 Ring Finger Protein Like 1	Protein Coding	41	GC14M068787	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZFP36L1
SRSF5	Serine And Arginine Rich Splicing Factor 5	Protein Coding	38	GC14P069727	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SRSF5
ZFYVE26	Zinc Finger FYVE-Type Containing 26	Protein Coding	38	GC14M067727	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZFYVE26
ZCCHC10	Zinc Finger CCHC-Type Containing 10	Protein Coding	32	GC05M132996	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZCCHC10
SUSD6	Sushi Domain Containing 6	Protein Coding	31	GC14P069611	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SUSD6
IRF1-AS1	IRF1 Antisense RNA 1	RNA Gene	20	GC05P132420	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRF1-AS1
MEIKIN	Meiotic Kinetochore Factor	Protein Coding	20	GC05M131806	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MEIKIN
MIR3936HG	MIR3936 Host Gene	RNA Gene	13	GC05M132312	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR3936HG
LINC01882	Long Intergenic Non-Protein Coding RNA 1882	RNA Gene	11	GC18M024974	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01882
DDX18P1	DEAD-Box Helicase 18 Pseudogene 1	Pseudo gene	9	GC14P069083	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDX18P1
LINC02863	Long Intergenic Non-Protein Coding RNA 2863	RNA Gene	9	GC05M132422	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02863

RNU6-921P	RNA, U6 Small Nuclear 921, Pseudogene	Pseudo gene	9	GC14M 068735	1.821 556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU6-921P
ENSG00000202533	Y RNA	RNA Gene	8	GC05P 132468	1.821 556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000202533
HMGNI3	High Mobility Group Nucleosome Binding Domain 1 Pseudogene 3	Pseudo gene	8	GC14M 068886	1.821 556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HMGNI3
ENSG00000283782	Novel Protein	Protein Coding	7	GC05P 132417	1.821 556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000283782
ENSG00000289583	Novel Transcript	RNA Gene	6	GC14M 068812	1.821 556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000289583
ENSG00000224431	Cytoplasmic Linker Associated Protein 2 (CLASP2) Pseudogene	Pseudo gene	5	GC05P 132199	1.821 556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000224431
ENSG00000289626	Novel Transcript, Sense Intronic To ZFP36L1	RNA Gene	5	GC14M 068804	1.821 556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000289626
HSALNG0102112		RNA Gene	5	GC14P 068766	1.821 556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0102112
HSALNG0102114		RNA Gene	5	GC14P 068787	1.821 556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0102114
HSALNG0102115		RNA Gene	5	GC14P 068789	1.821 556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0102115
HSALNG0102116		RNA Gene	5	GC14P 068790	1.821 556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0102116
lnc-IRF1-1		RNA Gene	5	GC05M 132473	1.821 556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-IRF1-1
lnc-RAD51B-6		RNA Gene	5	GC14P 068795	1.821 556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-RAD51B-6
HSALNG0044846		RNA Gene	4	GC05P 132467	1.821 556	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=HSALNG0044846
LOC107984709	Uncharacterized LOC107984709	RNA Gene	4	GC14M068793	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC107984709
MN298214		RNA Gene	4	GC05P132451	1.821556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MN298214
NPHS1	NPHS1 Adhesion Molecule, Nephlin	Protein Coding	44	GC19M035825	1.821475	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NPHS1
ANXA11	Annexin A11	Protein Coding	43	GC10M080150	1.820759	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANXA11
LAMP3	Lysosomal Associated Membrane Protein 3	Protein Coding	38	GC03M183122	1.819405	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LAMP3
TICAM1	TIR Domain Containing Adaptor Molecule 1	Protein Coding	42	GC19M004815	1.818682	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TICAM1
PLA2G2D	Phospholipase A2 Group IID	Protein Coding	41	GC01M020111	1.818682	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLA2G2D
HABP2	Hyaluronan Binding Protein 2	Protein Coding	45	GC10P113550	1.818093	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HABP2
IVNS1A BP	Influenza Virus NS1A Binding Protein	Protein Coding	40	GC01M185306	1.817918	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IVNS1ABP
GAD2	Glutamate Decarboxylase 2	Protein Coding	42	GC10P026216	1.817205	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GAD2
ADAMTS9	ADAM Metalloproteinase With Thrombospondin Type 1 Motif 9	Protein Coding	38	GC03M064501	1.815725	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAMTS9
CDK1	Cyclin Dependent Kinase 1	Protein Coding	44	GC10P060772	1.815159	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDK1
ARL1	ADP Ribosylation Factor Like GTPase 1	Protein Coding	40	GC12M101393	1.803441	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARL1

PLCG1	Phospholipase C Gamma 1	Protein Coding	46	GC20P041136	1.799927	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLCG1
C4BPA	Complement Component 4 Binding Protein Alpha	Protein Coding	41	GC01P207105	1.79878	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C4BPA
POLR1C	RNA Polymerase I And III Subunit C	Protein Coding	42	GC06P083925	1.794698	https://www.genecards.org/cgi-bin/carddisp.pl?gene=POLR1C
EIF4H	Eukaryotic Translation Initiation Factor 4H	Protein Coding	40	GC07P074174	1.794698	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EIF4H
FSTL4	Follistatin Like 4	Protein Coding	35	GC05M133196	1.794698	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FSTL4
ANAPC4	Anaphase Promoting Complex Subunit 4	Protein Coding	34	GC04P025379	1.794698	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANAPC4
CREBBP	CREB Binding Protein	Protein Coding	50	GC16M007298	1.792465	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CREBBP
MIR193A	MicroRNA 193a	RNA Gene	20	GC17P031559	1.790309	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR193A
DEFA3	Defensin Alpha 3	Protein Coding	36	GC08M007015	1.784046	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DEFA3
MC2R	Melanocortin 2 Receptor	Protein Coding	46	GC18M024785	1.783474	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MC2R
APOC3	Apolipoprotein C3	Protein Coding	44	GC11P116829	1.783474	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APOC3
SMS	Spermine Synthase	Protein Coding	42	GC0XP021958	1.783474	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMS
MIR29B1	MicroRNA 29b-1	RNA Gene	21	GC07M130877	1.783474	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR29B1
MIR532	MicroRNA 532	RNA Gene	17	GC0XP050769	1.783474	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR532

						bin/carddisp.pl?gene=MIR532
MANF	Mesencephalic Astrocyte Derived Neurotrophic Factor	Protein Coding	37	GC03P051385	1.778156	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MANF
MIR26B	MicroRNA 26b	RNA Gene	22	GC02P218402	1.778156	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR26B
AGT	Angiotensinogen	Protein Coding	47	GC01M230702	1.774172	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AGT
CCL14	C-C Motif Chemokine Ligand 14	Protein Coding	34	GC17M041940	1.773492	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCL14
TFF3	Trefoil Factor 3	Protein Coding	40	GC21M042311	1.772983	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TFF3
CLEC2D	C-Type Lectin Domain Family 2 Member D	Protein Coding	37	GC12P021193	1.771824	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLEC2D
SELENO S	Selenoprotein S	Protein Coding	30	GC15M117315	1.771824	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SELENO S
CPOX	Coproporphyrinogen Oxidase	Protein Coding	42	GC03M098576	1.770074	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CPOX
FUT1	Fucosyltransferase 1 (H Blood Group)	Protein Coding	39	GC19M048748	1.769892	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FUT1
BDP1P	B Double Prime 1 Pseudogene	Pseudo gene	8	GC18M077447	1.76978	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BDP1P
RPS26	Ribosomal Protein S26	Protein Coding	41	GC12P056043	1.764588	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS26
TSC22D3	TSC22 Domain Family Member 3	Protein Coding	39	GC0XM107713	1.761598	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSC22D3
KRT8	Keratin 8	Protein Coding	45	GC12M052897	1.760741	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KRT8

AFF2	AF4/FMR2 Family Member 2	Protein Coding	41	GC0XP148500	1.760741	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AFF2
ASRGL1	Asparaginase And Isoaspartyl Peptidase 1	Protein Coding	40	GC11P062337	1.760741	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ASRGL1
BCL2L2	BCL2 Like 2	Protein Coding	43	GC14P032837	1.759391	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCL2L2
MUSK	Muscle Associated Receptor Tyrosine Kinase	Protein Coding	46	GC09P110668	1.759109	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MUSK
B4GALT1	Beta-1,4-Galactosyltransferase 1	Protein Coding	44	GC09M033100	1.758877	https://www.genecards.org/cgi-bin/carddisp.pl?gene=B4GALT1
NCR3	Natural Cytotoxicity Triggering Receptor 3	Protein Coding	38	GC06M031588	1.758201	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCR3
CDH5	Cadherin 5	Protein Coding	45	GC16P066366	1.757975	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDH5
ID2	Inhibitor Of DNA Binding 2	Protein Coding	42	GC02P008678	1.757975	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ID2
SPINK5	Serine Peptidase Inhibitor Kazal Type 5	Protein Coding	41	GC05P148025	1.757052	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPINK5
RPLP0	Ribosomal Protein Lateral Stalk Subunit P0	Protein Coding	40	GC12M120196	1.75361	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPLP0
LPXN	Leupaxin	Protein Coding	40	GC11M089460	1.751273	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LPXN
NTAN1	N-Terminal Asparagine Amidase	Protein Coding	37	GC16M015037	1.751273	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NTAN1
MIR629	MicroRNA 629	RNA Gene	19	GC15M070079	1.749573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR629
MIR600	MicroRNA 600	RNA Gene	15	GC09M123111	1.749573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR600

						bin/carddisp.pl?gene=MIR600
CRHR1	Corticotropin Releasing Hormone Receptor 1	Protein Coding	42	GC17P045784	1.747556	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CRHR1
NLRC4	NLR Family CARD Domain Containing 4	Protein Coding	42	GC02M032224	1.743058	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NLRC4
TXK	TXK Tyrosine Kinase	Protein Coding	44	GC04M048066	1.742146	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TXK
RHOD	Ras Homolog Family Member D	Protein Coding	37	GC11P070125	1.741763	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RHOD
RPS2P14	Ribosomal Protein S2 Pseudogene 14	Pseudo gene	7	GC01M113698	1.740258	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS2P14
LOC102724971	Putative V-Set And Immunoglobulin Domain-Containing-Like Protein IGHV4OR15-8	Protein Coding	5	GC15M021742	1.73744	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC102724971
ROBO3	Roundabout Guidance Receptor 3	Protein Coding	43	GC11P124865	1.73387	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ROBO3
MIR424	MicroRNA 424	RNA Gene	18	GC0XM134693	1.73387	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR424
MIR188	MicroRNA 188	RNA Gene	17	GC0XP050003	1.73387	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR188
PITRM1	Pitrilysin Metallopeptidase 1	Protein Coding	40	GC10M003138	1.732475	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PITRM1
ASIC3	Acid Sensing Ion Channel Subunit 3	Protein Coding	38	GC07P151048	1.730679	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ASIC3
CHST4	Carbohydrate Sulfotransferase 4	Protein Coding	36	GC16P072011	1.730679	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHST4
CTSH	Cathepsin H	Protein Coding	46	GC15M090448	1.729593	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTSH

TRAF3IP2-AS1	TRAF3IP2 Antisense RNA 1	RNA Gene	19	GC06P111483	1.729137	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRAF3IP2-AS1
CD74	CD74 Molecule	Protein Coding	42	GC05M150378	1.729081	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD74
MOCOS	Molybdenum Cofactor Sulfurase	Protein Coding	40	GC18P036187	1.726709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MOCOS
MFGE8	Milk Fat Globule EGF And Factor V/VIII Domain Containing	Protein Coding	42	GC15M088898	1.725653	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MFGE8
GNS	Glucosamine (N-Acetyl)-6-Sulfatase	Protein Coding	43	GC12M064713	1.724605	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GNS
SIRT5	Sirtuin 5	Protein Coding	44	GC06P013574	1.72418	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SIRT5
SLC39A8	Solute Carrier Family 39 Member 8	Protein Coding	42	GC04M102252	1.719299	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC39A8
NFATC2	Nuclear Factor Of Activated T Cells 2	Protein Coding	42	GC20M051386	1.718933	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NFATC2
DNAJA2	DnaJ Heat Shock Protein Family (Hsp40) Member A2	Protein Coding	39	GC16M046955	1.718933	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNAJA2
SLC2A1	Solute Carrier Family 2 Member 1	Protein Coding	50	GC01M042925	1.718165	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC2A1
SLC7A5	Solute Carrier Family 7 Member 5	Protein Coding	43	GC16M087830	1.715385	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC7A5
MAF	MAF BZIP Transcription Factor	Protein Coding	44	GC16M079204	1.714878	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAF
DLL1	Delta Like Canonical Notch Ligand 1	Protein Coding	44	GC06M170282	1.713073	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DLL1
SSRP1	Structure Specific Recognition Protein 1	Protein Coding	39	GC11M089441	1.712	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=SSRP1
BMPR2	Bone Morphogenetic Protein Receptor Type 2	Protein Coding	48	GC02P 202376	1.711 393	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BMPR2
HSF1	Heat Shock Transcription Factor 1	Protein Coding	43	GC08P 144291	1.707 303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSF1
CD96	CD96 Molecule	Protein Coding	42	GC03P 111292	1.707 303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD96
MIR26A1	MicroRNA 26a-1	RNA Gene	21	GC03P 037969	1.707 303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR26A1
ST2	Suppression Of Tumorigenicity 2	Genetic Locus	7	GC11U 990127	1.707 303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ST2
GLS	Glutaminase	Protein Coding	47	GC02P 190880	1.706 537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GLS
MPPE1	Metallophosphoesterase 1	Protein Coding	37	GC18M 024771	1.706 537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MPPE1
RBM17	RNA Binding Motif Protein 17	Protein Coding	37	GC10P 006089	1.706 537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RBM17
CEP192	Centrosomal Protein 192	Protein Coding	36	GC18P 017459	1.706 537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEP192
CEP76	Centrosomal Protein 76	Protein Coding	35	GC18M 024777	1.706 537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEP76
RAVER1	Ribonucleoprotein, PTB Binding 1	Protein Coding	33	GC19M 010316	1.706 537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAVER1
CCDC116	Coiled-Coil Domain Containing 116	Protein Coding	32	GC22P 037047	1.706 537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCDC116
PRR5L	Proline Rich 5 Like	Protein Coding	30	GC11P 036297	1.706 537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRR5L

RIMBP3C	RIMS Binding Protein 3C	Protein Coding	26	GC22M023542	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RIMBP3C
PI4KAP2	Phosphatidylinositol 4-Kinase Alpha Pseudogene 2	Pseudo gene	22	GC22M021472	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PI4KAP2
THAP7-AS1	THAP7 Antisense RNA 1	RNA Gene	15	GC22P035904	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=THAP7-AS1
IGLV5-52	Immunoglobulin Lambda Variable 5-52	Protein Coding	13	GC22P022318	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGLV5-52
ABHD17AP4	ABHD17A Pseudogene 4	Pseudo gene	10	GC22M020667	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABHD17AP4
STAT4-AS1	STAT4 Antisense RNA 1	RNA Gene	10	GC02P191023	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STAT4-AS1
TSBP1-AS1	TSBP1 And BTNL2 Antisense RNA 1	RNA Gene	10	GC06P087405	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSBP1-AS1
ENSG00000234630	Novel Transcript	RNA Gene	9	GC22P035947	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000234630
ENSG00000267199	Novel Transcript, Antisense SPIRE1	RNA Gene	9	GC18P017448	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000267199
ENSG00000267480	Novel Transcript, Antisense IMPA2	RNA Gene	9	GC18M024891	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000267480
HSALNG0120134		RNA Gene	5	GC18P017594	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0120134
HSALNG0120135		RNA Gene	5	GC18M024927	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0120135
lnc-SEH1L-5		RNA Gene	5	GC18P017450	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-SEH1L-5
piR-53431-298		RNA Gene	5	GC18P017731	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-53431-298

						bin/carddisp.pl?gene=piR-53431-298
lnc-ICAM3-1		RNA Gene	4	GC19M010402	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ICAM3-1
piR-61101-324		RNA Gene	4	GC19P010348	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-61101-324
lnc-ICAM3-2		RNA Gene	3	GC19M010354	1.706537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ICAM3-2
EREG	Epiregulin	Protein Coding	41	GC04P074366	1.701794	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EREG
LAP3	Leucine Aminopeptidase 3	Protein Coding	41	GC04P018237	1.698339	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LAP3
PER2	Period Circadian Regulator 2	Protein Coding	42	GC02M238244	1.697734	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PER2
MIRLET7A1	MicroRNA Let-7a-1	RNA Gene	21	GC09P094175	1.697734	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIRLET7A1
HLA-DRB2	Major Histocompatibility Complex, Class II, DR Beta 2 (Pseudogene)	Pseudo gene	10	GC06Mn03753	1.697423	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HLA-DRB2
SERPINA4	Serpin Family A Member 4	Protein Coding	41	GC14P094561	1.697273	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPINA4
DNM1L	Dynamin 1 Like	Protein Coding	46	GC12P032679	1.696452	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNM1L
FOXM1	Forkhead Box M1	Protein Coding	42	GC12M002857	1.696452	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOXM1
RASGRF1	Ras Protein Specific Guanine Nucleotide Releasing Factor 1	Protein Coding	40	GC15M078959	1.696452	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RASGRF1
SNRPA	Small Nuclear Ribonucleoprotein Polypeptide A	Protein Coding	39	GC19P040750	1.696393	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNRPA

SLC22A1	Solute Carrier Family 22 Member 1	Protein Coding	42	GC06P160121	1.696227	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC22A1
LINC02381	Long Intergenic Non-Protein Coding RNA 2381	RNA Gene	10	GC12P055052	1.696227	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02381
IL17RB	Interleukin 17 Receptor B	Protein Coding	40	GC03P053855	1.694728	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL17RB
PLCG2	Phospholipase C Gamma 2	Protein Coding	50	GC16P081773	1.689247	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLCG2
CTSS	Cathepsin S	Protein Coding	44	GC01M150730	1.687668	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTSS
IRF9	Interferon Regulatory Factor 9	Protein Coding	42	GC14P024161	1.687188	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRF9
GP2	Glycoprotein 2	Protein Coding	40	GC16M020309	1.687188	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GP2
ITGAE	Integrin Subunit Alpha E	Protein Coding	39	GC17M004158	1.687188	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGAE
CTBS	Chitobiase	Protein Coding	38	GC01M084549	1.687188	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTBS
IFI27	Interferon Alpha Inducible Protein 27	Protein Coding	38	GC14P094104	1.687188	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFI27
MIR495	MicroRNA 495	RNA Gene	17	GC14P109998	1.687188	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR495
THRIL	TNF And HNRNPL Related Immunoregulatory Long Non-Coding RNA	RNA Gene	12	GC12M125025	1.687188	https://www.genecards.org/cgi-bin/carddisp.pl?gene=THRIL
FGF7	Fibroblast Growth Factor 7	Protein Coding	40	GC15P049423	1.685435	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGF7
ITIH2	Inter-Alpha-Trypsin Inhibitor Heavy Chain 2	Protein Coding	40	GC10P007703	1.684724	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=ITI2
LTA4H	Leukotriene A4 Hydrolase	Protein Coding	44	GC12M096000	1.684635	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=LTA4H
STK16	Serine/Threonine Kinase 16	Protein Coding	39	GC02P219248	1.681913	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=STK16
WBP1	WW Domain Binding Protein 1	Protein Coding	33	GC02P074458	1.678863	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=WBP1
FGB	Fibrinogen Beta Chain	Protein Coding	46	GC04P154595	1.67643	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=FGB
KLF5	Kruppel Like Factor 5	Protein Coding	44	GC13P073054	1.67643	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=KLF5
MMP28	Matrix Metalloproteinase 28	Protein Coding	36	GC17M035756	1.67643	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=MMP28
CNNM3-DT	CNNM3 Divergent Transcript	RNA Gene	9	GC02M098269	1.67643	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=CNNM3-DT
ARNT	Aryl Hydrocarbon Receptor Nuclear Translocator	Protein Coding	42	GC01M150809	1.674134	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=ARNT
FGF5	Fibroblast Growth Factor 5	Protein Coding	42	GC04P080266	1.674134	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=FGF5
NR2C2	Nuclear Receptor Subfamily 2 Group C Member 2	Protein Coding	42	GC03P014947	1.674134	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=NR2C2
GPANK1	G-Patch Domain And Ankyrin Repeats 1	Protein Coding	32	GC06M065962	1.672641	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=GPANK1
AHNAK	AHNAK Nucleoprotein	Protein Coding	37	GC11M089610	1.664649	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=AHNAK
SERPINA12	Serpin Family A Member 12	Protein Coding	38	GC14M094487	1.661815	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=SERPINA12

BCHE	Butyrylcholinesterase	Protein Coding	49	GC03M165772	1.660317	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCHE
CETP	Cholesteryl Ester Transfer Protein	Protein Coding	46	GC16P056961	1.660317	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CETP
CPT1A	Carnitine Palmitoyltransferase 1A	Protein Coding	46	GC11M068754	1.660317	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CPT1A
PLTP	Phospholipid Transfer Protein	Protein Coding	43	GC20M045898	1.660317	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLTP
ADIPOR2	Adiponectin Receptor 2	Protein Coding	41	GC12P001670	1.660317	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADIPOR2
REG1A	Regenerating Family Member 1 Alpha	Protein Coding	40	GC02P079120	1.660317	https://www.genecards.org/cgi-bin/carddisp.pl?gene=REG1A
ATP6V0E2	ATPase H ⁺ Transporting V0 Subunit E2	Protein Coding	36	GC07P149873	1.660317	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP6V0E2
MIR25	MicroRNA 25	RNA Gene	21	GC07M100093	1.660317	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR25
MIR27B	MicroRNA 27b	RNA Gene	21	GC09P095097	1.660317	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR27B
MIR378A	MicroRNA 378a	RNA Gene	21	GC05P149732	1.660317	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR378A
MIR574	MicroRNA 574	RNA Gene	20	GC04P038948	1.660317	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR574
MIR224	MicroRNA 224	RNA Gene	18	GC0XM151958	1.660317	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR224
MIR340	MicroRNA 340	RNA Gene	20	GC05M180015	1.65523	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR340
MX1	MX Dynamin Like GTPase 1	Protein Coding	40	GC21P041420	1.654687	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=MX1
AGRN	Agrin	Protein Coding	44	GC01P001020	1.654424	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AGRN
TNXA	Tenascin XA (Pseudogene)	Pseudo gene	23	GC06M065980	1.654226	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNXA
RPS6KA3	Ribosomal Protein S6 Kinase A3	Protein Coding	50	GC0XM020149	1.653955	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS6KA3
SLIT3	Slit Guidance Ligand 3	Protein Coding	41	GC05M168661	1.650758	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLIT3
IDDM8	Insulin Dependent Diabetes Mellitus 8	Genetic Locus	4	GC06U990066	1.650758	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IDDM8
ADGRG1	Adhesion G Protein-Coupled Receptor G1	Protein Coding	38	GC16P057610	1.648388	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADGRG1
OR6C4	Olfactory Receptor Family 6 Subfamily C Member 4	Protein Coding	32	GC12P055553	1.648388	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OR6C4
DEFB1	Defensin Beta 1	Protein Coding	38	GC08M006870	1.646858	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DEFB1
C1D	C1D Nuclear Receptor Corepressor	Protein Coding	38	GC02M068041	1.645422	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C1D
PLP1	Proteolipid Protein 1	Protein Coding	41	GC0XP103773	1.644365	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLP1
RPTOR	Regulatory Associated Protein Of MTOR Complex 1	Protein Coding	42	GC17P080544	1.64344	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPTOR
GBP5	Guanylate Binding Protein 5	Protein Coding	36	GC01M089259	1.642158	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GBP5
SH3PXD2A	SH3 And PX Domains 2A	Protein Coding	38	GC10M103594	1.641088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SH3PXD2A

DPP7	Dipeptidyl Peptidase 7	Protein Coding	39	GC09M137569	1.638876	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DPP7
THNSL2	Threonine Synthase Like 2	Protein Coding	33	GC02P088170	1.638876	https://www.genecards.org/cgi-bin/carddisp.pl?gene=THNSL2
TKT	Transketolase	Protein Coding	45	GC03M053224	1.637501	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TKT
TOP1	DNA Topoisomerase I	Protein Coding	47	GC20P041028	1.63069	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TOP1
LOC106780803	Tenascin XB Recombination Region	Biological Region	3	GC06P085230	1.630337	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC106780803
LOC106780804	Tenascin XA (Pseudogene) Recombination Region	Biological Region	2	GC06P085231	1.630337	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC106780804
IL20RA	Interleukin 20 Receptor Subunit Alpha	Protein Coding	36	GC06M136999	1.629896	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL20RA
SLC37A1	Solute Carrier Family 37 Member 1	Protein Coding	37	GC21P042571	1.626416	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC37A1
SDC4	Syndecan 4	Protein Coding	42	GC20M045325	1.625002	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SDC4
SELENO N	Selenoprotein N	Protein Coding	32	GC01P025800	1.623947	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SELENO N
CD47	CD47 Molecule	Protein Coding	41	GC03M108043	1.623184	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD47
SCUBE2	Signal Peptide, CUB Domain And EGF Like Domain Containing 2	Protein Coding	40	GC11M009019	1.62303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SCUBE2
EGLN1	Egl-9 Family Hypoxia Inducible Factor 1	Protein Coding	48	GC01M231363	1.622046	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EGLN1
CPQ	Carboxypeptidase Q	Protein Coding	36	GC08P096645	1.622046	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CPQ

						bin/carddisp.pl?gene=CPQ
TRIM3	Tripartite Motif Containing 3	Protein Coding	35	GC11M006459	1.622046	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIM3
NAA25	N-Alpha-Acetyltransferase 25, NatB Auxiliary Subunit	Protein Coding	34	GC12M112026	1.620996	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NAA25
TAB3	TGF-Beta Activated Kinase 1 (MAP3K7) Binding Protein 3	Protein Coding	39	GC0XM030901	1.620379	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAB3
LORICRI N	Loricrin Cornified Envelope Precursor Protein	Protein Coding	27	GC01P153262	1.61466	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LORICRIN
PGLYRP 2	Peptidoglycan Recognition Protein 2	Protein Coding	38	GC19M015468	1.608178	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PGLYRP2
SCG2	Secretogranin II	Protein Coding	39	GC02M223596	1.607782	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SCG2
STK4	Serine/Threonine Kinase 4	Protein Coding	48	GC20P044966	1.606022	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STK4
MIR19A	MicroRNA 19a	RNA Gene	20	GC13P091554	1.604466	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR19A
RNPEPL 1	Arginyl Aminopeptidase Like 1	Protein Coding	35	GC02P240565	1.604185	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNPEPL1
ID3	Inhibitor Of DNA Binding 3, HLH Protein	Protein Coding	40	GC01M023557	1.60176	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ID3
DPYSL5	Dihydropyrimidinase Like 5	Protein Coding	39	GC02P026847	1.601079	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DPYSL5
ERCC6	ERCC Excision Repair 6, Chromatin Remodeling Factor	Protein Coding	45	GC10M049454	1.600263	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ERCC6
ITGA6	Integrin Subunit Alpha 6	Protein Coding	48	GC02P172427	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGA6

COL4A1	Collagen Type IV Alpha 1 Chain	Protein Coding	46	GC13M110148	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL4A1
DRD1	Dopamine Receptor D1	Protein Coding	43	GC05M175440	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DRD1
DRD3	Dopamine Receptor D3	Protein Coding	43	GC03M114128	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DRD3
PSMB1	Proteasome 20S Subunit Beta 1	Protein Coding	43	GC06M170535	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMB1
FSCN1	Fascin Actin-Bundling Protein 1	Protein Coding	42	GC07P005592	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FSCN1
ORAI1	ORAI Calcium Release-Activated Calcium Modulator 1	Protein Coding	42	GC12P126225	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ORAI1
MRC1	Mannose Receptor C-Type 1	Protein Coding	40	GC10P017809	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MRC1
MRE11	MRE11 Homolog, Double Strand Break Repair Nuclease	Protein Coding	39	GC11M096553	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MRE11
LSM4	LSM4 Homolog, U6 Small Nuclear RNA And MRNA Degradation Associated	Protein Coding	38	GC19M018306	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LSM4
NLRC5	NLR Family CARD Domain Containing 5	Protein Coding	38	GC16P057035	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NLRC5
AFF1	AF4/FMR2 Family Member 1	Protein Coding	37	GC04P086934	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AFF1
CIRBP	Cold Inducible RNA Binding Protein	Protein Coding	37	GC19P001259	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CIRBP
IKZF2	IKAROS Family Zinc Finger 2	Protein Coding	37	GC02M213001	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IKZF2

MIR766	MicroRNA 766	RNA Gene	18	GC0XM119646	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR766
MIR498	MicroRNA 498	RNA Gene	17	GC19P067334	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR498
MIR6089	MicroRNA 6089	RNA Gene	8	GC0XP002632	1.594318	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR6089
DDC	Dopa Decarboxylase	Protein Coding	49	GC07M050458	1.594307	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDC
MARCO	Macrophage Receptor With Collagenous Structure	Protein Coding	40	GC02P118942	1.589498	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MARCO
SNX9	Sorting Nexin 9	Protein Coding	40	GC06P157685	1.588394	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNX9
DSP	Desmoplakin	Protein Coding	48	GC06P007541	1.587361	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DSP
KLKB1	Kallikrein B1	Protein Coding	46	GC04P186208	1.58596	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLKB1
BLVRB	Biliverdin Reductase B	Protein Coding	38	GC19M040447	1.58596	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BLVRB
ZNF148	Zinc Finger Protein 148	Protein Coding	40	GC03M125225	1.584283	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF148
GADD45B	Growth Arrest And DNA Damage Inducible Beta	Protein Coding	36	GC19P002476	1.584283	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GADD45B
MIR147B	MicroRNA 147b	RNA Gene	19	GC15P045433	1.584283	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR147B
ACVRL1	Activin A Receptor Like Type 1	Protein Coding	48	GC12P051906	1.583642	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACVRL1
ELF3	E74 Like ETS Transcription Factor 3	Protein Coding	39	GC01P202007	1.582903	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=ELF3
PIM2	Pim-2 Proto-Oncogene, Serine/Threonine Kinase	Protein Coding	42	GC0XM048913	1.582481	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIM2
SNTB1	Syntrophin Beta 1	Protein Coding	37	GC08M120535	1.582481	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNTB1
P2RX3	Purinergic Receptor P2X 3	Protein Coding	41	GC11P057356	1.581138	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RX3
MUC7	Mucin 7, Secreted	Protein Coding	36	GC04P070430	1.579775	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MUC7
HSD17B8	Hydroxysteroid 17-Beta Dehydrogenase 8	Protein Coding	39	GC06P083755	1.575986	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSD17B8
ATF6B	Activating Transcription Factor 6 Beta	Protein Coding	37	GC06M032115	1.575986	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATF6B
HCG23	HLA Complex Group 23	RNA Gene	16	GC06P083724	1.575986	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HCG23
ENSG00000250264	Novel Protein, TAP2-HLA-DOB Readthrough	Protein Coding	9	GC06M066022	1.575986	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000250264
HSALNG0049451		RNA Gene	4	GC06P084618	1.575986	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049451
lnc-PSMB9-14		RNA Gene	4	GC06P085131	1.575986	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-PSMB9-14
CABIN1	Calcineurin Binding Protein 1	Protein Coding	41	GC22P024011	1.574012	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CABIN1
LAMC2	Laminin Subunit Gamma 2	Protein Coding	45	GC01P183186	1.572692	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LAMC2
COL4A2	Collagen Type IV Alpha 2 Chain	Protein Coding	44	GC13P110305	1.570701	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL4A2

AGTR2	Angiotensin II Receptor Type 2	Protein Coding	42	GC0XP116170	1.570701	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AGTR2
CFD	Complement Factor D	Protein Coding	43	GC19P000859	1.569983	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CFD
ACKR3	Atypical Chemokine Receptor 3	Protein Coding	40	GC02P236537	1.567161	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACKR3
PDIA3	Protein Disulfide Isomerase Family A Member 3	Protein Coding	42	GC15P043746	1.565365	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDIA3
RASGRP2	RAS Guanyl Releasing Protein 2	Protein Coding	42	GC11M064726	1.565365	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RASGRP2
GOT1	Glutamic-Oxaloacetic Transaminase 1	Protein Coding	44	GC10M099396	1.563368	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GOT1
LINC01475	Long Intergenic Non-Protein Coding RNA 1475	RNA Gene	12	GC10M099526	1.563368	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01475
EEF1B2P6	Eukaryotic Translation Elongation Factor 1 Beta 2 Pseudogene 6	Pseudo gene	7	GC07M131661	1.563368	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EEF1B2P6
MT2A	Metallothionein 2A	Protein Coding	41	GC16P057038	1.5624	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MT2A
CHI3L2	Chitinase 3 Like 2	Protein Coding	37	GC01P111201	1.561887	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHI3L2
PRDX2	Peroxiredoxin 2	Protein Coding	44	GC19M012796	1.561156	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRDX2
MT-CYB	Mitochondrially Encoded Cytochrome B	Protein Coding	32	GCMT P014749	1.56021	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MT-CYB
MIR20A	MicroRNA 20a	RNA Gene	20	GC13P091555	1.558542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR20A
CCL25	C-C Motif Chemokine Ligand 25	Protein Coding	36	GC19P008052	1.558183	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=CCL25
CENPA	Centromere Protein A	Protein Coding	38	GC02P026765	1.556901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CENPA
EGR2	Early Growth Response 2	Protein Coding	42	GC10M062811	1.553344	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EGR2
SUCNR1	Succinate Receptor 1	Protein Coding	38	GC03P151873	1.548542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SUCNR1
INAVA	Innate Immunity Activator	Protein Coding	27	GC01P200892	1.546315	https://www.genecards.org/cgi-bin/carddisp.pl?gene=INAVA
IKZF1	IKAROS Family Zinc Finger 1	Protein Coding	46	GC07P050303	1.543654	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IKZF1
HDAC6	Histone Deacetylase 6	Protein Coding	50	GC0XP048801	1.541989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HDAC6
IL25	Interleukin 25	Protein Coding	36	GC14P032705	1.541989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL25
DERL3	Derlin 3	Protein Coding	34	GC22M023834	1.541989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DERL3
MIR106B	MicroRNA 106b	RNA Gene	22	GC07M101892	1.541989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR106B
NPPC	Natriuretic Peptide C	Protein Coding	41	GC02M231921	1.540562	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NPPC
LILRA2	Leukocyte Immunoglobulin Like Receptor A2	Protein Coding	40	GC19P054572	1.540562	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LILRA2
OIP5	Opa Interacting Protein 5	Protein Coding	34	GC15M041309	1.540562	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OIP5
MIR138-2	MicroRNA 138-2	RNA Gene	21	GC16P057067	1.540562	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR138-2

MIR448	MicroRNA 448	RNA Gene	13	GC0XP114823	1.540562	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR448
KISS1R	KISS1 Receptor	Protein Coding	44	GC19P000917	1.533888	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KISS1R
CRAT	Carnitine O-Acetyltransferase	Protein Coding	44	GC09M129094	1.531042	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CRAT
MFNG	MFNG O-Fucosylpeptide 3-Beta-N-Acetylglucosaminyltransferase	Protein Coding	39	GC22M037469	1.530903	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MFNG
CHID1	Chitinase Domain Containing 1	Protein Coding	36	GC11M000867	1.527948	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHID1
GSDME	Gasdermin E	Protein Coding	31	GC07M024699	1.527948	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GSDME
MC1R	Melanocortin 1 Receptor	Protein Coding	45	GC16P089912	1.524795	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MC1R
TARS1	Threonyl-TRNA Synthetase 1	Protein Coding	36	GC05P033441	1.522445	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TARS1
PSMB7	Proteasome 20S Subunit Beta 7	Protein Coding	44	GC09M124353	1.520765	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMB7
HMMR	Hyaluronan Mediated Motility Receptor	Protein Coding	41	GC05P163480	1.520765	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HMMR
GNLY	Granulysin	Protein Coding	37	GC02P085685	1.520765	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GNLY
ALCAM	Activated Leukocyte Cell Adhesion Molecule	Protein Coding	42	GC03P105366	1.517186	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALCAM
A1BG	Alpha-1-B Glycoprotein	Protein Coding	37	GC19M058345	1.517186	https://www.genecards.org/cgi-bin/carddisp.pl?gene=A1BG
DDIT3	DNA Damage Inducible Transcript 3	Protein Coding	44	GC12M057516	1.516357	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=DDIT3
HYAL2	Hyaluronidase 2	Protein Coding	43	GC03M050317	1.516357	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HYAL2
CHAD	Chondroadherin	Protein Coding	37	GC17M050464	1.516357	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHAD
IGH	Immunoglobulin Heavy Locus	Protein Coding	18	GC14M112706	1.509174	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGH
ELMOD2	ELMO Domain Containing 2	Protein Coding	35	GC04P140524	1.508702	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ELMOD2
SPPL2C	Signal Peptide Peptidase Like 2C	Protein Coding	32	GC17P045844	1.508702	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPPL2C
SAG	S-Antigen Visual Arrestin	Protein Coding	44	GC02P233393	1.504816	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAG
CTH	Cystathionine Gamma-Lyase	Protein Coding	48	GC01P070411	1.504572	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTH
SLAMF8	SLAM Family Member 8	Protein Coding	34	GC01P159826	1.504572	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLAMF8
SLC6A3	Solute Carrier Family 6 Member 3	Protein Coding	48	GC05M001392	1.497591	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC6A3
MAP4K3	Mitogen-Activated Protein Kinase Kinase Kinase 3	Protein Coding	40	GC02M039249	1.496403	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP4K3
TRIM38	Tripartite Motif Containing 38	Protein Coding	38	GC06P025962	1.492981	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIM38
MIR425	MicroRNA 425	RNA Gene	20	GC03M051161	1.492981	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR425
MIR361	MicroRNA 361	RNA Gene	17	GC0XM085903	1.492981	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR361

DLG5	Discs Large MAGUK Scaffold Protein 5	Protein Coding	38	GC10M077790	1.492894	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DLG5
LNPEP	Leucyl And Cystinyl Aminopeptidase	Protein Coding	45	GC05P096935	1.492114	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LNPEP
ATP8B2	ATPase Phospholipid Transporting 8B2	Protein Coding	38	GC01P154325	1.492114	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP8B2
CLIC4	Chloride Intracellular Channel 4	Protein Coding	38	GC01P024745	1.492114	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLIC4
LINC02341	Long Intergenic Non-Protein Coding RNA 2341	RNA Gene	10	GC13P042339	1.492114	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02341
NOS1	Nitric Oxide Synthase 1	Protein Coding	48	GC12M117208	1.491924	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOS1
ODC1	Ornithine Decarboxylase 1	Protein Coding	46	GC02M010432	1.489458	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ODC1
ADAMTSL2	ADAMTS Like 2	Protein Coding	41	GC09P134257	1.482744	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAMTSL2
RPL3P2	Ribosomal Protein L3 Pseudogene 2	Pseudo gene	10	GC06P031280	1.481575	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL3P2
MAP1LC3A	Microtubule Associated Protein 1 Light Chain 3 Alpha	Protein Coding	40	GC20P034546	1.480463	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP1LC3A
TRIM2	Tripartite Motif Containing 2	Protein Coding	40	GC04P153152	1.480463	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIM2
BAIAP2L1	BAR/IMD Domain Containing Adaptor Protein 2 Like 1	Protein Coding	38	GC07M098294	1.480463	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BAIAP2L1
MAL	Mal, T Cell Differentiation Protein	Protein Coding	36	GC02P095025	1.480463	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAL
YWHAQ	Tyrosine 3-Monooxygenase/Tryptoph	Protein Coding	44	GC02M009583	1.478126	https://www.genecards.org/cgi-

	an 5-Monooxygenase Activation Protein Theta					bin/carddisp.pl?gene=YWHAQ
NR1D1	Nuclear Receptor Subfamily 1 Group D Member 1	Protein Coding	46	GC17M040092	1.476844	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR1D1
CPA6	Carboxypeptidase A6	Protein Coding	43	GC08M067422	1.476844	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CPA6
GDF2	Growth Differentiation Factor 2	Protein Coding	42	GC10P047322	1.476844	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GDF2
OPRD1	Opioid Receptor Delta 1	Protein Coding	42	GC01P028812	1.476844	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OPRD1
CEBPD	CCAAT Enhancer Binding Protein Delta	Protein Coding	38	GC08M047759	1.476844	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEBPD
MIR7-1	MicroRNA 7-1	RNA Gene	18	GC09M093952	1.476844	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR7-1
MIR7-3	MicroRNA 7-3	RNA Gene	18	GC19P004770	1.476844	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR7-3
MIR7-2	MicroRNA 7-2	RNA Gene	17	GC15P088611	1.476844	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR7-2
SCG5	Secretogranin V	Protein Coding	37	GC15P032641	1.474648	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SCG5
PYY	Peptide YY	Protein Coding	42	GC17M043952	1.468681	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PYY
ADGRE2	Adhesion G Protein-Coupled Receptor E2	Protein Coding	39	GC19M014733	1.46716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADGRE2
LRP4	LDL Receptor Related Protein 4	Protein Coding	43	GC11M089351	1.466792	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRP4
CD1C	CD1c Molecule	Protein Coding	38	GC01P158289	1.466792	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD1C

CD1E	CD1e Molecule	Protein Coding	38	GC01P158354	1.466792	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD1E
CD1B	CD1b Molecule	Protein Coding	37	GC01M158297	1.466792	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD1B
PSMB11	Proteasome Subunit Beta 11	Protein Coding	32	GC14P033245	1.466792	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMB11
LDHB	Lactate Dehydrogenase B	Protein Coding	45	GC12M021635	1.465253	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LDHB
LOXL2	Lysyl Oxidase Like 2	Protein Coding	45	GC08M023296	1.465253	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOXL2
GDF11	Growth Differentiation Factor 11	Protein Coding	41	GC12P055743	1.465253	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GDF11
PIK3C2A	Phosphatidylinositol-4-Phosphate 3-Kinase Catalytic Subunit Type 2 Alpha	Protein Coding	45	GC11M017580	1.464933	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIK3C2A
OSMR	Oncostatin M Receptor	Protein Coding	44	GC05P038845	1.46427	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OSMR
CKLF	Chemokine Like Factor	Protein Coding	37	GC16P066552	1.46427	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CKLF
STAMPB	STAM Binding Protein	Protein Coding	43	GC02P073828	1.463375	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STAMPB
H2BC21	H2B Clustered Histone 21	Protein Coding	30	GC01M152029	1.460906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=H2BC21
RAPGEF3	Rap Guanine Nucleotide Exchange Factor 3	Protein Coding	43	GC12M047736	1.457924	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAPGEF3
LY6G5B	Lymphocyte Antigen 6 Family Member G5B	Protein Coding	30	GC06P083701	1.457831	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LY6G5B
FMR1	Fragile X Messenger Ribonucleoprotein 1	Protein Coding	42	GC0XP147943	1.456519	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=FMR1
SIGLEC5	Sialic Acid Binding Ig Like Lectin 5	Protein Coding	38	GC19M066230	1.453637	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SIGLEC5
UROD	Uroporphyrinogen Decarboxylase	Protein Coding	44	GC01P045353	1.450618	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UROD
SAA3P	Serum Amyloid A3, Pseudogene	Pseudo gene	16	GC11M018112	1.450228	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAA3P
QDPR	Quinoid Dihydropteridine Reductase	Protein Coding	45	GC04M017460	1.443045	https://www.genecards.org/cgi-bin/carddisp.pl?gene=QDPR
VSTM1	V-Set And Transmembrane Domain Containing 1	Protein Coding	32	GC19M054040	1.443045	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VSTM1
MOGS	Mannosyl-Oligosaccharide Glucosidase	Protein Coding	41	GC02M074461	1.441766	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MOGS
CDKN2B	Cyclin Dependent Kinase Inhibitor 2B	Protein Coding	45	GC09M022002	1.441158	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDKN2B
OPRK1	Opioid Receptor Kappa 1	Protein Coding	44	GC08M053227	1.440708	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OPRK1
NCR2	Natural Cytotoxicity Triggering Receptor 2	Protein Coding	38	GC06P083892	1.440708	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCR2
MMD	Monocyte To Macrophage Differentiation Associated	Protein Coding	33	GC17M055392	1.440708	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMD
DUSP5	Dual Specificity Phosphatase 5	Protein Coding	40	GC10P110497	1.436743	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DUSP5
DYRK1A	Dual Specificity Tyrosine Phosphorylation Regulated Kinase 1A	Protein Coding	49	GC21P037365	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DYRK1A
PRKCA	Protein Kinase C Alpha	Protein Coding	48	GC17P066302	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKCA

RARB	Retinoic Acid Receptor Beta	Protein Coding	48	GC03P024689	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RARB
EIF4G1	Eukaryotic Translation Initiation Factor 4 Gamma 1	Protein Coding	45	GC03P184314	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EIF4G1
PKM	Pyruvate Kinase M1/2	Protein Coding	44	GC15M072199	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PKM
USP5	Ubiquitin Specific Peptidase 5	Protein Coding	44	GC12P021073	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=USP5
KPNA2	Karyopherin Subunit Alpha 2	Protein Coding	43	GC17P068035	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KPNA2
PRMT5	Protein Arginine Methyltransferase 5	Protein Coding	43	GC14M022920	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRMT5
CNP	2',3'-Cyclic Nucleotide 3' Phosphodiesterase	Protein Coding	42	GC17P041966	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNP
TRIM32	Tripartite Motif Containing 32	Protein Coding	42	GC09P116687	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIM32
CD63	CD63 Molecule	Protein Coding	41	GC12M055725	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD63
GRK5	G Protein-Coupled Receptor Kinase 5	Protein Coding	41	GC10P119207	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GRK5
KHDRBS1	KH RNA Binding Domain Containing, Signal Transduction Associated 1	Protein Coding	41	GC01P032013	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KHDRBS1
KLF10	Kruppel Like Factor 10	Protein Coding	41	GC08M102648	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLF10
PCBP1	Poly(RC) Binding Protein 1	Protein Coding	41	GC02P070087	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PCBP1
S100A6	S100 Calcium Binding Protein A6	Protein Coding	41	GC01M153559	1.436542	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=S100A6
SPRY1	Sprouty RTK Signaling Antagonist 1	Protein Coding	41	GC04P123396	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPRY1
STAB1	Stabilin 1	Protein Coding	41	GC03P052495	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STAB1
WNT9A	Wnt Family Member 9A	Protein Coding	41	GC01M227920	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WNT9A
BCL3	BCL3 Transcription Coactivator	Protein Coding	40	GC19P044747	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCL3
CLCF1	Cardiotrophin Like Cytokine Factor 1	Protein Coding	40	GC11M067364	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLCF1
IRAK2	Interleukin 1 Receptor Associated Kinase 2	Protein Coding	39	GC03P012457	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRAK2
SERPINB1	Serpin Family B Member 1	Protein Coding	39	GC06M002835	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPINB1
CD53	CD53 Molecule	Protein Coding	38	GC01P110871	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD53
MAST3	Microtubule Associated Serine/Threonine Kinase 3	Protein Coding	38	GC19P066241	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAST3
MT3	Metallothionein 3	Protein Coding	38	GC16P056589	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MT3
OXA1L	OXA1L Mitochondrial Inner Membrane Protein	Protein Coding	38	GC14P022766	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OXA1L
PDLIM2	PDZ And LIM Domain 2	Protein Coding	37	GC08P022578	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDLIM2
SNAPIN	SNAP Associated Protein	Protein Coding	37	GC01P153660	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNAPIN

ORM2	Orosomucoid 2	Protein Coding	36	GC09P114329	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ORM2
STXBP6	Syntaxin Binding Protein 6	Protein Coding	36	GC14M024812	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STXBP6
KLLN	Killin, P53 Regulated DNA Replication Inhibitor	Protein Coding	29	GC10M087867	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLLN
TUG1	Taurine Up-Regulated 1	Protein Coding	22	GC22P030969	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TUG1
MIR92A1	MicroRNA 92a-1	RNA Gene	19	GC13P091558	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR92A1
MIR421	MicroRNA 421	RNA Gene	16	GC0XM074218	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR421
MIR613	MicroRNA 613	RNA Gene	14	GC12P021342	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR613
MIR4701	MicroRNA 4701	RNA Gene	12	GC12M049616	1.436542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR4701
NR1I3	Nuclear Receptor Subfamily 1 Group I Member 3	Protein Coding	44	GC01M161229	1.431934	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR1I3
TGFBI	Transforming Growth Factor Beta Induced	Protein Coding	45	GC05P136027	1.429118	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TGFBI
SAT1	Spermidine/Spermine N1-Acetyltransferase 1	Protein Coding	42	GC0XP023784	1.429118	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAT1
FSTL3	Follistatin Like 3	Protein Coding	39	GC19P000676	1.429118	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FSTL3
IFNLR1	Interferon Lambda Receptor 1	Protein Coding	34	GC01M025645	1.429118	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFNLR1
MIR331	MicroRNA 331	RNA Gene	20	GC12P095308	1.429118	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR331

						bin/carddisp.pl?gene=MIR331
FOXD2-AS1	FOXD2 Adjacent Opposite Strand RNA 1	RNA Gene	16	GC01M047432	1.429118	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOXD2-AS1
NTRK3	Neurotrophic Receptor Tyrosine Kinase 3	Protein Coding	50	GC15M087859	1.426852	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NTRK3
NTF4	Neurotrophin 4	Protein Coding	42	GC19M066077	1.426852	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NTF4
F11R	F11 Receptor	Protein Coding	41	GC01M160995	1.426852	https://www.genecards.org/cgi-bin/carddisp.pl?gene=F11R
RMRP	RNA Component Of Mitochondrial RNA Processing Endoribonuclease	RNA Gene	25	GC09M035655	1.426852	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RMRP
PEX5	Peroxisomal Biogenesis Factor 5	Protein Coding	42	GC12P021103	1.42668	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PEX5
GSDMC	Gasdermin C	Protein Coding	33	GC08M129705	1.425374	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GSDMC
APCS	Amyloid P Component, Serum	Protein Coding	42	GC01P159587	1.425147	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APCS
RXRB	Retinoid X Receptor Beta	Protein Coding	45	GC06M033193	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RXRB
AGPAT1	1-Acylglycerol-3-Phosphate O-Acyltransferase 1	Protein Coding	40	GC06M032168	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AGPAT1
VPS52	VPS52 Subunit Of GARP Complex	Protein Coding	34	GC06M066055	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VPS52
HSALNG0049404		RNA Gene	5	GC06M066657	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049404
HSALNG0049429		RNA Gene	5	GC06P084613	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049429

lnc-HLA-DRB1-8		RNA Gene	5	GC06M032619	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-HLA-DRB1-8
HSALNG0049424		RNA Gene	4	GC06M066659	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049424
HSALNG0049427		RNA Gene	4	GC06P084612	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049427
HSALNG0049428		RNA Gene	4	GC06M066660	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049428
RF00017-5040		RNA Gene	4	GC06M068718	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-5040
lnc-HLA-DOB-1		RNA Gene	4	GC06M032825	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-HLA-DOB-1
piR-33103-025		RNA Gene	2	GC06P086003	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-33103-025
piR-35002-057		RNA Gene	2	GC06P086099	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-35002-057
piR-39858-769		RNA Gene	2	GC06M068187	1.421127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-39858-769
ADK	Adenosine Kinase	Protein Coding	49	GC10P074155	1.420507	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADK
ITK	IL2 Inducible T Cell Kinase	Protein Coding	50	GC05P157158	1.418892	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITK
GRHPR	Glyoxylate And Hydroxypyruvate Reductase	Protein Coding	45	GC09P047213	1.418892	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GRHPR
BLZF1	Basic Leucine Zipper Nuclear Factor 1	Protein Coding	38	GC01P169367	1.418892	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BLZF1
SYNJ2BP	Synaptojanin 2 Binding Protein	Protein Coding	36	GC14M070366	1.418892	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SYNJ2BP

						bin/carddisp.pl?gene=SYNJ2BP
MIR1238	MicroRNA 1238	RNA Gene	15	GC19P010552	1.418892	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR1238
MIR6069	MicroRNA 6069	RNA Gene	9	GC22M035336	1.418892	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR6069
TSSK1B	Testis Specific Serine Kinase 1B	Protein Coding	37	GC05M113432	1.416734	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSSK1B
TSIX	TSIX Transcript, XIST Antisense RNA	RNA Gene	17	GC0XP073792	1.416734	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSIX
ANG	Angiogenin	Protein Coding	44	GC14P032461	1.416694	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANG
CDKN2C	Cyclin Dependent Kinase Inhibitor 2C	Protein Coding	43	GC01P050960	1.416056	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDKN2C
CSTA	Cystatin A	Protein Coding	43	GC03P122325	1.414482	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSTA
ROM1	Retinal Outer Segment Membrane Protein 1	Protein Coding	42	GC11P062611	1.405944	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ROM1
CLOCK	Clock Circadian Regulator	Protein Coding	42	GC04M055427	1.405062	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLOCK
TRPC5	Transient Receptor Potential Cation Channel Subfamily C Member 5	Protein Coding	41	GC0XM111774	1.401049	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRPC5
GSTM3	Glutathione S-Transferase Mu 3	Protein Coding	45	GC01M109733	1.400406	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GSTM3
MBD4	Methyl-CpG Binding Domain 4, DNA Glycosylase	Protein Coding	41	GC03M129430	1.400406	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MBD4
EPC1	Enhancer Of Polycomb Homolog 1	Protein Coding	38	GC10M033099	1.400406	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EPC1

LILRA5	Leukocyte Immunoglobulin Like Receptor A5	Protein Coding	37	GC19M054307	1.400406	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LILRA5
ENGASE	Endo-Beta-N-Acetylglucosaminidase	Protein Coding	34	GC17P079071	1.400406	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENGASE
LEAP2	Liver Enriched Antimicrobial Peptide 2	Protein Coding	32	GC05P132872	1.400406	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LEAP2
MIR22HG	MIR22 Host Gene	RNA Gene	26	GC17M004360	1.400406	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR22HG
LINC00305	Long Intergenic Non-Protein Coding RNA 305	RNA Gene	20	GC18M064080	1.400406	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC00305
MPZ	Myelin Protein Zero	Protein Coding	44	GC01M161304	1.399909	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MPZ
LYN	LYN Proto-Oncogene, Src Family Tyrosine Kinase	Protein Coding	46	GC08P055879	1.399825	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LYN
MSH6	MutS Homolog 6	Protein Coding	48	GC02P047695	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MSH6
ACTG1	Actin Gamma 1	Protein Coding	47	GC17M081509	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACTG1
MAP3K11	Mitogen-Activated Protein Kinase Kinase Kinase 11	Protein Coding	45	GC11M089796	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP3K11
DVL2	Dishevelled Segment Polarity Protein 2	Protein Coding	44	GC17M007225	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DVL2
PTPRS	Protein Tyrosine Phosphatase Receptor Type S	Protein Coding	44	GC19M005495	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPRS
NDUFA13	NADH:Ubiquinone Oxidoreductase Subunit A13	Protein Coding	43	GC19P019515	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NDUFA13
CASP5	Caspase 5	Protein Coding	42	GC11M104995	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CASP5

						bin/carddisp.pl?gene=CASP5
MAP3K4	Mitogen-Activated Protein Kinase Kinase Kinase 4	Protein Coding	42	GC06P160991	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP3K4
PPM1A	Protein Phosphatase, Mg ²⁺ /Mn ²⁺ Dependent 1A	Protein Coding	42	GC14P060245	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPM1A
KMT2C	Lysine Methyltransferase 2C	Protein Coding	41	GC07M152134	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KMT2C
KLK11	Kallikrein Related Peptidase 11	Protein Coding	40	GC19M066201	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLK11
NLRP2	NLR Family Pyrin Domain Containing 2	Protein Coding	40	GC19P054953	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NLRP2
PPP1R15A	Protein Phosphatase 1 Regulatory Subunit 15A	Protein Coding	38	GC19P048872	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPP1R15A
TNIP3	TNFAIP3 Interacting Protein 3	Protein Coding	36	GC04M121131	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNIP3
TNFAIP8L2	TNF Alpha Induced Protein 8 Like 2	Protein Coding	33	GC01P151156	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFAIP8L2
MIRLET7C	MicroRNA Let-7c	RNA Gene	22	GC21P016551	1.399124	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIRLET7C
TIMP4	TIMP Metallopeptidase Inhibitor 4	Protein Coding	38	GC03M012153	1.398468	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TIMP4
COL4A5	Collagen Type IV Alpha 5 Chain	Protein Coding	43	GC0XP108439	1.397666	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL4A5
CEACAM5	CEA Cell Adhesion Molecule 5	Protein Coding	42	GC19P066761	1.393224	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEACAM5
MUC16	Mucin 16, Cell Surface Associated	Protein Coding	37	GC19M008848	1.393224	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MUC16

ACHE	Acetylcholinesterase (Cartwright Blood Group)	Protein Coding	44	GC07M100889	1.393109	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACHE
ESRRA	Estrogen Related Receptor Alpha	Protein Coding	46	GC11P064305	1.389456	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ESRRA
GRK2	G Protein-Coupled Receptor Kinase 2	Protein Coding	36	GC11P067266	1.38607	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GRK2
MDC1	Mediator Of DNA Damage Checkpoint 1	Protein Coding	40	GC06M065881	1.384277	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MDC1
CACNA1I	Calcium Voltage-Gated Channel Subunit Alpha1 I	Protein Coding	44	GC22P039570	1.382956	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CACNA1I
STAB2	Stabilin 2	Protein Coding	41	GC12P103587	1.382956	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STAB2
CSMD1	CUB And Sushi Multiple Domains 1	Protein Coding	38	GC08M002953	1.382956	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSMD1
TOR1A	Torsin Family 1 Member A	Protein Coding	44	GC09M129812	1.382589	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TOR1A
MAN2A1	Mannosidase Alpha Class 2A Member 1	Protein Coding	42	GC05P109689	1.381862	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAN2A1
CAPN1	Calpain 1	Protein Coding	48	GC11P069958	1.379053	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAPN1
ABCB7	ATP Binding Cassette Subfamily B Member 7	Protein Coding	43	GC0XM075053	1.378355	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCB7
CFHR1	Complement Factor H Related 1	Protein Coding	42	GC01P196822	1.374459	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CFHR1
RYR1	Ryanodine Receptor 1	Protein Coding	45	GC19P066612	1.373652	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RYR1
CDC25B	Cell Division Cycle 25B	Protein Coding	44	GC20P004259	1.373163	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=CDC25B
TCTA	T Cell Leukemia Translocation Altered	Protein Coding	33	GC03P049412	1.36799	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TCTA
EPHB2	EPH Receptor B2	Protein Coding	49	GC01P022710	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EPHB2
CA4	Carbonic Anhydrase 4	Protein Coding	45	GC17P060149	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CA4
CSTB	Cystatin B	Protein Coding	45	GC21M043772	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSTB
KDM4B	Lysine Demethylase 4B	Protein Coding	45	GC19P004969	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KDM4B
TALDO1	Transaldolase 1	Protein Coding	45	GC11P001784	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TALDO1
UNG	Uracil DNA Glycosylase	Protein Coding	45	GC12P109097	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UNG
B4GALNT1	Beta-1,4-N-Acetyl-Galactosaminyltransferase 1	Protein Coding	44	GC12M057623	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=B4GALNT1
PARN	Poly(A)-Specific Ribonuclease	Protein Coding	44	GC16M014435	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PARN
PML	PML Nuclear Body Scaffold	Protein Coding	44	GC15P073994	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PML
ROBO1	Roundabout Guidance Receptor 1	Protein Coding	44	GC03M078597	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ROBO1
EYA4	EYA Transcriptional Coactivator And Phosphatase 4	Protein Coding	43	GC06P133240	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EYA4
KREME N1	Kringle Containing Transmembrane Protein 1	Protein Coding	43	GC22P029073	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KREME N1

NONO	Non-POU Domain Containing Octamer Binding	Protein Coding	43	GC0XP071255	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NONO
ABCC5	ATP Binding Cassette Subfamily C Member 5	Protein Coding	42	GC03M183919	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCC5
CDA	Cytidine Deaminase	Protein Coding	42	GC01P020588	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDA
CLIP1	CAP-Gly Domain Containing Linker Protein 1	Protein Coding	42	GC12M122271	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLIP1
CRABP2	Cellular Retinoic Acid Binding Protein 2	Protein Coding	42	GC01M156701	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CRABP2
DCK	Deoxycytidine Kinase	Protein Coding	42	GC04P070992	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DCK
DDAH1	Dimethylarginine Dimethylaminohydrolase 1	Protein Coding	42	GC01M085318	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDAH1
GADD45A	Growth Arrest And DNA Damage Inducible Alpha	Protein Coding	42	GC01P067685	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GADD45A
GDAP1	Ganglioside Induced Differentiation Associated Protein 1	Protein Coding	42	GC08P074315	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GDAP1
MKI67	Marker Of Proliferation Ki-67	Protein Coding	42	GC10M128096	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MKI67
NCOR1	Nuclear Receptor Corepressor 1	Protein Coding	42	GC17M016029	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCOR1
NIN	Ninein	Protein Coding	42	GC14M050719	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NIN
PDGFA	Platelet Derived Growth Factor Subunit A	Protein Coding	42	GC07M000497	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDGFA
PDGFC	Platelet Derived Growth Factor C	Protein Coding	42	GC04M156760	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDGFC

						bin/carddisp.pl?gene=PDGFC
REST	RE1 Silencing Transcription Factor	Protein Coding	42	GC04P056907	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=REST
SLC8A3	Solute Carrier Family 8 Member A3	Protein Coding	42	GC14M070044	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC8A3
ASH2L	ASH2 Like, Histone Lysine Methyltransferase Complex Subunit	Protein Coding	41	GC08P038468	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ASH2L
CAPZA1	Capping Actin Protein Of Muscle Z-Line Subunit Alpha 1	Protein Coding	41	GC01P112619	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAPZA1
CAV2	Caveolin 2	Protein Coding	41	GC07P116287	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAV2
CD84	CD84 Molecule	Protein Coding	41	GC01M160541	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD84
CENPJ	Centromere Protein J	Protein Coding	41	GC13M024882	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CENPJ
FOXC1	Forkhead Box C1	Protein Coding	41	GC06P001610	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOXC1
HGFAC	HGF Activator	Protein Coding	41	GC04P003443	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HGFAC
KAT7	Lysine Acetyltransferase 7	Protein Coding	41	GC17P049788	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KAT7
LPAR3	Lysophosphatidic Acid Receptor 3	Protein Coding	41	GC01M084811	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LPAR3
MTMR3	Myotubularin Related Protein 3	Protein Coding	41	GC22P036836	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTMR3
NOX4	NADPH Oxidase 4	Protein Coding	41	GC11M089324	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOX4

PCSK6	Proprotein Convertase Subtilisin/Kexin Type 6	Protein Coding	41	GC15M117314	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PCSK6
PRDX4	Peroxiredoxin 4	Protein Coding	41	GC0XP023665	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRDX4
RPL31	Ribosomal Protein L31	Protein Coding	41	GC02P100985	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL31
SMG1	SMG1 Nonsense Mediated MRNA Decay Associated PI3K Related Kinase	Protein Coding	41	GC16M019212	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMG1
TFF1	Trefoil Factor 1	Protein Coding	41	GC21M042362	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TFF1
THOP1	Thimet Oligopeptidase 1	Protein Coding	41	GC19P002785	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=THOP1
TTPA	Alpha Tocopherol Transfer Protein	Protein Coding	41	GC08M063048	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TTPA
ASCC1	Activating Signal Cointegrator 1 Complex Subunit 1	Protein Coding	40	GC10M072096	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ASCC1
BRD1	Bromodomain Containing 1	Protein Coding	40	GC22M049773	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BRD1
CLDN5	Claudin 5	Protein Coding	40	GC22M019523	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLDN5
DHRS3	Dehydrogenase/Reductase 3	Protein Coding	40	GC01M012567	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DHRS3
FGL1	Fibrinogen Like 1	Protein Coding	40	GC08M017864	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGL1
MEOX2	Mesenchyme Homeobox 2	Protein Coding	40	GC07M015617	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MEOX2
MINK1	Misshapen Like Kinase 1	Protein Coding	40	GC17P004833	1.362989	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=MINK1
TPST1	Tyrosylprotein Sulfotransferase 1	Protein Coding	40	GC07P070512	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TPST1
TRAIP	TRAF Interacting Protein	Protein Coding	40	GC03M051209	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRAIP
TRIM63	Tripartite Motif Containing 63	Protein Coding	40	GC01M026062	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIM63
UNC5C	Unc-5 Netrin Receptor C	Protein Coding	40	GC04M095162	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UNC5C
VNN2	Vanin 2	Protein Coding	40	GC06M132743	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VNN2
BHLHE41	Basic Helix-Loop-Helix Family Member E41	Protein Coding	39	GC12M026120	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BHLHE41
MBD2	Methyl-CpG Binding Domain Protein 2	Protein Coding	39	GC18M054151	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MBD2
SEC14L2	SEC14 Like Lipid Binding 2	Protein Coding	39	GC22P030396	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEC14L2
SV2B	Synaptic Vesicle Glycoprotein 2B	Protein Coding	39	GC15P091099	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SV2B
BICD1	BICD Cargo Adaptor 1	Protein Coding	38	GC12P032107	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BICD1
BOK	BCL2 Family Apoptosis Regulator BOK	Protein Coding	38	GC02P241558	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BOK
ELL	Elongation Factor For RNA Polymerase II	Protein Coding	38	GC19M018443	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ELL
FCRL2	Fc Receptor Like 2	Protein Coding	38	GC01M157745	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCRL2

HSPB6	Heat Shock Protein Family B (Small) Member 6	Protein Coding	38	GC19M065727	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPB6
KCNK5	Potassium Two Pore Domain Channel Subfamily K Member 5	Protein Coding	38	GC06M066128	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KCNK5
MAPRE3	Microtubule Associated Protein RP/EB Family Member 3	Protein Coding	38	GC02P026935	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAPRE3
MIA3	MIA SH3 Domain ER Export Factor 3	Protein Coding	38	GC01P222618	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIA3
MTDH	Metadherin	Protein Coding	38	GC08P097644	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTDH
OLFM4	Olfactomedin 4	Protein Coding	38	GC13P053028	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OLFM4
SLCO1A2	Solute Carrier Organic Anion Transporter Family Member 1A2	Protein Coding	38	GC12M021264	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLCO1A2
BTG3	BTG Anti-Proliferation Factor 3	Protein Coding	37	GC21M017621	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BTG3
CERS6	Ceramide Synthase 6	Protein Coding	37	GC02P168455	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CERS6
CYP4F22	Cytochrome P450 Family 4 Subfamily F Member 22	Protein Coding	37	GC19P015508	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP4F22
EBAG9	Estrogen Receptor Binding Site Associated Antigen 9	Protein Coding	37	GC08P109536	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EBAG9
GLCCI1	Glucocorticoid Induced 1	Protein Coding	37	GC07P007974	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GLCCI1
KHDRBS3	KH RNA Binding Domain Containing, Signal Transduction Associated 3	Protein Coding	37	GC08P135457	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KHDRBS3
NCR1	Natural Cytotoxicity Triggering Receptor 1	Protein Coding	37	GC19P067389	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCR1

						bin/carddisp.pl?gene=NCR1
NLRP6	NLR Family Pyrin Domain Containing 6	Protein Coding	37	GC11P000269	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NLRP6
PDZD2	PDZ Domain Containing 2	Protein Coding	37	GC05P031639	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDZD2
PIWIL4	Piwi Like RNA-Mediated Gene Silencing 4	Protein Coding	37	GC11P094543	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIWIL4
SAP30BP	SAP30 Binding Protein	Protein Coding	37	GC17P075667	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAP30BP
TOR2A	Torsin Family 2 Member A	Protein Coding	37	GC09M127800	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TOR2A
YTHDF2	YTH N6-Methyladenosine RNA Binding Protein 2	Protein Coding	37	GC01P028800	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=YTHDF2
ZC3HC1	Zinc Finger C3HC-Type Containing 1	Protein Coding	37	GC07M130026	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZC3HC1
CBLN2	Cerebellin 2 Precursor	Protein Coding	36	GC18M072537	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CBLN2
CCNG2	Cyclin G2	Protein Coding	36	GC04P077158	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCNG2
CNTNAP4	Contactin Associated Protein Family Member 4	Protein Coding	36	GC16P076278	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNTNAP4
DERL1	Derlin 1	Protein Coding	36	GC08M123013	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DERL1
EMCN	Endomucin	Protein Coding	36	GC04M100395	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EMCN
GPR15	G Protein-Coupled Receptor 15	Protein Coding	36	GC03P098531	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPR15

MRPL17	Mitochondrial Ribosomal Protein L17	Protein Coding	36	GC11M006680	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MRPL17
PIWIL2	Piwi Like RNA-Mediated Gene Silencing 2	Protein Coding	36	GC08P022275	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIWIL2
SPAG16	Sperm Associated Antigen 16	Protein Coding	36	GC02P213284	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPAG16
TAS2R38	Taste 2 Receptor Member 38	Protein Coding	36	GC07M141972	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAS2R38
ARAP2	ArfGAP With RhoGAP Domain, Ankyrin Repeat And PH Domain 2	Protein Coding	34	GC04M035950	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARAP2
CASC3	CASC3 Exon Junction Complex Subunit	Protein Coding	34	GC17P040140	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CASC3
CASP12	Caspase 12 (Gene/Pseudogene)	Protein Coding	34	GC11M104885	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CASP12
CST2	Cystatin SA	Protein Coding	34	GC20M023805	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CST2
FOXJ3	Forkhead Box J3	Protein Coding	34	GC01M042176	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOXJ3
GALNT18	Polypeptide N-Acetylgalactosaminyltransferase 18	Protein Coding	34	GC11M011293	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GALNT18
IFNL2	Interferon Lambda 2	Protein Coding	34	GC19P039268	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFNL2
ALKBH5	AlkB Homolog 5, RNA Demethylase	Protein Coding	33	GC17P018183	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALKBH5
C1orf87	Chromosome 1 Open Reading Frame 87	Protein Coding	33	GC01M059987	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C1orf87
EBF4	EBF Family Member 4	Protein Coding	33	GC20P004231	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EBF4

						bin/cdddisp.pl?gene=EBF4
PCNP	PEST Proteolytic Signal Containing Nuclear Protein	Protein Coding	33	GC03P101574	1.362989	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=PCNP
TESPA1	Thymocyte Expressed, Positive Selection Associated 1	Protein Coding	33	GC12M054949	1.362989	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=TESPA1
TTC38	Tetratricopeptide Repeat Domain 38	Protein Coding	33	GC22P046267	1.362989	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=TTC38
NKAPL	NFKB Activating Protein Like	Protein Coding	32	GC06P028259	1.362989	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=NKAPL
RUBCN	Rubicon Autophagy Regulator	Protein Coding	32	GC03M198357	1.362989	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=RUBCN
MTREX	Mtr4 Exosome RNA Helicase	Protein Coding	30	GC05P055308	1.362989	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=MTREX
ENHO	Energy Homeostasis Associated	Protein Coding	29	GC09M034516	1.362989	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ENHO
IGSF22	Immunoglobulin Superfamily Member 22	Protein Coding	28	GC11M018705	1.362989	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=IGSF22
PALS2	Protein Associated With LIN7 2, MAGUK P55 Family Member	Protein Coding	27	GC07P024574	1.362989	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=PALS2
BLTP3A	Bridge-Like Lipid Transfer Protein Family Member 3A	Protein Coding	26	GC06P084361	1.362989	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=BLTP3A
PBOV1	Prostate And Breast Cancer Overexpressed 1	Protein Coding	26	GC06M138215	1.362989	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=PBOV1
FAM215A	Family With Sequence Similarity 215 Member A	RNA Gene	23	GC17P043917	1.362989	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=FAM215A
FER1L4	Fer-1 Like Family Member 4 (Pseudogene)	Pseudo gene	23	GC20M035558	1.362989	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=FER1L4

MIR191	MicroRNA 191	RNA Gene	23	GC03M051160	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR191
HAND2-AS1	HAND2 Antisense RNA 1	RNA Gene	21	GC04P173527	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HAND2-AS1
MIR199A2	MicroRNA 199a-2	RNA Gene	21	GC01M172235	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR199A2
MIR301A	MicroRNA 301a	RNA Gene	21	GC17M059151	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR301A
MAPKAPK5-AS1	MAPKAPK5 Antisense RNA 1	RNA Gene	20	GC12M111839	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAPKAPK5-AS1
MIR101-1	MicroRNA 101-1	RNA Gene	20	GC01M065058	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR101-1
MIR137	MicroRNA 137	RNA Gene	20	GC01M098046	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR137
MIR181A2	MicroRNA 181a-2	RNA Gene	20	GC09P124692	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR181A2
MIR760	MicroRNA 760	RNA Gene	20	GC01P093846	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR760
UMAD1	UBAP1-MVB12-Associated (UMA) Domain Containing 1	Protein Coding	20	GC07P007640	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UMAD1
MIR128-1	MicroRNA 128-1	RNA Gene	19	GC02P135665	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR128-1
MIR129-2	MicroRNA 129-2	RNA Gene	19	GC11P043772	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR129-2
MIR29B2	MicroRNA 29b-2	RNA Gene	19	GC01M207806	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR29B2
CBR3-AS1	CBR3 Antisense RNA 1	RNA Gene	18	GC21M036131	1.362989	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=CBR3-AS1
CYTOR	Cytoskeleton Regulator RNA	RNA Gene	18	GC02P088103	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYTOR
LINC-PINT	Long Intergenic Non-Protein Coding RNA, P53 Induced Transcript	RNA Gene	18	GC07M131004	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC-PINT
MIR218-1	MicroRNA 218-1	RNA Gene	18	GC04P020849	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR218-1
MIR31HG	MIR31 Host Gene	RNA Gene	18	GC09M021439	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR31HG
MIR543	MicroRNA 543	RNA Gene	18	GC14P109698	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR543
GUSBP1	GUSB Pseudogene 1	Pseudo gene	17	GC05P021337	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GUSBP1
LINC00452	Long Intergenic Non-Protein Coding RNA 452	RNA Gene	17	GC13P113884	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC00452
MIR1915	MicroRNA 1915	RNA Gene	17	GC10M021496	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR1915
MIR323A	MicroRNA 323a	RNA Gene	17	GC14P109973	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR323A
MIR573	MicroRNA 573	RNA Gene	17	GC04M024521	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR573
PICSAR	P38 Inhibited Cutaneous Squamous Cell Carcinoma Associated LincRNA	RNA Gene	17	GC21M050753	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PICSAR
SNHG14	Small Nucleolar RNA Host Gene 14	RNA Gene	17	GC15P041831	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNHG14
TSPEAR-AS2	TSPEAR Antisense RNA 2	RNA Gene	17	GC21P045172	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSPEAR-AS2

MIR1286	MicroRNA 1286	RNA Gene	16	GC22M020249	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR1286
MIR363	MicroRNA 363	RNA Gene	16	GC0XM134308	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR363
ZNF667-AS1	ZNF667 Antisense RNA 1 (Head To Head)	RNA Gene	16	GC19P056477	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF667-AS1
MIR4423	MicroRNA 4423	RNA Gene	15	GC01P085133	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR4423
MIR522	MicroRNA 522	RNA Gene	15	GC19P053751	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR522
IGKV2D-29	Immunoglobulin Kappa Variable 2D-29	Protein Coding	14	GC02P091319	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGKV2D-29
MIR5196	MicroRNA 5196	RNA Gene	14	GC19P066536	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR5196
MIR523	MicroRNA 523	RNA Gene	14	GC19P053698	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR523
LINC01483	Long Intergenic Non-Protein Coding RNA 1483	RNA Gene	13	GC17P069577	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01483
TSPOAP1-AS1	TSPOAP1, SUPT4H1 And RNF43 Antisense RNA 1	RNA Gene	13	GC17P058326	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSPOAP1-AS1
LOC730100	Uncharacterized LOC730100	RNA Gene	12	GC02P051033	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC730100
MIR5571	MicroRNA 5571	RNA Gene	11	GC22P022886	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR5571
CLYBL-AS3	CLYBL Antisense RNA 3	RNA Gene	10	GC13M099741	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLYBL-AS3

HSPE1P1	Heat Shock Protein Family E (Hsp10) Member 1 Pseudogene 1	Pseudo gene	9	GC20M039932	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPE1P1
CYP4F23P	Cytochrome P450 Family 4 Subfamily F Member 23, Pseudogene	Pseudo gene	8	GC19P015822	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP4F23P
RPL31P31	Ribosomal Protein L31 Pseudogene 31	Pseudo gene	8	GC04P033972	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL31P31
CDR1-AS	CDR1 Antisense RNA	RNA Gene	7	GC0XU902169	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDR1-AS
MRPS35P1	Mitochondrial Ribosomal Protein S35 Pseudogene 1	Pseudo gene	6	GC03P005446	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MRPS35P1
MS	Multiple Sclerosis	Genetic Locus	4	GC00U990205	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MS
NTT	Noncoding Transcript In T Cells	RNA Gene	3	GC06U990159	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NTT
LOC110973015	NOS3 5' Regulatory Region	Biological Region	2	GC07P150988	1.362989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC110973015
SCNN1A	Sodium Channel Epithelial 1 Subunit Alpha	Protein Coding	46	GC12M006346	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SCNN1A
NCAPD2	Non-SMC Condensin I Complex Subunit D2	Protein Coding	40	GC12P006493	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCAPD2
CDCA3	Cell Division Cycle Associated 3	Protein Coding	37	GC12M006844	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDCA3
S100A3	S100 Calcium Binding Protein A3	Protein Coding	37	GC01M153547	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=S100A3
UBAP2L	Ubiquitin Associated Protein 2 Like	Protein Coding	37	GC01P154219	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBAP2L
ZNF384	Zinc Finger Protein 384	Protein Coding	37	GC12M006903	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF384

						bin/carddisp.pl?gene=ZNF384
AQP10	Aquaporin 10	Protein Coding	36	GC01P154321	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AQP10
CH25H	Cholesterol 25-Hydroxylase	Protein Coding	36	GC10M089205	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CH25H
NOP2	NOP2 Nucleolar Protein	Protein Coding	36	GC12M006556	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOP2
UBE2Q1	Ubiquitin Conjugating Enzyme E2 Q1	Protein Coding	36	GC01M154548	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBE2Q1
TOMM7	Translocase Of Outer Mitochondrial Membrane 7	Protein Coding	35	GC07M022816	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TOMM7
LONRF2	LON Peptidase N-Terminal Domain And Ring Finger 2	Protein Coding	34	GC02M100274	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LONRF2
SPSB2	SplA/Ryanodine Receptor Domain And SOCS Box Containing 2	Protein Coding	34	GC12M006918	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPSB2
TAPBPL	TAP Binding Protein Like	Protein Coding	34	GC12P006451	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAPBPL
PLEKHG6	Pleckstrin Homology And RhoGEF Domain Containing G6	Protein Coding	33	GC12P006310	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLEKHG6
RMI2	RecQ Mediated Genome Instability 2	Protein Coding	33	GC16P012113	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RMI2
SHE	Src Homology 2 Domain Containing E	Protein Coding	33	GC01M154556	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SHE
IFFO1	Intermediate Filament Family Orphan 1	Protein Coding	32	GC12M006538	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFFO1
PRM1	Protamine 1	Protein Coding	30	GC16M012266	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRM1

TDRD10	Tudor Domain Containing 10	Protein Coding	29	GC01P154502	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TDRD10
CFAP141	Cilia And Flagella Associated Protein 141	Protein Coding	21	GC01M154200	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CFAP141
LOC400499	Putative Uncharacterized Protein LOC400499	Protein Coding	21	GC16M012281	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC400499
SCARNA12	Small Cajal Body-Specific RNA 12	RNA Gene	21	GC12M007743	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SCARNA12
ACTA2-AS1	ACTA2 Antisense RNA 1	RNA Gene	16	GC10P088932	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACTA2-AS1
CD27-AS1	CD27 Antisense RNA 1	RNA Gene	16	GC12M006439	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD27-AS1
IL6R-AS1	IL6R Antisense RNA 1	RNA Gene	12	GC01M154544	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL6R-AS1
SNORA58B	Small Nucleolar RNA, H/ACA Box 58B	RNA Gene	12	GC01P154261	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNORA58B
UBE2Q1-AS1	UBE2Q1 Antisense RNA 1	RNA Gene	12	GC01P154553	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBE2Q1-AS1
LINC01845	Long Intergenic Non-Protein Coding RNA 1845	RNA Gene	10	GC05M159448	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01845
ENSG00000256433	Novel Transcript	RNA Gene	9	GC12P006393	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000256433
PSMD8P1	Proteasome 26S Subunit, Non-ATPase, 8 Pseudogene 1	Pseudo gene	9	GC01M154414	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMD8P1
RNU7-57P	RNA, U7 Small Nuclear 57 Pseudogene	Pseudo gene	9	GC01P154382	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU7-57P
ENSG00000219410	Novel Transcript	RNA Gene	8	GC12P021065	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000219410

						bin/carddisp.pl?gene=ENSG00000219410
ENSG00000286116	FAS Antisense RNA 1	Uncategorized	8	GC10M088990	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000286116
ENSG00000247853	Novel Transcript, Antisense To CHD4	RNA Gene	7	GC12P021050	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000247853
ENSG00000225544	Pseudogene Similar To Part Of Metallophosphoesterase 1 (MPPE1)	Pseudogene	6	GC22M021885	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000225544
RAB1AP1	RAB1A Pseudogene 1	Pseudogene	6	GC02M190993	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAB1AP1
MF281465		RNA Gene	5	GC02M191013	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MF281465
MTCYBP42	MT-CYB Pseudogene 42	Pseudogene	5	GC07M022748	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTCYBP42
lnc-HLA-DQB1-2		RNA Gene	5	GC06M066017	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-HLA-DQB1-2
lnc-PLEKHG6-5		RNA Gene	5	GC12P021034	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-PLEKHG6-5
lnc-PRM1-3		RNA Gene	5	GC16M012282	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-PRM1-3
lnc-PRM1-5		RNA Gene	5	GC16M012280	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-PRM1-5
lnc-RMI2-2		RNA Gene	5	GC16P012119	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-RMI2-2
ENSG00000262636	Mitochondrial Ribosomal Protein L18 (MRPL18) Pseudogene	Pseudogene	4	GC16M012284	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000262636
HSALNG0049436		RNA Gene	4	GC06P084614	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049436

HSALNG0075913		RNA Gene	4	GC10P006045	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0075913
HSALNG0079553		RNA Gene	4	GC10M088999	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0079553
HSALNG0088851		RNA Gene	4	GC12P021614	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0088851
HSALNG0088852		RNA Gene	4	GC12P021615	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0088852
LOC105371082	Uncharacterized LOC105371082	RNA Gene	4	GC16P011249	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC105371082
RF00017-3467		RNA Gene	4	GC22P038730	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-3467
RF00017-3468		RNA Gene	4	GC22P038733	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-3468
piR-49732-033		RNA Gene	4	GC10M006055	1.361563	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-49732-033
CDKN2B-AS1	CDKN2B Antisense RNA 1	RNA Gene	22	GC09P021994	1.360434	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDKN2B-AS1
RICTOR	RPTOR Independent Companion Of MTOR Complex 2	Protein Coding	42	GC05M038937	1.359894	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RICTOR
GALNS	Galactosamine (N-Acetyl)-6-Sulfatase	Protein Coding	46	GC16M088813	1.358621	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GALNS
C4BPB	Complement Component 4 Binding Protein Beta	Protein Coding	40	GC01P207088	1.356425	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C4BPB
TTF2	Transcription Termination Factor 2	Protein Coding	39	GC01P117060	1.356425	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TTF2
TRIP11	Thyroid Hormone Receptor Interactor 11	Protein Coding	41	GC14M091965	1.355733	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIP11

						bin/carddisp.pl?gene=TRIP11
CCBE1	Collagen And Calcium Binding EGF Domains 1	Protein Coding	41	GC18M059430	1.353179	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCBE1
S100A7	S100 Calcium Binding Protein A7	Protein Coding	39	GC01M153457	1.350399	https://www.genecards.org/cgi-bin/carddisp.pl?gene=S100A7
SEMA5A	Semaphorin 5A	Protein Coding	40	GC05M009036	1.350374	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEMA5A
SPZ1	Spermatogenic Leucine Zipper 1	Protein Coding	34	GC05P080319	1.350374	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPZ1
ERN1	Endoplasmic Reticulum To Nucleus Signaling 1	Protein Coding	44	GC17M064039	1.345868	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ERN1
LTC4S	Leukotriene C4 Synthase	Protein Coding	41	GC05P179793	1.339262	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LTC4S
MIR24-1	MicroRNA 24-1	RNA Gene	20	GC09P095086	1.338933	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR24-1
CNTNAP2	Contactin Associated Protein 2	Protein Coding	43	GC07P146116	1.337749	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNTNAP2
UCN3	Urocortin 3	Protein Coding	36	GC10P005396	1.334767	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UCN3
UCN2	Urocortin 2	Protein Coding	32	GC03M048561	1.334767	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UCN2
MIRLET7G	MicroRNA Let-7g	RNA Gene	20	GC03M052268	1.332631	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIRLET7G
TYRP1	Tyrosinase Related Protein 1	Protein Coding	45	GC09P012683	1.329633	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TYRP1
IFNAR2	Interferon Alpha And Beta Receptor Subunit 2	Protein Coding	47	GC21P033229	1.329088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFNAR2

RNASET2	Ribonuclease T2	Protein Coding	43	GC06M166924	1.329088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNASET2
DGCR8	DGCR8 Microprocessor Complex Subunit	Protein Coding	40	GC22P020080	1.329088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DGCR8
SCARF2	Scavenger Receptor Class F Member 2	Protein Coding	40	GC22M020424	1.329088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SCARF2
MED15	Mediator Complex Subunit 15	Protein Coding	39	GC22P035865	1.329088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MED15
PLCL1	Phospholipase C Like 1 (Inactive)	Protein Coding	38	GC02P197804	1.329088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLCL1
TELO2	Telomere Maintenance 2	Protein Coding	38	GC16P001493	1.329088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TELO2
DCTPP1	DCTP Pyrophosphatase 1	Protein Coding	35	GC16M037170	1.329088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DCTPP1
RMDN2	Regulator Of Microtubule Dynamics 2	Protein Coding	32	GC02P037923	1.329088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RMDN2
SEPTIN5	Septin 5	Protein Coding	29	GC22P019714	1.329088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEPTIN5
PHETA1	PH Domain Containing Endocytic Trafficking Adaptor 1	Protein Coding	27	GC12M111361	1.329088	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PHETA1
PTGES3	Prostaglandin E Synthase 3	Protein Coding	43	GC12M056866	1.328492	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTGES3
P2RX6	Purinergic Receptor P2X 6	Protein Coding	41	GC22P035894	1.325502	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RX6
ITPR3	Inositol 1,4,5-Trisphosphate Receptor Type 3	Protein Coding	44	GC06P033620	1.324167	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITPR3
AARS2	Alanyl-TRNA Synthetase 2, Mitochondrial	Protein Coding	42	GC06M066237	1.315896	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=AARS2
POLR2B	RNA Polymerase II Subunit B	Protein Coding	42	GC04P056977	1.315849	https://www.genecards.org/cgi-bin/carddisp.pl?gene=POLR2B
MAGT1	Magnesium Transporter 1	Protein Coding	39	GC0XM078008	1.315849	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAGT1
MT-CO1	Mitochondrially Encoded Cytochrome C Oxidase I	Protein Coding	34	GCMT P005906	1.315849	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MT-CO1
CYTL1	Cytokine Like 1	Protein Coding	32	GC04M005016	1.315397	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYTL1
TAF3	TATA-Box Binding Protein Associated Factor 3	Protein Coding	37	GC10P007860	1.312455	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAF3
SLC6A4	Solute Carrier Family 6 Member 4	Protein Coding	46	GC17M030194	1.30904	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC6A4
MLANA	Melan-A	Protein Coding	38	GC09P006557	1.30585	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MLANA
PTS	6-Pyruvoyltetrahydropterin Synthase	Protein Coding	44	GC11P112226	1.304664	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTS
FHL1	Four And A Half LIM Domains 1	Protein Coding	44	GC0XP136146	1.303164	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FHL1
MIR663A	MicroRNA 663a	RNA Gene	16	GC20M026189	1.303164	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR663A
ZEB1	Zinc Finger E-Box Binding Homeobox 1	Protein Coding	46	GC10P031318	1.302217	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZEB1
CCKAR	Cholecystokinin A Receptor	Protein Coding	44	GC04M026483	1.302217	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCKAR
NR5A2	Nuclear Receptor Subfamily 5 Group A Member 2	Protein Coding	44	GC01P199996	1.302217	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR5A2

PRDM16	PR/SET Domain 16	Protein Coding	44	GC01P003946	1.302217	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRDM16
SATB2	SATB Homeobox 2	Protein Coding	43	GC02M199269	1.302217	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SATB2
NDUFS4	NADH:Ubiquinone Oxidoreductase Subunit S4	Protein Coding	42	GC05P053560	1.302217	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NDUFS4
YIPF3	Yip1 Domain Family Member 3	Protein Coding	35	GC06M066209	1.302217	https://www.genecards.org/cgi-bin/carddisp.pl?gene=YIPF3
CCDC154	Coiled-Coil Domain Containing 154	Protein Coding	29	GC16M001434	1.302217	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCDC154
PSMD9	Proteasome 26S Subunit, Non-ATPase 9	Protein Coding	41	GC12P126233	1.302004	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMD9
SH3TC2	SH3 Domain And Tetratricopeptide Repeats 2	Protein Coding	37	GC05M148923	1.302004	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SH3TC2
HRG	Histidine Rich Glycoprotein	Protein Coding	45	GC03P186660	1.300443	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HRG
ADCY10	Adenylate Cyclase 10	Protein Coding	43	GC01M167809	1.299235	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADCY10
ARRB1	Arrestin Beta 1	Protein Coding	42	GC11M090410	1.290536	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARRB1
CD177	CD177 Molecule	Protein Coding	38	GC19P043353	1.286208	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD177
MAVS	Mitochondrial Antiviral Signaling Protein	Protein Coding	37	GC20P004265	1.279931	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAVS
ZNF365	Zinc Finger Protein 365	Protein Coding	38	GC10P062374	1.277035	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF365
IRF6	Interferon Regulatory Factor 6	Protein Coding	42	GC01M209785	1.276064	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=IRF6
SNAI1	Snail Family Transcriptional Repressor 1	Protein Coding	42	GC20P049982	1.275204	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNAI1
PTBP1	Polypyrimidine Tract Binding Protein 1	Protein Coding	41	GC19P000797	1.27503	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTBP1
CARD16	Caspase Recruitment Domain Family Member 16	Protein Coding	35	GC11M105041	1.268728	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CARD16
VKORC1	Vitamin K Epoxide Reductase Complex Subunit 1	Protein Coding	46	GC16M037224	1.26575	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VKORC1
TSPAN8	Tetraspanin 8	Protein Coding	38	GC12M071125	1.264643	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSPAN8
RPS27A	Ribosomal Protein S27a	Protein Coding	41	GC02P055231	1.264195	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS27A
PAK1	P21 (RAC1) Activated Kinase 1	Protein Coding	46	GC11M090480	1.263135	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PAK1
MIR379	MicroRNA 379	RNA Gene	17	GC14P109984	1.25984	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR379
ALOX12	Arachidonate 12-Lipoxygenase, 12S Type	Protein Coding	43	GC17P006995	1.259021	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALOX12
AZU1	Azurocidin 1	Protein Coding	39	GC19P000825	1.255604	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AZU1
DOCK8	Dedicator Of Cytokinesis 8	Protein Coding	43	GC09P000214	1.251442	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DOCK8
HMGCR	3-Hydroxy-3-Methylglutaryl-CoA Reductase	Protein Coding	45	GC05P075336	1.250626	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HMGCR
ADAMTS1	ADAM Metallopeptidase With Thrombospondin Type 1 Motif 1	Protein Coding	44	GC21M026835	1.250154	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAMTS1

SACS	Sacsin Molecular Chaperone	Protein Coding	37	GC13M023288	1.249107	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SACS
MSX1	Msh Homeobox 1	Protein Coding	44	GC04P004861	1.248302	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MSX1
MIR197	MicroRNA 197	RNA Gene	20	GC01P109549	1.240171	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR197
NUP160	Nucleoporin 160	Protein Coding	39	GC11M089379	1.235978	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NUP160
PTPN1	Protein Tyrosine Phosphatase Non-Receptor Type 1	Protein Coding	48	GC20P050510	1.233077	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPN1
NARS1	Asparaginyl-TRNA Synthetase 1	Protein Coding	34	GC18M057601	1.230197	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NARS1
SLC9A3R1	SLC9A3 Regulator 1	Protein Coding	44	GC17P074749	1.225507	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC9A3R1
PMP22	Peripheral Myelin Protein 22	Protein Coding	41	GC17M015229	1.222336	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PMP22
CD200R1L	CD200 Receptor 1 Like	Protein Coding	29	GC03M112815	1.219312	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD200R1L
LINC01996	Long Intergenic Non-Protein Coding RNA 1996	RNA Gene	10	GC17P004611	1.219312	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01996
C17orf114	Chromosome 17 Open Reading Frame 114	Protein Coding	9	GC17M004806	1.219312	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C17orf114
RGS1	Regulator Of G Protein Signaling 1	Protein Coding	37	GC01P192575	1.210462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RGS1
UCP2	Uncoupling Protein 2	Protein Coding	44	GC11M073974	1.210295	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UCP2
PEBP1	Phosphatidylethanolamine Binding Protein 1	Protein Coding	43	GC12P118135	1.209291	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=PEBP1
PTPRJ	Protein Tyrosine Phosphatase Receptor Type J	Protein Coding	46	GC11P048002	1.209265	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPRJ
PRKCZ	Protein Kinase C Zeta	Protein Coding	47	GC01P003912	1.208204	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKCZ
CTTN	Cortactin	Protein Coding	41	GC11P070398	1.207488	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTTN
LCP2	Lymphocyte Cytosolic Protein 2	Protein Coding	41	GC05M170246	1.207488	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LCP2
AMT	Aminomethyltransferase	Protein Coding	44	GC03M051187	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AMT
PPIF	Peptidylprolyl Isomerase F	Protein Coding	43	GC10P092351	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPIF
PEX13	Peroxisomal Biogenesis Factor 13	Protein Coding	40	GC02P061017	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PEX13
REV1	REV1 DNA Directed Polymerase	Protein Coding	40	GC02M099383	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=REV1
DHX16	DEAH-Box Helicase 16	Protein Coding	39	GC06M030653	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DHX16
GTF2H4	General Transcription Factor IIH Subunit 4	Protein Coding	39	GC06P083679	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GTF2H4
LIMD1	LIM Domain Containing 1	Protein Coding	38	GC03P045555	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LIMD1
PAPOLG	Poly(A) Polymerase Gamma	Protein Coding	38	GC02P060756	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PAPOLG
RASSF5	Ras Association Domain Family Member 5	Protein Coding	38	GC01P206507	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RASSF5

CARD6	Caspase Recruitment Domain Family Member 6	Protein Coding	37	GC05P040841	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CARD6
PSMG1	Proteasome Assembly Chaperone 1	Protein Coding	37	GC21M039174	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMG1
TCF19	Transcription Factor 19	Protein Coding	37	GC06P083684	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TCF19
IKZF4	IKAROS Family Zinc Finger 4	Protein Coding	36	GC12P056007	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IKZF4
NRBF2	Nuclear Receptor Binding Factor 2	Protein Coding	36	GC10P063133	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NRBF2
SH3BP1	SH3 Domain Binding Protein 1	Protein Coding	36	GC22P037634	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SH3BP1
LRRC2	Leucine Rich Repeat Containing 2	Protein Coding	35	GC03M046515	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRRC2
PUS10	Pseudouridine Synthase 10	Protein Coding	35	GC02M060940	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PUS10
ZBTB7C	Zinc Finger And BTB Domain Containing 7C	Protein Coding	33	GC18M048026	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZBTB7C
TTC33	Tetratricopeptide Repeat Domain 33	Protein Coding	32	GC05M040512	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TTC33
INKA1	InkA Box Actin Regulator 1	Protein Coding	24	GC03P049803	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=INKA1
AHSA2P	Activator Of HSP90 ATPase Homolog 2, Pseudogene	Pseudo gene	22	GC02P061179	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AHSA2P
CCR5AS	CCR5 Antisense RNA	RNA Gene	12	GC03M046365	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCR5AS
IL6ST-DT	IL6ST Divergent Transcript	RNA Gene	12	GC05P055996	1.206704	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=IL6ST-DT
NONOP2	Non-POU Domain Containing, Octamer-Binding Pseudogene 2	Pseudo gene	10	GC02M060937	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NONOP2
USP34-DT	USP34 Divergent Transcript	RNA Gene	10	GC02P061473	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=USP34-DT
ALDH7A1P4	Aldehyde Dehydrogenase 7 Family Member A1 Pseudogene 4	Pseudo gene	9	GC10M062740	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALDH7A1P4
ENSG00000235888	Novel Transcript	RNA Gene	9	GC21M038988	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000235888
RPS12P3	Ribosomal Protein S12 Pseudogene 3	Pseudo gene	9	GC02M060938	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS12P3
RPS15AP38	Ribosomal Protein S15a Pseudogene 38	Pseudo gene	9	GC22M036421	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS15AP38
ENSG00000199332	Y RNA	RNA Gene	8	GC06M065930	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000199332
ENSG00000267520	Novel Transcript	RNA Gene	8	GC02P060925	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000267520
ENSG00000272221	Novel Transcript	RNA Gene	8	GC06M065927	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000272221
LOC124901197	Small Nucleolar RNA U13	RNA Gene	8	GC05M056001	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124901197
RN7SL51P	RNA, 7SL, Cytoplasmic 51, Pseudogene	Pseudo gene	8	GC02M062262	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RN7SL51P
RNA5SP184	RNA, 5S Ribosomal Pseudogene 184	Pseudo gene	8	GC05M056146	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNA5SP184
RNU6-299P	RNA, U6 Small Nuclear 299, Pseudogene	Pseudo gene	8	GC05P056125	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU6-299P

RNU6-850P	RNA, U6 Small Nuclear 850, Pseudogene	Pseudo gene	8	GC06M031756	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU6-850P
RPL23AP12	Ribosomal Protein L23a Pseudogene 12	Pseudo gene	8	GC21P039127	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL23AP12
AIMP1P2	Aminoacyl TRNA Synthetase Complex Interacting Multifunctional Protein 1 Pseudogene 2	Pseudo gene	7	GC01M172856	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AIMP1P2
HNRNPA1P41	Heterogeneous Nuclear Ribonucleoprotein A1 Pseudogene 41	Pseudo gene	6	GC09M004946	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HNRNPA1P41
ENSG00000285552	Novel Transcript	RNA Gene	5	GC05P040463	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000285552
ENSG00000285616	Novel Transcript	RNA Gene	5	GC05M040474	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000285616
MG828730-053		RNA Gene	5	GC06M067894	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MG828730-053
NONHSAG034948.2		RNA Gene	5	GC03P046242	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NONHSAG034948.2
RF00017-4256		RNA Gene	5	GC05P055987	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-4256
RF00017-5028		RNA Gene	5	GC06M068702	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-5028
lnc-AFF3-1		RNA Gene	5	GC02M100109	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-AFF3-1
lnc-IL31RA-5		RNA Gene	5	GC05P056122	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-IL31RA-5
lnc-IL6ST-2		RNA Gene	5	GC05M056111	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-IL6ST-2

lnc-RAB5B-2	RNA Gene	5	GC12P055998	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-RAB5B-2
lnc-ZCCHC24-7	RNA Gene	5	GC10M079298	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ZCCHC24-7
HSALNG0015261	RNA Gene	4	GC02M060924	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0015261
HSALNG0017286	RNA Gene	4	GC02P100109	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0017286
HSALNG0069758	RNA Gene	4	GC09M004978	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0069758
HSALNG0079128	RNA Gene	4	GC10P092600	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0079128
HSALNG0091478	RNA Gene	4	GC12P056006	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0091478
HSALNG0133104	RNA Gene	4	GC21M039035	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0133104
MK280144-361	RNA Gene	4	GC02P100121	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MK280144-361
MN309188	RNA Gene	4	GC10M079292	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MN309188
RF00001-253	RNA Gene	4	GC05M056283	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00001-253
RF00017-3020	RNA Gene	4	GC02M099997	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-3020
RF00017-3680	RNA Gene	4	GC03P049643	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-3680
RF00017-4260	RNA Gene	4	GC05P056157	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-4260

						bin/carddisp.pl?gene=RF00017-4260
Inc-TTC33-6		RNA Gene	4	GC05M040484	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=Inc-TTC33-6
piR-43099-059		RNA Gene	4	GC10M079279	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-43099-059
piR-58297-114		RNA Gene	4	GC12M055999	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-58297-114
piR-58029-003		RNA Gene	3	GC02M060941	1.206704	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-58029-003
RARS1	Arginyl-TRNA Synthetase 1	Protein Coding	35	GC05P168487	1.20346	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RARS1
C2	Complement C2	Protein Coding	46	GC06P031897	1.202754	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C2
NR4A1	Nuclear Receptor Subfamily 4 Group A Member 1	Protein Coding	45	GC12P052022	1.199172	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR4A1
STAT2	Signal Transducer And Activator Of Transcription 2	Protein Coding	45	GC12M056341	1.196838	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STAT2
NPHS2	NPHS2 Stomatin Family Member, Podocin	Protein Coding	41	GC01M179519	1.196341	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NPHS2
NOX1	NADPH Oxidase 1	Protein Coding	41	GC0XM100843	1.195215	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOX1
CCNA2	Cyclin A2	Protein Coding	44	GC04M121816	1.194973	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCNA2
CSF2RA	Colony Stimulating Factor 2 Receptor Subunit Alpha	Protein Coding	43	GC0XP001676	1.186367	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSF2RA
TPT1	Tumor Protein, Translationally-Controlled 1	Protein Coding	45	GC13M045333	1.185415	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TPT1

LMO2	LIM Domain Only 2	Protein Coding	41	GC11M033858	1.185415	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LMO2
SERPINB5	Serpin Family B Member 5	Protein Coding	41	GC18P063476	1.185415	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPINB5
TRADD	TNFRSF1A Associated Via Death Domain	Protein Coding	41	GC16M067154	1.185415	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRADD
DDX18	DEAD-Box Helicase 18	Protein Coding	40	GC02P122504	1.185415	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDX18
RPN2	Ribophorin II	Protein Coding	40	GC20P037178	1.185415	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPN2
NAV2	Neuron Navigator 2	Protein Coding	38	GC11P019345	1.185415	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NAV2
SARM1	Sterile Alpha And TIR Motif Containing 1	Protein Coding	38	GC17P028364	1.185415	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SARM1
SLC30A6	Solute Carrier Family 30 Member 6	Protein Coding	37	GC02P032166	1.185415	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC30A6
BTN3A2	Butyrophilin Subfamily 3 Member A2	Protein Coding	36	GC06P026365	1.185415	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BTN3A2
E2F3-IT1	E2F3 Intronic Transcript 1	RNA Gene	12	GC06P020403	1.185415	https://www.genecards.org/cgi-bin/carddisp.pl?gene=E2F3-IT1
SKP1	S-Phase Kinase Associated Protein 1	Protein Coding	41	GC05M134148	1.182462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SKP1
RPL3	Ribosomal Protein L3	Protein Coding	40	GC22M057593	1.182462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL3
UBR5	Ubiquitin Protein Ligase E3 Component N-Recognin 5	Protein Coding	40	GC08M102252	1.182462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBR5
ORMDL3	ORMDL Sphingolipid Biosynthesis Regulator 3	Protein Coding	39	GC17M039921	1.182462	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=ORMDL3
CDH22	Cadherin 22	Protein Coding	38	GC20M046173	1.182462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDH22
ICAM4	Intercellular Adhesion Molecule 4 (Landsteiner-Wiener Blood Group)	Protein Coding	36	GC19P010286	1.182462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ICAM4
TSPAN33	Tetraspanin 33	Protein Coding	36	GC07P131929	1.182462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSPAN33
ZNF318	Zinc Finger Protein 318	Protein Coding	35	GC06M066206	1.182462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF318
UMODL1	Uromodulin Like 1	Protein Coding	34	GC21P042062	1.182462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UMODL1
CTIF	Cap Binding Complex Dependent Translation Initiation Factor	Protein Coding	32	GC18P048539	1.182462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTIF
CEP170B	Centrosomal Protein 170B	Protein Coding	30	GC14P109737	1.182462	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEP170B
STXBP2	Syntaxin Binding Protein 2	Protein Coding	44	GC19P007856	1.181562	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STXBP2
THAP1	THAP Domain Containing 1	Protein Coding	39	GC08M042836	1.181562	https://www.genecards.org/cgi-bin/carddisp.pl?gene=THAP1
CPB2	Carboxypeptidase B2	Protein Coding	44	GC13M046053	1.180554	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CPB2
DRD2	Dopamine Receptor D2	Protein Coding	48	GC11M113409	1.180007	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DRD2
PCBD1	Pterin-4 Alpha-Carbinolamine Dehydratase 1	Protein Coding	43	GC10M070882	1.172204	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PCBD1
MCHR1	Melanin Concentrating Hormone Receptor 1	Protein Coding	40	GC22P040679	1.172204	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MCHR1

MAGEA1	MAGE Family Member A1	Protein Coding	37	GC0XP153179	1.169714	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAGEA1
TRO	Trophinin	Protein Coding	37	GC0XP054920	1.169714	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRO
GNRH1	Gonadotropin Releasing Hormone 1	Protein Coding	39	GC08M025419	1.167608	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GNRH1
FGF8	Fibroblast Growth Factor 8	Protein Coding	45	GC10M101770	1.164202	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGF8
TXNIP	Thioredoxin Interacting Protein	Protein Coding	37	GC01M145992	1.162784	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TXNIP
CXCL3	C-X-C Motif Chemokine Ligand 3	Protein Coding	36	GC04M074036	1.161772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCL3
INPP5D	Inositol Polyphosphate-5-Phosphatase D	Protein Coding	44	GC02P233059	1.161755	https://www.genecards.org/cgi-bin/carddisp.pl?gene=INPP5D
HIP1	Huntingtin Interacting Protein 1	Protein Coding	40	GC07M075533	1.161755	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HIP1
CORD1	Cone Rod Dystrophy 1 (Autosomal Dominant)	Genetic Locus	4	GC18U990008	1.161755	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CORD1
LRG1	Leucine Rich Alpha-2-Glycoprotein 1	Protein Coding	39	GC19M005467	1.159959	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRG1
FYN	FYN Proto-Oncogene, Src Family Tyrosine Kinase	Protein Coding	45	GC06M111660	1.15329	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FYN
MORC3	MORC Family CW-Type Zinc Finger 3	Protein Coding	34	GC21P036320	1.153072	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MORC3
DPP6	Dipeptidyl Peptidase Like 6	Protein Coding	44	GC07P153748	1.151047	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DPP6
COL4A4	Collagen Type IV Alpha 4 Chain	Protein Coding	43	GC02M226973	1.151047	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL4A4

						bin/carddisp.pl?gene=COL4A4
SEPSECS	Sep (O-Phosphoserine) TRNA:Sec (Selenocysteine) TRNA Synthase	Protein Coding	42	GC04M025121	1.151047	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEPSECS
FST	Follistatin	Protein Coding	45	GC05P053480	1.146774	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FST
CCNB1	Cyclin B1	Protein Coding	44	GC05P069167	1.142886	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCNB1
ABCA3	ATP Binding Cassette Subfamily A Member 3	Protein Coding	48	GC16M002275	1.142593	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCA3
KRT7	Keratin 7	Protein Coding	41	GC12P052232	1.142593	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KRT7
FPR1	Formyl Peptide Receptor 1	Protein Coding	46	GC19M051745	1.141736	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FPR1
ATP4A	ATPase H+/K+ Transporting Subunit Alpha	Protein Coding	40	GC19M066540	1.135156	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP4A
IGLL5	Immunoglobulin Lambda Like Polypeptide 5	Protein Coding	29	GC22P036016	1.134276	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGLL5
MIR486-1	MicroRNA 486-1	RNA Gene	18	GC08M041660	1.132564	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR486-1
HCP5	HLA Complex P5	RNA Gene	29	GC06P031400	1.131999	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HCP5
NOTCH3	Notch Receptor 3	Protein Coding	48	GC19M015159	1.131546	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOTCH3
TPSB2	Tryptase Beta 2	Protein Coding	39	GC16M001227	1.128264	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TPSB2
KIF21B	Kinesin Family Member 21B	Protein Coding	35	GC01M200938	1.128264	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIF21B

MEST	Mesoderm Specific Transcript	Protein Coding	40	GC07P130486	1.125553	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MEST
C1GALT1C1	C1GALT1 Specific Chaperone 1	Protein Coding	36	GC0XM120625	1.125553	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C1GALT1C1
MME	Membrane Metalloendopeptidase	Protein Coding	48	GC03P155024	1.1255	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MME
TNNT3	Troponin T3, Fast Skeletal Type	Protein Coding	42	GC11P001920	1.123285	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNNT3
SLC16A4	Solute Carrier Family 16 Member 4	Protein Coding	38	GC01M110362	1.122542	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC16A4
TP53AIP1	Tumor Protein P53 Regulated Apoptosis Inducing Protein 1	Protein Coding	34	GC11M128934	1.121662	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TP53AIP1
FOSL2	FOS Like 2, AP-1 Transcription Factor Subunit	Protein Coding	40	GC02P028392	1.118083	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOSL2
TDRD9	Tudor Domain Containing 9	Protein Coding	39	GC14P109720	1.116959	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TDRD9
ANXA7	Annexin A7	Protein Coding	41	GC10M073375	1.115158	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANXA7
NKX2-5	NK2 Homeobox 5	Protein Coding	43	GC05M173232	1.114008	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NKX2-5
POFUT2	Protein O-Fucosyltransferase 2	Protein Coding	37	GC21M045263	1.114008	https://www.genecards.org/cgi-bin/carddisp.pl?gene=POFUT2
ZFAT	Zinc Finger And AT-Hook Domain Containing	Protein Coding	36	GC08M134477	1.114008	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZFAT
ARHGAP45	Rho GTPase Activating Protein 45	Protein Coding	29	GC19P001065	1.114008	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARHGAP45
CENPE	Centromere Protein E	Protein Coding	44	GC04M103105	1.11168	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CENPE

						bin/carddisp.pl?gene=CENPE
INHBA	Inhibin Subunit Beta A	Protein Coding	44	GC07M041668	1.11168	https://www.genecards.org/cgi-bin/carddisp.pl?gene=INHBA
EDNRA	Endothelin Receptor Type A	Protein Coding	47	GC04P147480	1.10989	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EDNRA
NM	Neutrophil Migration	Genetic Locus	5	GC07U990060	1.108623	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NM
VSIR	V-Set Immunoregulatory Receptor	Protein Coding	32	GC10M071748	1.099166	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VSIR
USP8	Ubiquitin Specific Peptidase 8	Protein Coding	46	GC15P050424	1.097772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=USP8
KLF2	Kruppel Like Factor 2	Protein Coding	39	GC19P066201	1.094939	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLF2
JUND	JunD Proto-Oncogene, AP-1 Transcription Factor Subunit	Protein Coding	41	GC19M018279	1.093878	https://www.genecards.org/cgi-bin/carddisp.pl?gene=JUND
HTR1A	5-Hydroxytryptamine Receptor 1A	Protein Coding	45	GC05M063960	1.092535	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HTR1A
DCT	Dopachrome Tautomerase	Protein Coding	43	GC13M094436	1.092535	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DCT
CUL5	Cullin 5	Protein Coding	42	GC11P108008	1.092128	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CUL5
ETV7	ETS Variant Transcription Factor 7	Protein Coding	34	GC06M066113	1.092128	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ETV7
FGF14	Fibroblast Growth Factor 14	Protein Coding	42	GC13M101710	1.087138	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGF14
NEU1	Neuraminidase 1	Protein Coding	44	GC06M031857	1.083123	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NEU1

IGHV4-38-2	Immunoglobulin Heavy Variable 4-38-2	Protein Coding	8	GC14U901616	1.076324	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGHV4-38-2
KLK7	Kallikrein Related Peptidase 7	Protein Coding	40	GC19M066197	1.073234	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLK7
IVL	Involucrin	Protein Coding	37	GC01P152909	1.073234	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IVL
NR1I2	Nuclear Receptor Subfamily 1 Group I Member 2	Protein Coding	44	GC03P119780	1.072242	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR1I2
PSMA3	Proteasome 20S Subunit Alpha 3	Protein Coding	42	GC14P058244	1.071438	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMA3
LASP1	LIM And SH3 Protein 1	Protein Coding	41	GC17P038869	1.071438	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LASP1
H1-5	H1.5 Linker Histone, Cluster Member	Protein Coding	33	GC06M066505	1.071438	https://www.genecards.org/cgi-bin/carddisp.pl?gene=H1-5
NUP205	Nucleoporin 205	Protein Coding	37	GC07P135557	1.069558	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NUP205
AIFM1	Apoptosis Inducing Factor Mitochondria Associated 1	Protein Coding	46	GC0XM130129	1.06615	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AIFM1
KDM1A	Lysine Demethylase 1A	Protein Coding	46	GC01P023019	1.06615	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KDM1A
TDO2	Tryptophan 2,3-Dioxygenase	Protein Coding	44	GC04P155854	1.065416	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TDO2
FOXO4	Forkhead Box O4	Protein Coding	40	GC0XP071095	1.065167	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOXO4
SMARCB1	SWI/SNF Related, Matrix Associated, Actin Dependent Regulator Of Chromatin, Subfamily B, Member 1	Protein Coding	44	GC22P023786	1.058504	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMARCB1

NRAS	NRAS Proto-Oncogene, GTPase	Protein Coding	47	GC01M114704	1.058404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NRAS
ARF1	ADP Ribosylation Factor 1	Protein Coding	44	GC01P228082	1.058404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARF1
DSC3	Desmocollin 3	Protein Coding	42	GC18M030990	1.058404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DSC3
NUP107	Nucleoporin 107	Protein Coding	42	GC12P068686	1.058404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NUP107
DST	Dystonin	Protein Coding	41	GC06M056457	1.058404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DST
FAF1	Fas Associated Factor 1	Protein Coding	41	GC01M050439	1.058404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAF1
ARFGAP1	ADP Ribosylation Factor GTPase Activating Protein 1	Protein Coding	40	GC20P063272	1.058404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARFGAP1
NUP133	Nucleoporin 133	Protein Coding	40	GC01M229520	1.058404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NUP133
ARFGAP3	ADP Ribosylation Factor GTPase Activating Protein 3	Protein Coding	39	GC22M042796	1.058404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARFGAP3
NUP85	Nucleoporin 85	Protein Coding	39	GC17P075205	1.058404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NUP85
RPS16	Ribosomal Protein S16	Protein Coding	39	GC19M039433	1.058404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS16
DSC1	Desmocollin 1	Protein Coding	38	GC18M031129	1.058404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DSC1
PIR	Pirin	Protein Coding	38	GC0XM015402	1.058404	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIR
RAB3IL1	RAB3A Interacting Protein Like 1	Protein Coding	37	GC11M061897	1.058404	https://www.genecards.org/cgi-

						bin/cdddisp.pl?gene=RAB3IL1
AHCTF1	AT-Hook Containing Transcription Factor 1	Protein Coding	36	GC01M246840	1.058404	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=AHCTF1
ANKRD49	Ankyrin Repeat Domain 49	Protein Coding	36	GC11P094493	1.058404	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ANKRD49
ARFGAP2	ADP Ribosylation Factor GTPase Activating Protein 2	Protein Coding	35	GC11M089355	1.058404	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ARFGAP2
NUP43	Nucleoporin 43	Protein Coding	33	GC06M149724	1.058404	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=NUP43
MT-TF	Mitochondrially Encoded TRNA-Phe (UUU/C)	RNA Gene	14	GCMT P000580	1.058404	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=MT-TF
MT-TH	Mitochondrially Encoded TRNA-His (CAU/C)	RNA Gene	14	GCMT P012140	1.058404	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=MT-TH
MT-TK	Mitochondrially Encoded TRNA-Lys (AAA/G)	RNA Gene	14	GCMT P008297	1.058404	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=MT-TK
MT-TG	Mitochondrially Encoded TRNA-Gly (GGN)	RNA Gene	13	GCMT P009993	1.058404	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=MT-TG
NPC2	NPC Intracellular Cholesterol Transporter 2	Protein Coding	41	GC14M074476	1.056815	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=NPC2
ISG15	ISG15 Ubiquitin Like Modifier	Protein Coding	44	GC01P001001	1.056545	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ISG15
HUWE1	HECT, UBA And WWE Domain Containing E3 Ubiquitin Protein Ligase 1	Protein Coding	42	GC0XM053532	1.055635	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=HUWE1
PMAIP1	Phorbol-12-Myristate-13-Acetate-Induced Protein 1	Protein Coding	38	GC18P059899	1.055635	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=PMAIP1
SIK2	Salt Inducible Kinase 2	Protein Coding	42	GC11P111920	1.054219	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=SIK2

SIGLEC15	Sialic Acid Binding Ig Like Lectin 15	Protein Coding	34	GC18P045825	1.052802	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SIGLEC15
ALYREF	Aly/REF Export Factor	Protein Coding	37	GC17M081887	1.05225	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALYREF
SAE1	SUMO1 Activating Enzyme Subunit 1	Protein Coding	44	GC19P066970	1.051125	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAE1
UBA2	Ubiquitin Like Modifier Activating Enzyme 2	Protein Coding	43	GC19P034428	1.051125	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBA2
KLRG1	Killer Cell Lectin Like Receptor G1	Protein Coding	37	GC12P008950	1.047638	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLRG1
NFKBIZ	NFKB Inhibitor Zeta	Protein Coding	37	GC03P101827	1.045705	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NFKBIZ
TRIM26	Tripartite Motif Containing 26	Protein Coding	36	GC06M030184	1.045705	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIM26
PI4KA	Phosphatidylinositol 4-Kinase Alpha	Protein Coding	46	GC22M020707	1.043198	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PI4KA
MIR24-2	MicroRNA 24-2	RNA Gene	20	GC19M014483	1.041605	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR24-2
MYO9B	Myosin IXB	Protein Coding	43	GC19P066216	1.040936	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MYO9B
PDYN	Prodynorphin	Protein Coding	43	GC20M001978	1.038956	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDYN
CAPS2	Calcyphosine 2	Protein Coding	32	GC12M075260	1.037439	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAPS2
MIR9-2	MicroRNA 9-2	RNA Gene	20	GC05M088666	1.032208	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR9-2
MIR9-3	MicroRNA 9-3	RNA Gene	20	GC15P089368	1.032208	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR9-3

						bin/carddisp.pl?gene=MIR9-3
OAS1	2'-5'-Oligoadenylate Synthetase 1	Protein Coding	43	GC12P112939	1.030091	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OAS1
CDC42	Cell Division Cycle 42	Protein Coding	49	GC01P022052	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDC42
PRNP	Prion Protein	Protein Coding	45	GC20P004686	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRNP
FGF17	Fibroblast Growth Factor 17	Protein Coding	44	GC08P022042	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGF17
WASF1	WASP Family Member 1	Protein Coding	43	GC06M110099	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WASF1
NCK1	NCK Adaptor Protein 1	Protein Coding	42	GC03P136862	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCK1
WASF2	WASP Family Member 2	Protein Coding	41	GC01M027404	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WASF2
ACTR3	Actin Related Protein 3	Protein Coding	40	GC02P113889	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACTR3
BAIAP2	BAR/IMD Domain Containing Adaptor Protein 2	Protein Coding	40	GC17P081035	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BAIAP2
WASF3	WASP Family Member 3	Protein Coding	40	GC13P026557	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WASF3
WASL	WASP Like Actin Nucleation Promoting Factor	Protein Coding	40	GC07M123681	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WASL
TRIP10	Thyroid Hormone Receptor Interactor 10	Protein Coding	38	GC19P006737	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIP10
ARFRP1	ADP Ribosylation Factor Related Protein 1	Protein Coding	37	GC20M063698	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARFRP1

NCKIPSD	NCK Interacting Protein With SH3 Domain	Protein Coding	36	GC03M048667	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCKIPSD
PNMA2	PNMA Family Member 2	Protein Coding	36	GC08M026504	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PNMA2
WHAMM	WASP Homolog Associated With Actin, Golgi Membranes And Microtubules	Protein Coding	33	GC15P117911	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WHAMM
WASHC1	WASH Complex Subunit 1	Protein Coding	23	GC09M000016	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WASHC1
WASH3P	WASP Family Homolog 3, Pseudogene	Pseudogene	20	GC15P101960	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WASH3P
WASH6P	WASP Family Homolog 6, Pseudogene	Pseudogene	18	GC0XP156054	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WASH6P
WASF4P	WASP Family Member 4, Pseudogene	Pseudogene	11	GC0XP047804	1.029915	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WASF4P
ADAM8	ADAM Metallopeptidase Domain 8	Protein Coding	42	GC10M133262	1.029904	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAM8
MIA	MIA SH3 Domain Containing	Protein Coding	37	GC19P040771	1.027749	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIA
TRIB3	Tribbles Pseudokinase 3	Protein Coding	41	GC20P000361	1.021446	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIB3
ACO1	Aconitase 1	Protein Coding	43	GC09P032374	1.01676	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACO1
UBASH3B	Ubiquitin Associated And SH3 Domain Containing B	Protein Coding	40	GC11P122655	1.01676	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBASH3B
HAS3	Hyaluronan Synthase 3	Protein Coding	41	GC16P069105	1.014896	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HAS3
TRAF5	TNF Receptor Associated Factor 5	Protein Coding	40	GC01P211326	1.014896	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=TRAF5
TSHR	Thyroid Stimulating Hormone Receptor	Protein Coding	45	GC14P080954	1.013282	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSHR
AKT3	AKT Serine/Threonine Kinase 3	Protein Coding	51	GC01M243488	1.012203	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AKT3
TBK1	TANK Binding Kinase 1	Protein Coding	47	GC12P064451	1.012203	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TBK1
EXO1	Exonuclease 1	Protein Coding	42	GC01P241847	1.012203	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EXO1
F10	Coagulation Factor X	Protein Coding	48	GC13P113122	1.011449	https://www.genecards.org/cgi-bin/carddisp.pl?gene=F10
COL17A1	Collagen Type XVII Alpha 1 Chain	Protein Coding	43	GC10M104031	1.006446	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL17A1
PTPRN	Protein Tyrosine Phosphatase Receptor Type N	Protein Coding	43	GC02M219289	1.006446	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPRN
LIMK1	LIM Domain Kinase 1	Protein Coding	48	GC07P074082	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LIMK1
POLH	DNA Polymerase Eta	Protein Coding	48	GC06P043576	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=POLH
ITGA7	Integrin Subunit Alpha 7	Protein Coding	46	GC12M055684	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGA7
LEF1	Lymphoid Enhancer Binding Factor 1	Protein Coding	46	GC04M108047	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LEF1
TRPC3	Transient Receptor Potential Cation Channel Subfamily C Member 3	Protein Coding	46	GC04M121879	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRPC3
ABCD1	ATP Binding Cassette Subfamily D Member 1	Protein Coding	45	GC0XP153724	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCD1

FEN1	Flap Structure-Specific Endonuclease 1	Protein Coding	45	GC11P061793	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FEN1
GALT	Galactose-1-Phosphate Uridyltransferase	Protein Coding	45	GC09P047114	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GALT
HADH	Hydroxyacyl-CoA Dehydrogenase	Protein Coding	45	GC04P107989	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HADH
HCFC1	Host Cell Factor C1	Protein Coding	45	GC0XM153947	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HCFC1
ACTG2	Actin Gamma 2, Smooth Muscle	Protein Coding	44	GC02P073892	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACTG2
COX4I1	Cytochrome C Oxidase Subunit 4I1	Protein Coding	44	GC16P085798	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COX4I1
FLNC	Filamin C	Protein Coding	44	GC07P128830	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FLNC
GAK	Cyclin G Associated Kinase	Protein Coding	44	GC04M000849	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GAK
KCNE1	Potassium Voltage-Gated Channel Subfamily E Regulatory Subunit 1	Protein Coding	44	GC21M034446	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KCNE1
KMT2A	Lysine Methyltransferase 2A	Protein Coding	44	GC11P118436	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KMT2A
HSPA6	Heat Shock Protein Family A (Hsp70) Member 6	Protein Coding	43	GC01P161524	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPA6
KIF23	Kinesin Family Member 23	Protein Coding	43	GC15P069414	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIF23
ABCG1	ATP Binding Cassette Subfamily G Member 1	Protein Coding	42	GC21P042199	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCG1
BEST1	Bestrophin 1	Protein Coding	42	GC11P061949	1.004889	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=BEST1
CDK12	Cyclin Dependent Kinase 12	Protein Coding	42	GC17P039461	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDK12
CELF2	CUGBP Elav-Like Family Member 2	Protein Coding	42	GC10P010462	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CELF2
CTDP1	CTD Phosphatase Subunit 1	Protein Coding	42	GC18P079679	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTDP1
CYP2U1	Cytochrome P450 Family 2 Subfamily U Member 1	Protein Coding	42	GC04P107931	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP2U1
GART	Phosphoribosylglycinamide Formyltransferase, Phosphoribosylglycinamide Synthetase, Phosphoribosylaminoimidazole Synthetase	Protein Coding	42	GC21M033503	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GART
MAPKAPK5	MAPK Activated Protein Kinase 5	Protein Coding	42	GC12P111842	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAPKAPK5
TCF7	Transcription Factor 7	Protein Coding	42	GC05P134114	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TCF7
TLE1	TLE Family Member 1, Transcriptional Corepressor	Protein Coding	42	GC09M081583	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLE1
TLE3	TLE Family Member 3, Transcriptional Corepressor	Protein Coding	42	GC15M070047	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLE3
ARHGAP4	Rho GTPase Activating Protein 4	Protein Coding	41	GC0XM153907	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARHGAP4
BRAP	BRCA1 Associated Protein	Protein Coding	41	GC12M111642	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BRAP
CPA4	Carboxypeptidase A4	Protein Coding	41	GC07P130293	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CPA4
CRB2	Crumbs Cell Polarity Complex Component 2	Protein Coding	41	GC09P123356	1.004889	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=CRB2
DGKQ	Diacylglycerol Kinase Theta	Protein Coding	41	GC04M000958	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DGKQ
FOXF1	Forkhead Box F1	Protein Coding	41	GC16P086510	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOXF1
GSTO2	Glutathione S-Transferase Omega 2	Protein Coding	41	GC10P104268	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GSTO2
GTF2IRD1	GTF2I Repeat Domain Containing 1	Protein Coding	41	GC07P075437	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GTF2IRD1
IGSF3	Immunoglobulin Superfamily Member 3	Protein Coding	41	GC01M116574	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGSF3
IQGAP1	IQ Motif Containing GTPase Activating Protein 1	Protein Coding	41	GC15P090388	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IQGAP1
LARP7	La Ribonucleoprotein 7, Transcriptional Regulator	Protein Coding	41	GC04P112636	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LARP7
NEUROD2	Neuronal Differentiation 2	Protein Coding	41	GC17M039603	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NEUROD2
RCAN1	Regulator Of Calcineurin 1	Protein Coding	41	GC21M034513	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RCAN1
SLC4A7	Solute Carrier Family 4 Member 7	Protein Coding	41	GC03M027372	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC4A7
SON	SON DNA And RNA Binding Protein	Protein Coding	41	GC21P033542	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SON
VANGL2	VANGL Planar Cell Polarity Protein 2	Protein Coding	41	GC01P160400	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VANGL2
VPS11	VPS11 Core Subunit Of CORVET And HOPS Complexes	Protein Coding	41	GC11P119067	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VPS11

AP4B1	Adaptor Related Protein Complex 4 Subunit Beta 1	Protein Coding	40	GC01M113894	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AP4B1
APEH	Acylaminoacyl-Peptide Hydrolase	Protein Coding	40	GC03P049673	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APEH
ATP6V1F	ATPase H ⁺ Transporting V1 Subunit F	Protein Coding	40	GC07P128862	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP6V1F
BACE2	Beta-Secretase 2	Protein Coding	40	GC21P041168	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BACE2
CACNG3	Calcium Voltage-Gated Channel Auxiliary Subunit Gamma 3	Protein Coding	40	GC16P024309	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CACNG3
DNMT3L	DNA Methyltransferase 3 Like	Protein Coding	40	GC21M044246	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNMT3L
GPC5	Glypican 5	Protein Coding	40	GC13P091398	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPC5
HS3ST1	Heparan Sulfate-Glucosamine 3-Sulfotransferase 1	Protein Coding	40	GC04M011394	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HS3ST1
ICAM5	Intercellular Adhesion Molecule 5	Protein Coding	40	GC19P010289	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ICAM5
IFT140	Intraflagellar Transport 140	Protein Coding	40	GC16M007076	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFT140
INCENP	Inner Centromere Protein	Protein Coding	40	GC11P062142	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=INCENP
MSI1	Musashi RNA Binding Protein 1	Protein Coding	40	GC12M120341	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MSI1
RENBP	Renin Binding Protein	Protein Coding	40	GC0XM153935	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RENBP

SETD1A	SET Domain Containing 1A, Histone Lysine Methyltransferase	Protein Coding	40	GC16P041106	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SETD1A
SRCAP	Snf2 Related CREBBP Activator Protein	Protein Coding	40	GC16P041094	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SRCAP
STX4	Syntaxin 4	Protein Coding	40	GC16P041110	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STX4
TRIOBP	TRIO And F-Actin Binding Protein	Protein Coding	40	GC22P037697	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIOBP
UBE2E3	Ubiquitin Conjugating Enzyme E2 E3	Protein Coding	40	GC02P180967	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBE2E3
UBE4A	Ubiquitination Factor E4A	Protein Coding	40	GC11P118359	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBE4A
VTI1B	Vesicle Transport Through Interaction With T-SNAREs 1B	Protein Coding	40	GC14M067647	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VTI1B
XPO5	Exportin 5	Protein Coding	40	GC06M043522	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XPO5
ZNF143	Zinc Finger Protein 143	Protein Coding	40	GC11P009483	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF143
ABCC10	ATP Binding Cassette Subfamily C Member 10	Protein Coding	39	GC06P043427	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCC10
CCNT1	Cyclin T1	Protein Coding	39	GC12M048688	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCNT1
KIF3A	Kinesin Family Member 3A	Protein Coding	39	GC05M132689	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIF3A
MVP	Major Vault Protein	Protein Coding	39	GC16P041016	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MVP
OLIG2	Oligodendrocyte Transcription Factor 2	Protein Coding	39	GC21P033025	1.004889	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=OLIG2
SAR1A	Secretion Associated Ras Related GTPase 1A	Protein Coding	39	GC10M070147	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAR1A
SLC35B2	Solute Carrier Family 35 Member B2	Protein Coding	39	GC06M044254	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC35B2
SWAP70	Switching B Cell Complex Subunit SWAP70	Protein Coding	39	GC11P009664	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SWAP70
TET3	Tet Methylcytosine Dioxygenase 3	Protein Coding	39	GC02P073986	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TET3
USP6NL	USP6 N-Terminal Like	Protein Coding	39	GC10M011453	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=USP6NL
UTS2	Urotensin 2	Protein Coding	39	GC01M007843	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UTS2
BMP2K	BMP2 Inducible Kinase	Protein Coding	38	GC04P078776	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BMP2K
CAPN11	Calpain 11	Protein Coding	38	GC06P083931	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAPN11
CDC42EP3	CDC42 Effector Protein 3	Protein Coding	38	GC02M037641	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDC42EP3
CLIC6	Chloride Intracellular Channel 6	Protein Coding	38	GC21P034671	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLIC6
DAP	Death Associated Protein	Protein Coding	38	GC05M010679	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DAP
DCTN4	Dynactin Subunit 4	Protein Coding	38	GC05M150708	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DCTN4
DDX23	DEAD-Box Helicase 23	Protein Coding	38	GC12M048829	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDX23

DNASE1L1	Deoxyribonuclease 1 Like 1	Protein Coding	38	GC0XM154401	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNASE1L1
DNMBP	Dynamin Binding Protein	Protein Coding	38	GC10M099875	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNMBP
EIF3D	Eukaryotic Translation Initiation Factor 3 Subunit D	Protein Coding	38	GC22M036510	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EIF3D
EXOC2	Exocyst Complex Component 2	Protein Coding	38	GC06M000485	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EXOC2
FIGNL1	Fidgetin Like 1	Protein Coding	38	GC07M050444	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FIGNL1
GTPBP2	GTP Binding Protein 2	Protein Coding	38	GC06M043605	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GTPBP2
LZTS1	Leucine Zipper Tumor Suppressor 1	Protein Coding	38	GC08M020246	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LZTS1
NAB1	NGFI-A Binding Protein 1	Protein Coding	38	GC02P190646	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NAB1
NLRX1	NLR Family Member X1	Protein Coding	38	GC11P119166	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NLRX1
NUP88	Nucleoporin 88	Protein Coding	38	GC17M006177	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NUP88
P2RY10	P2Y Receptor Family Member 10	Protein Coding	38	GC0XP078945	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RY10
PARD6G	Par-6 Family Cell Polarity Regulator Gamma	Protein Coding	38	GC18M080157	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PARD6G
PDC	Phosducin	Protein Coding	38	GC01M186412	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDC
PINX1	PIN2 (TERF1) Interacting Telomerase Inhibitor 1	Protein Coding	38	GC08M010764	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PINX1

						bin/carddisp.pl?gene=PINX1
PPIL3	Peptidylprolyl Isomerase Like 3	Protein Coding	38	GC02M200870	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPIL3
RNF40	Ring Finger Protein 40	Protein Coding	38	GC16P041101	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNF40
SBF2	SET Binding Factor 2	Protein Coding	38	GC11M009797	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SBF2
SLC36A1	Solute Carrier Family 36 Member 1	Protein Coding	38	GC05P151344	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC36A1
SLC9A9	Solute Carrier Family 9 Member A9	Protein Coding	38	GC03M143265	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC9A9
USP19	Ubiquitin Specific Peptidase 19	Protein Coding	38	GC03M051164	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=USP19
WTAP	WT1 Associated Protein	Protein Coding	38	GC06P159725	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WTAP
ZNF638	Zinc Finger Protein 638	Protein Coding	38	GC02P071276	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF638
ADO	2-Aminoethanethiol Dioxygenase	Protein Coding	37	GC10P062804	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADO
AIFM2	Apoptosis Inducing Factor Mitochondria Associated 2	Protein Coding	37	GC10M070098	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AIFM2
ATP10B	ATPase Phospholipid Transporting 10B (Putative)	Protein Coding	37	GC05M160499	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP10B
ATP9B	ATPase Phospholipid Transporting 9B (Putative)	Protein Coding	37	GC18P079069	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP9B
BOLA3	BolA Family Member 3	Protein Coding	37	GC02M074136	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BOLA3

CTR9	CTR9 Homolog, Paf1/RNA Polymerase II Complex Component	Protein Coding	37	GC11P010772	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTR9
DENND1A	DENN Domain Containing 1A	Protein Coding	37	GC09M123379	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DENND1A
FIS1	Fission, Mitochondrial 1	Protein Coding	37	GC07M101239	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FIS1
GATAD1	GATA Zinc Finger Domain Containing 1	Protein Coding	37	GC07P092447	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GATAD1
GGA2	Golgi Associated, Gamma Adaptin Ear Containing, ARF Binding Protein 2	Protein Coding	37	GC16M023464	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GGA2
GJA10	Gap Junction Protein Alpha 10	Protein Coding	37	GC06P089894	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GJA10
GPSM1	G Protein Signaling Modulator 1	Protein Coding	37	GC09P136327	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPSM1
MOB1A	MOB Kinase Activator 1A	Protein Coding	37	GC02M074152	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MOB1A
MYO1B	Myosin IB	Protein Coding	37	GC02P191246	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MYO1B
NEUROG2	Neurogenin 2	Protein Coding	37	GC04M112513	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NEUROG2
NUDT12	Nudix Hydrolase 12	Protein Coding	37	GC05M103548	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NUDT12
OLIG1	Oligodendrocyte Transcription Factor 1	Protein Coding	37	GC21P033070	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OLIG1
PDXP	Pyridoxal Phosphatase	Protein Coding	37	GC22P037658	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDXP
POLR2G	RNA Polymerase II Subunit G	Protein Coding	37	GC11P062784	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=POLR2G

						bin/carddisp.pl?gene=POLR2G
PIIP5K2	Diphosphoinositol Pentakisphosphate Kinase 2	Protein Coding	37	GC05P103120	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIIP5K2
PSMD5	Proteasome 26S Subunit, Non-ATPase 5	Protein Coding	37	GC09M120815	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMD5
RAPGEF6	Rap Guanine Nucleotide Exchange Factor 6	Protein Coding	37	GC05M131423	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAPGEF6
RBFOX1	RNA Binding Fox-1 Homolog 1	Protein Coding	37	GC16P011816	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RBFOX1
RSL1D1	Ribosomal L1 Domain Containing 1	Protein Coding	37	GC16M011833	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RSL1D1
SESN3	Sestrin 3	Protein Coding	37	GC11M096560	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SESN3
SLC26A1	Solute Carrier Family 26 Member 1	Protein Coding	37	GC04M001530	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC26A1
SMG7	SMG7 Nonsense Mediated mRNA Decay Factor	Protein Coding	37	GC01P183441	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMG7
SNAPC4	Small Nuclear RNA Activating Complex Polypeptide 4	Protein Coding	37	GC09M136375	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNAPC4
SSBP3	Single Stranded DNA Binding Protein 3	Protein Coding	37	GC01M054225	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SSBP3
TPCN2	Two Pore Segment Channel 2	Protein Coding	37	GC11P070233	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TPCN2
ADGRA3	Adhesion G Protein-Coupled Receptor A3	Protein Coding	36	GC04M022345	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADGRA3
AUP1	AUP1 Lipid Droplet Regulating VLDL Assembly Factor	Protein Coding	36	GC02M074526	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AUP1

BOLL	Boule Homolog, RNA Binding Protein	Protein Coding	36	GC02M197726	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BOLL
CEP68	Centrosomal Protein 68	Protein Coding	36	GC02P065056	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEP68
CNTRL	Centriolin	Protein Coding	36	GC09P121074	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNTRL
CSMD3	CUB And Sushi Multiple Domains 3	Protein Coding	36	GC08M112223	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSMD3
DOK6	Docking Protein 6	Protein Coding	36	GC18P069401	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DOK6
FAM136A	Family With Sequence Similarity 136 Member A	Protein Coding	36	GC02M070296	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAM136A
GPR25	G Protein-Coupled Receptor 25	Protein Coding	36	GC01P200872	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPR25
KCNG2	Potassium Voltage-Gated Channel Modifier Subfamily G Member 2	Protein Coding	36	GC18P079797	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KCNG2
KIN	Kin17 DNA And RNA Binding Protein	Protein Coding	36	GC10M007750	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIN
NRIP3	Nuclear Receptor Interacting Protein 3	Protein Coding	36	GC11M008966	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NRIP3
RBM22	RNA Binding Motif Protein 22	Protein Coding	36	GC05M150690	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RBM22
RBM6	RNA Binding Motif Protein 6	Protein Coding	36	GC03P049940	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RBM6
RPS25	Ribosomal Protein S25	Protein Coding	36	GC11M119015	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS25
RSPH3	Radial Spoke Head 3	Protein Coding	36	GC06M158962	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RSPH3

						bin/carddisp.pl?gene=RSPH3
SEC16A	SEC16 Homolog A, Endoplasmic Reticulum Export Factor	Protein Coding	36	GC09M136440	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEC16A
SLU7	SLU7 Homolog, Splicing Factor	Protein Coding	36	GC05M160401	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLU7
SMC1B	Structural Maintenance Of Chromosomes 1B	Protein Coding	36	GC22M045344	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMC1B
SNX20	Sorting Nexin 20	Protein Coding	36	GC16M050700	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNX20
UPK2	Uroplakin 2	Protein Coding	36	GC11P118925	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UPK2
ZC3H7A	Zinc Finger CCCH-Type Containing 7A	Protein Coding	36	GC16M011750	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZC3H7A
FBXW2	F-Box And WD Repeat Domain Containing 2	Protein Coding	35	GC09M120751	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FBXW2
FBXW8	F-Box And WD Repeat Domain Containing 8	Protein Coding	35	GC12P116910	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FBXW8
NEURL1	Neuralized E3 Ubiquitin Protein Ligase 1	Protein Coding	35	GC10P103493	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NEURL1
PCGF1	Polycomb Group Ring Finger 1	Protein Coding	35	GC02M074505	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PCGF1
PHLDB1	Pleckstrin Homology Like Domain Family B Member 1	Protein Coding	35	GC11P118606	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PHLDB1
RPAIN	RPA Interacting Protein	Protein Coding	35	GC17P005419	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPAIN
SAMD4A	Sterile Alpha Motif Domain Containing 4A	Protein Coding	35	GC14P054567	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAMD4A

SDF2L1	Stromal Cell Derived Factor 2 Like 1	Protein Coding	35	GC22P035927	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SDF2L1
SERBP1	SERPINE1 MRNA Binding Protein 1	Protein Coding	35	GC01M067407	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERBP1
STRBP	Spermatid Perinuclear RNA Binding Protein	Protein Coding	35	GC09M123681	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STRBP
SYTL3	Synaptotagmin Like 3	Protein Coding	35	GC06P158644	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SYTL3
TMEM30B	Transmembrane Protein 30B	Protein Coding	35	GC14M061277	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMEM30B
TRMT112	TRNA Methyltransferase Activator Subunit 11-2	Protein Coding	35	GC11M064316	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRMT112
TYSND1	Trypsin Like Peroxisomal Matrix Peptidase 1	Protein Coding	35	GC10M070137	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TYSND1
ASB8	Ankyrin Repeat And SOCS Box Containing 8	Protein Coding	34	GC12M048147	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ASB8
ATG14	Autophagy Related 14	Protein Coding	34	GC14M055366	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATG14
BCL7C	BAF Chromatin Remodeling Complex Subunit BCL7C	Protein Coding	34	GC16M037209	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCL7C
BCL9L	BCL9 Like	Protein Coding	34	GC11M118893	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCL9L
COL26A1	Collagen Type XXVI Alpha 1 Chain	Protein Coding	34	GC07P101362	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL26A1
CPSF7	Cleavage And Polyadenylation Specific Factor 7	Protein Coding	34	GC11M061402	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CPSF7
DUSP11	Dual Specificity Phosphatase 11	Protein Coding	34	GC02M073788	1.004889	https://www.genecards.org/cgi-

						bin/caddisp.pl?gene=DUSP11
DYDC1	DPY30 Domain Containing 1	Protein Coding	34	GC10M080336	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=DYDC1
FAM76B	Family With Sequence Similarity 76 Member B	Protein Coding	34	GC11M095768	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=FAM76B
GPR174	G Protein-Coupled Receptor 174	Protein Coding	34	GC0XP079170	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=GPR174
HORMA D2	HORMA Domain Containing 2	Protein Coding	34	GC22P036840	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=HORMAD2
KCP	Kielin Cysteine Rich BMP Regulator	Protein Coding	34	GC07M128862	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=KCP
MAGI3	Membrane Associated Guanylate Kinase, WW And PDZ Domain Containing 3	Protein Coding	34	GC01P113390	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=MAGI3
MRPL34	Mitochondrial Ribosomal Protein L34	Protein Coding	34	GC19P066222	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=MRPL34
MRPL4	Mitochondrial Ribosomal Protein L4	Protein Coding	34	GC19P010251	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=MRPL4
OTUD3	OTU Deubiquitinase 3	Protein Coding	34	GC01P019881	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=OTUD3
QRICH1	Glutamine Rich 1	Protein Coding	34	GC03M051163	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=QRICH1
SNAPC1	Small Nuclear RNA Activating Complex Polypeptide 1	Protein Coding	34	GC14P061762	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=SNAPC1
TCTE1	T-Complex-Associated-Testis-Expressed 1	Protein Coding	34	GC06M044278	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=TCTE1
TIFA	TRAF Interacting Protein With Forkhead Associated Domain	Protein Coding	34	GC04M112274	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=TIFA

TRIAP1	TP53 Regulated Inhibitor Of Apoptosis 1	Protein Coding	34	GC12M120443	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIAP1
TSPAN14	Tetraspanin 14	Protein Coding	34	GC10P092360	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSPAN14
ZNF366	Zinc Finger Protein 366	Protein Coding	34	GC05M073593	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF366
C5orf15	Chromosome 5 Open Reading Frame 15	Protein Coding	33	GC05M133955	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C5orf15
CCDC69	Coiled-Coil Domain Containing 69	Protein Coding	33	GC05M151181	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCDC69
CNOT6L	CCR4-NOT Transcription Complex Subunit 6 Like	Protein Coding	33	GC04M077713	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNOT6L
DYDC2	DPY30 Domain Containing 2	Protein Coding	33	GC10P080344	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DYDC2
FOXR1	Forkhead Box R1	Protein Coding	33	GC11P118971	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOXR1
GPR137	G Protein-Coupled Receptor 137	Protein Coding	33	GC11P064270	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPR137
KANSL2	KAT8 Regulatory NSL Complex Subunit 2	Protein Coding	33	GC12M048653	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KANSL2
KIF26A	Kinesin Family Member 26A	Protein Coding	33	GC14P104138	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIF26A
MIER1	MIER1 Transcriptional Regulator	Protein Coding	33	GC01P066924	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIER1
NECAB2	N-Terminal EF-Hand Calcium Binding Protein 2	Protein Coding	33	GC16P083968	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NECAB2
NHLH1	Nescient Helix-Loop-Helix 1	Protein Coding	33	GC01P160367	1.004889	https://www.genecards.org/cgi-

						bin/cdddisp.pl?gene=NHLH1
ORAI3	ORAI Calcium Release-Activated Calcium Modulator 3	Protein Coding	33	GC16P030949	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ORAI3
RNF186	Ring Finger Protein 186	Protein Coding	33	GC01M019814	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=RNF186
RPAP3	RNA Polymerase II Associated Protein 3	Protein Coding	33	GC12M047661	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=RPAP3
SCT	Secretin	Protein Coding	33	GC11M000626	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=SCT
SEL1L3	SEL1L Family Member 3	Protein Coding	33	GC04M025715	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=SEL1L3
SNN	Stannin	Protein Coding	33	GC16P012203	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=SNN
TMEM175	Transmembrane Protein 175	Protein Coding	33	GC04P000932	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=TMEM175
TMEM50B	Transmembrane Protein 50B	Protein Coding	33	GC21M033432	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=TMEM50B
ZBTB21	Zinc Finger And BTB Domain Containing 21	Protein Coding	33	GC21M041986	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ZBTB21
ZNF641	Zinc Finger Protein 641	Protein Coding	33	GC12M049432	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ZNF641
ZNF689	Zinc Finger Protein 689	Protein Coding	33	GC16M030602	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ZNF689
ZNF764	Zinc Finger Protein 764	Protein Coding	33	GC16M030553	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ZNF764
ADNP2	ADNP Homeobox 2	Protein Coding	32	GC18P080109	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ADNP2

AP1AR	Adaptor Related Protein Complex 1 Associated Regulatory Protein	Protein Coding	32	GC04P112231	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AP1AR
C2CD2	C2 Calcium Dependent Domain Containing 2	Protein Coding	32	GC21M041885	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C2CD2
CALHM2	Calcium Homeostasis Modulator Family Member 2	Protein Coding	32	GC10M103446	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CALHM2
CAMTA2	Calmodulin Binding Transcription Activator 2	Protein Coding	32	GC17M006122	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAMTA2
CYB561A3	Cytochrome B561 Family Member A3	Protein Coding	32	GC11M061348	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYB561A3
DNAJC28	DnaJ Heat Shock Protein Family (Hsp40) Member C28	Protein Coding	32	GC21M033485	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNAJC28
FAM98B	Family With Sequence Similarity 98 Member B	Protein Coding	32	GC15P038454	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAM98B
FBRS	Fibrosin	Protein Coding	32	GC16P041093	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FBRS
GPR31	G Protein-Coupled Receptor 31	Protein Coding	32	GC06M167156	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPR31
IFT46	Intraflagellar Transport 46	Protein Coding	32	GC11M118544	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFT46
INO80B	INO80 Complex Subunit B	Protein Coding	32	GC02P074456	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=INO80B
KCTD20	Potassium Channel Tetramerization Domain Containing 20	Protein Coding	32	GC06P083845	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KCTD20
PRR14	Proline Rich 14	Protein Coding	32	GC16P041089	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRR14
RPP25L	Ribonuclease P/MRP Subunit P25 Like	Protein Coding	32	GC09M034610	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPP25L

						bin/caddisp.pl?gene=RPP25L
SH2D4B	SH2 Domain Containing 4B	Protein Coding	32	GC10P092361	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=SH2D4B
TMEM106C	Transmembrane Protein 106C	Protein Coding	32	GC12P047963	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=TMEM106C
TMEM204	Transmembrane Protein 204	Protein Coding	32	GC16P001528	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=TMEM204
ZNF785	Zinc Finger Protein 785	Protein Coding	32	GC16M030573	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=ZNF785
ABHD8	Abhydrolase Domain Containing 8	Protein Coding	31	GC19M017292	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=ABHD8
EMSY	EMSY Transcriptional Repressor, BRCA2 Interacting	Protein Coding	31	GC11P077991	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=EMSY
HECTD4	HECT Domain E3 Ubiquitin Protein Ligase 4	Protein Coding	31	GC12M112160	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=HECTD4
INO80E	INO80 Complex Subunit E	Protein Coding	31	GC16P041024	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=INO80E
MRPL53	Mitochondrial Ribosomal Protein L53	Protein Coding	31	GC02M074471	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=MRPL53
OR10AD1	Olfactory Receptor Family 10 Subfamily AD Member 1	Protein Coding	31	GC12M048201	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=OR10AD1
PRR12	Proline Rich 12	Protein Coding	31	GC19P049591	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=PRR12
ZGRF1	Zinc Finger GRF-Type Containing 1	Protein Coding	31	GC04M112539	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=ZGRF1
ZNF688	Zinc Finger Protein 688	Protein Coding	31	GC16M030569	1.004889	https://www.genecards.org/cgi-bin/caddisp.pl?gene=ZNF688

BLCAP	BLCAP Apoptosis Inducing Factor	Protein Coding	30	GC20M037492	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BLCAP
CCDC153	Coiled-Coil Domain Containing 153	Protein Coding	30	GC11M119207	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCDC153
DNAJC4	DnaJ Heat Shock Protein Family (Hsp40) Member C4	Protein Coding	30	GC11P064230	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNAJC4
IFT22	Intraflagellar Transport 22	Protein Coding	30	GC07M101986	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFT22
PLAC9	Placenta Associated 9	Protein Coding	30	GC10P080131	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLAC9
RBFA	Ribosome Binding Factor A	Protein Coding	30	GC18P080068	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RBFA
TMEM109	Transmembrane Protein 109	Protein Coding	30	GC11P060914	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMEM109
ZGLP1	Zinc Finger GATA Like Protein 1	Protein Coding	30	GC19M010304	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZGLP1
ANKRD33B	Ankyrin Repeat Domain 33B	Protein Coding	29	GC05P010564	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANKRD33B
FAM133B	Family With Sequence Similarity 133 Member B	Protein Coding	29	GC07M092560	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAM133B
SLX1A	SLX1 Homolog A, Structure-Specific Endonuclease Subunit	Protein Coding	29	GC16P041045	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLX1A
TMEM151B	Transmembrane Protein 151B	Protein Coding	29	GC06P044270	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMEM151B
ZNF679	Zinc Finger Protein 679	Protein Coding	29	GC07P064228	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF679
C14orf180	Chromosome 14 Open Reading Frame 180	Protein Coding	28	GC14P104579	1.004889	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=C14orf180
C2orf74	Chromosome 2 Open Reading Frame 74	Protein Coding	28	GC02P061146	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C2orf74
CCDC142	Coiled-Coil Domain Containing 142	Protein Coding	28	GC02M075091	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCDC142
DENND2B	DENN Domain Containing 2B	Protein Coding	28	GC11M008753	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DENND2B
DNLZ	DNL-Type Zinc Finger	Protein Coding	28	GC09M136359	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNLZ
PTX4	Pentraxin 4	Protein Coding	28	GC16M001485	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTX4
SMIM20	Small Integral Membrane Protein 20	Protein Coding	28	GC04P025867	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMIM20
TMEM179	Transmembrane Protein 179	Protein Coding	28	GC14M104477	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMEM179
TTC31	Tetratricopeptide Repeat Domain 31	Protein Coding	28	GC02P074483	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TTC31
ABHD16B	Abhydrolase Domain Containing 16B	Protein Coding	27	GC20P063861	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABHD16B
ENTR1	Endosome Associated Trafficking Regulator 1	Protein Coding	27	GC09M136403	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENTR1
MACROH2A2	MacroH2A.2 Histone	Protein Coding	27	GC10P070053	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MACROH2A2
TMEM235	Transmembrane Protein 235	Protein Coding	27	GC17P078231	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMEM235
CCDC184	Coiled-Coil Domain Containing 184	Protein Coding	26	GC12P048183	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCDC184

CDHR4	Cadherin Related Family Member 4	Protein Coding	26	GC03M049790	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDHR4
CYRIB	CYFIP Related Rac1 Interactor B	Protein Coding	26	GC08M131809	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYRIB
DEFB136	Defensin Beta 136	Protein Coding	26	GC08M011973	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DEFB136
FAM205A	Family With Sequence Similarity 205 Member A	Protein Coding	26	GC09M034723	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAM205A
PRXL2A	Peroxiredoxin Like 2A	Protein Coding	26	GC10P093417	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRXL2A
TMEM116	Transmembrane Protein 116	Protein Coding	26	GC12M111894	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMEM116
PHF24	PHD Finger Protein 24	Protein Coding	25	GC09P047597	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PHF24
HSPA7	Heat Shock Protein Family A (Hsp70) Member 7 (Pseudogene)	Pseudo gene	24	GC01P161606	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPA7
PRXL2B	Peroxiredoxin Like 2B	Protein Coding	24	GC01P003939	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRXL2B
SANBR	SANT And BTB Domain Regulator Of CSR	Protein Coding	24	GC02P061068	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SANBR
CENATA C	Centrosomal AT-AC Splicing Factor	Protein Coding	23	GC11P120147	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CENATAC
CLBA1	Clathrin Binding Box Of Aftiphilin Containing 1	Protein Coding	22	GC14P109741	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLBA1
FAM241A	Family With Sequence Similarity 241 Member A	Protein Coding	22	GC04P112146	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAM241A
LINC02694	Long Intergenic Non-Protein Coding RNA 2694	RNA Gene	22	GC15P042443	1.004889	https://www.genecards.org/cgi-

HOXA10-AS	HOXA10 Antisense RNA	RNA Gene	18	GC07P027735	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HOXA10-AS
LEF1-AS1	LEF1 Antisense RNA 1	RNA Gene	18	GC04P108167	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LEF1-AS1
LINC00323	Long Intergenic Non-Protein Coding RNA 323	RNA Gene	18	GC21M041141	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC00323
PMS2P5	PMS1 Homolog 2, Mismatch Repair System Component Pseudogene 5	Pseudo gene	18	GC07P074890	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PMS2P5
DGUOK-AS1	DGUOK Antisense RNA 1	RNA Gene	17	GC02M073947	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DGUOK-AS1
LINC00158	Long Intergenic Non-Protein Coding RNA 158	RNA Gene	17	GC21M025385	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC00158
LINC01088	Long Intergenic Non-Protein Coding RNA 1088	RNA Gene	17	GC04P078971	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01088
SBF2-AS1	SBF2 Antisense RNA 1	RNA Gene	17	GC11P009758	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SBF2-AS1
ADAM1A	ADAM Metallopeptidase Domain 1A (Pseudogene)	Pseudo gene	16	GC12P111899	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAM1A
GATA3-AS1	GATA3 Antisense RNA 1	RNA Gene	16	GC10M008016	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GATA3-AS1
HIF1A-AS1	HIF1A Antisense RNA 1	RNA Gene	16	GC14M061681	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HIF1A-AS1
JAZF1-AS1	JAZF1 Antisense RNA 1	RNA Gene	16	GC07P028180	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=JAZF1-AS1
LINC00593	Long Intergenic Non-Protein Coding RNA 593	RNA Gene	16	GC15P117549	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC00593
LINC00977	Long Intergenic Non-Protein Coding RNA 977	RNA Gene	16	GC08M131797	1.004889	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=LINC00977
LINC01082	Long Intergenic Non-Protein Coding RNA 1082	RNA Gene	16	GC16P086065	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01082
MIR181A1HG	MIR181A1 Host Gene	RNA Gene	16	GC01M198780	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR181A1HG
PCAT29	Prostate Cancer Associated Transcript 29	RNA Gene	16	GC15P118926	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PCAT29
SNORA72	Small Nucleolar RNA, H/ACA Box 72	RNA Gene	16	GC08M098042	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNORA72
TMEM9B-AS1	TMEM9B Antisense RNA 1	RNA Gene	16	GC11P008964	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMEM9B-AS1
CELF2-AS2	CELF2 Antisense RNA 2	RNA Gene	15	GC10M011071	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CELF2-AS2
HTD2	Hydroxyacyl-Thioester Dehydratase Type 2	Protein Coding	15	GC03P058306	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HTD2
SENCR	Smooth Muscle And Endothelial Cell Enriched Migration/Differentiation-Associated LncRNA	RNA Gene	15	GC11M128691	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SENCR
C20orf181	Chromosome 20 Open Reading Frame 181	Uncategorized	14	GC20M063844	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C20orf181
FLNB-AS1	FLNB Antisense RNA 1	RNA Gene	14	GC03M058150	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FLNB-AS1
LINC03033	Long Intergenic Non-Protein Coding RNA 3033	RNA Gene	14	GC14P061572	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC03033
MBL1P	Mannose Binding Lectin 1, Pseudogene	Pseudogene	14	GC10P092759	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MBL1P
MIR1208	MicroRNA 1208	RNA Gene	14	GC08P128150	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR1208

MIR3142 HG	MIR3142 Host Gene	RNA Gene	14	GC05P160438	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR3142HG
MIR4437	MicroRNA 4437	RNA Gene	14	GC02M181305	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR4437
MIR718	MicroRNA 718	RNA Gene	14	GC0XM154019	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR718
NPIPB2	Nuclear Pore Complex Interacting Protein Family Member B2	Protein Coding	14	GC16M012293	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NPIPB2
PRKCQ-AS1	PRKCQ Antisense RNA 1	RNA Gene	14	GC10P006580	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKCQ-AS1
SEMA3B-AS1	SEMA3B Antisense RNA 1 (Head To Head)	RNA Gene	14	GC03M051236	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEMA3B-AS1
TPI1P2	Triosephosphate Isomerase 1 Pseudogene 2	Pseudo gene	14	GC07P129055	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TPI1P2
BOLA3-DT	BOLA3 Divergent Transcript	RNA Gene	13	GC02P074146	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BOLA3-DT
FAM205BP	Family With Sequence Similarity 205 Member B, Pseudogene	Pseudo gene	13	GC09M034837	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAM205BP
LINC00824	Long Intergenic Non-Protein Coding RNA 824	RNA Gene	13	GC08M128405	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC00824
MIR3202-2	MicroRNA 3202-2	RNA Gene	13	GC0XM153981	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR3202-2
MROH3P	Maestro Heat Like Repeat Family Member 3, Pseudogene	Pseudo gene	13	GC01P200920	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MROH3P
NEURL1-AS1	NEURL1 Antisense RNA 1	RNA Gene	13	GC10M103479	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NEURL1-AS1
P4HA2-AS1	P4HA2 Antisense RNA 1	RNA Gene	13	GC05P132186	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P4HA2-AS1

						bin/carddisp.pl?gene=P4HA2-AS1
TGFA-IT1	TGFA Intronic Transcript 1	RNA Gene	13	GC02M070468	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TGFA-IT1
TNFRSF14-AS1	TNFRSF14 Antisense RNA 1	RNA Gene	13	GC01M006028	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF14-AS1
WAKMAR2	Wound And Keratinocyte Migration Associated LncRNA 2	RNA Gene	13	GC06M137820	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WAKMAR2
B3GALT9	Beta-1,3-Galactosyltransferase 9	Protein Coding	12	GC09P120792	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=B3GALT9
CFAP20DC-AS1	CFAP20DC Antisense RNA 1	RNA Gene	12	GC03P058825	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CFAP20DC-AS1
ENSG00000248751	Novel Protein	Protein Coding	12	GC22M030285	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000248751
ETS1-AS1	ETS1 Antisense RNA 1	RNA Gene	12	GC11P128527	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ETS1-AS1
FLNC-AS1	FLNC Antisense RNA 1	RNA Gene	12	GC07M128851	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FLNC-AS1
LINC00709	Long Intergenic Non-Protein Coding RNA 709	RNA Gene	12	GC10P009275	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC00709
LINC01934	Long Intergenic Non-Protein Coding RNA 1934	RNA Gene	12	GC02P181086	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01934
LINC02098	Long Intergenic Non-Protein Coding RNA 2098	RNA Gene	12	GC11P128210	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02098
LNCRNA-IUR	LncRNA Imatinib Upregulated	RNA Gene	12	GC11P095154	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LNCRNA-IUR
MIR3202-1	MicroRNA 3202-1	RNA Gene	12	GC0XP153981	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR3202-1

SEPT5-GP1BB	SEPT5-GP1BB Readthrough	RNA Gene	12	GC22P019717	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEPT5-GP1BB
SMG1P5	SMG1 Pseudogene 5	Pseudo gene	12	GC16M030267	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMG1P5
TLE1-DT	TLE1 Divergent Transcript	RNA Gene	12	GC09P081690	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLE1-DT
C6orf47-AS1	C6orf47 Antisense RNA 1	RNA Gene	11	GC06P083704	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C6orf47-AS1
CD101-AS1	CD101 Antisense RNA 1	RNA Gene	11	GC01M117023	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD101-AS1
CENATA C-DT	CENATAC Divergent Transcript	RNA Gene	11	GC11M118984	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CENATAC-DT
LINC01303	Long Intergenic Non-Protein Coding RNA 1303	RNA Gene	11	GC14M061557	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01303
LINC02153	Long Intergenic Non-Protein Coding RNA 2153	RNA Gene	11	GC08P020974	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02153
LINC02649	Long Intergenic Non-Protein Coding RNA 2649	RNA Gene	11	GC10P006357	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02649
LINC02709	Long Intergenic Non-Protein Coding RNA 2709	RNA Gene	11	GC11M009754	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02709
LINC03004	Long Intergenic Non-Protein Coding RNA 3004	RNA Gene	11	GC06P137658	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC03004
MIR4328	MicroRNA 4328	RNA Gene	11	GC0XM078901	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR4328
RPL13P2	Ribosomal Protein L13 Pseudogene 2	Pseudo gene	11	GC20P046099	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL13P2
TAGAP-AS1	TAGAP Antisense RNA 1	RNA Gene	11	GC06P160653	1.004889	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=TAGAP-AS1
ADM-DT	ADM Divergent Transcript	RNA Gene	10	GC11M010302	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADM-DT
CCDC201	Coiled-Coil Domain Containing 201	Protein Coding	10	GC07M045859	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCDC201
CUTALP	CutA Divalent Cation Tolerance Like, Pseudogene	Pseudo gene	10	GC09P120826	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CUTALP
EMSLR	E2F1 mRNA Stabilizing LncRNA	RNA Gene	10	GC07P101335	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EMSLR
ENSG00000167807	Novel Transcript	Protein Coding	10	GC19M010400	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000167807
ENSG00000228778	Novel Transcript	RNA Gene	10	GC10P099527	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000228778
ENSG00000249624	Novel Protein	Protein Coding	10	GC21P033246	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000249624
LINC01343	Long Intergenic Non-Protein Coding RNA 1343	RNA Gene	10	GC01M038209	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01343
LINC01898	Long Intergenic Non-Protein Coding RNA 1898	RNA Gene	10	GC18M075697	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01898
LINC01980	Long Intergenic Non-Protein Coding RNA 1980	RNA Gene	10	GC03P027798	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01980
LINC02528	Long Intergenic Non-Protein Coding RNA 2528	RNA Gene	10	GC06M137945	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02528
LINC02539	Long Intergenic Non-Protein Coding RNA 2539	RNA Gene	10	GC06M137731	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02539
LINC02664	Long Intergenic Non-Protein Coding RNA 2664	RNA Gene	10	GC10P031190	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02664

LINC02757	Long Intergenic Non-Protein Coding RNA 2757	RNA Gene	10	GC11M090455	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02757
LINC02789	Long Intergenic Non-Protein Coding RNA 2789	RNA Gene	10	GC01P199149	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02789
LNCPRESS1	LncRNA P53 Regulated And ESC Associated 1	RNA Gene	10	GC07P101304	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LNCPRESS1
LOC100996583	Uncharacterized LOC100996583	RNA Gene	10	GC01P003937	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC100996583
LOC101929290	Uncharacterized LOC101929290	RNA Gene	10	GC08M011315	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC101929290
MIR4308	MicroRNA 4308	RNA Gene	10	GC14M054878	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR4308
PCNPP1	PEST Containing Nuclear Protein Pseudogene 1	Pseudo gene	10	GC12M111666	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PCNPP1
PLCL2-AS1	PLCL2 Antisense RNA 1	RNA Gene	10	GC03M017042	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLCL2-AS1
PRDX6-AS1	PRDX6 Antisense RNA 1	RNA Gene	10	GC01M173418	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRDX6-AS1
RPL7AP14	Ribosomal Protein L7a Pseudogene 14	Pseudo gene	10	GC20M037444	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL7AP14
SPATA31D5P	SPATA31 Subfamily D Member 5, Pseudogene	Pseudo gene	10	GC09P081913	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPATA31D5P
TDH-AS1	TDH Antisense RNA 1	RNA Gene	10	GC08M011181	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TDH-AS1
TSPAN14-AS1	TSPAN14 Antisense RNA 1	RNA Gene	10	GC10M082037	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSPAN14-AS1
ZNF232-AS1	ZNF232 Antisense RNA 1	RNA Gene	10	GC17P005518	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF232-AS1

						bin/carddisp.pl?gene=ZNF232-AS1
ZNF747-DT	ZNF747 Divergent Transcript	RNA Gene	10	GC16P041647	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF747-DT
CALM2P2	Calmodulin 2 Pseudogene 2	Pseudo gene	9	GC10P070163	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CALM2P2
EBAG9P1	EBAG9 Pseudogene 1	Pseudo gene	9	GC10M099697	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EBAG9P1
ENSG00000204929	Novel Transcript	Uncategorized	9	GC02P065451	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000204929
ENSG00000217702	Novel Transcript, Antisense To BOLA3	RNA Gene	9	GC02P074130	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000217702
ENSG00000224015	Novel Transcript	RNA Gene	9	GC05M132062	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000224015
ENSG00000228005	Novel Transcript	RNA Gene	9	GC07M050181	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000228005
ENSG00000228509	Novel Transcript, Antisense To NAB1	RNA Gene	9	GC02M190672	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000228509
ENSG00000228863	Novel Transcript, Antisense To CD48	RNA Gene	9	GC01P160671	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000228863
ENSG00000231128	Novel Transcript, Antisense To PTPN22	RNA Gene	9	GC01P113812	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000231128
ENSG00000231355	Novel Transcript	RNA Gene	9	GC21M033482	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000231355
ENSG00000231467	Novel Transcript	RNA Gene	9	GC22P037080	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000231467
ENSG00000232638	Novel Transcript	RNA Gene	9	GC10P008051	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000232638

ENSG00000234132	Novel Transcript, Antisense CACNA1S	RNA Gene	9	GC01P201032	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000234132
ENSG00000234255	Novel Transcript	RNA Gene	9	GC02M065442	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000234255
ENSG00000236935	Novel Transcript	RNA Gene	9	GC11M089710	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000236935
ENSG00000249141	Novel Protein	Protein Coding	9	GC06M166858	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000249141
ENSG00000253720	Novel Transcript	RNA Gene	9	GC08P129939	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000253720
ENSG00000255422	Novel Transcript	RNA Gene	9	GC11P118700	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000255422
ENSG00000258989	Novel Protein	Protein Coding	9	GC14P061530	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000258989
ENSG00000260267	Novel Transcript, Antisense To ARMC5	RNA Gene	9	GC16M031456	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000260267
ENSG00000269918	Novel Transcript	RNA Gene	9	GC08M011104	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000269918
ENSG00000269954	Novel Transcript, Antisense To BLK	RNA Gene	9	GC08M011552	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000269954
LINC02084	Long Intergenic Non-Protein Coding RNA 2084	RNA Gene	9	GC03P027714	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02084
LINC02132	Long Intergenic Non-Protein Coding RNA 2132	RNA Gene	9	GC16M085935	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02132
LINC02356	Long Intergenic Non-Protein Coding RNA 2356	RNA Gene	9	GC12P111371	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02356
LINC02357	Long Intergenic Non-Protein Coding RNA 2357	RNA Gene	9	GC04P026071	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02357

						bin/cdddisp.pl?gene=LINC02357
LINC02676	Long Intergenic Non-Protein Coding RNA 2676	RNA Gene	9	GC10P008726	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=LINC02676
LINC02723	Long Intergenic Non-Protein Coding RNA 2723	RNA Gene	9	GC11M089711	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=LINC02723
LOC105371083	Uncharacterized LOC105371083	RNA Gene	9	GC16M012272	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=LOC105371083
LOC112267968	Uncharacterized LOC112267968	Protein Coding	9	GC06M159053	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=LOC112267968
LOC124903255	Small Nucleolar RNA SNORD116	RNA Gene	9	GC13M039869	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=LOC124903255
NEFHP1	Neurofilament Heavy Pseudogene 1	Pseudo gene	9	GC01M116739	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=NEFHP1
PPIAP6	Peptidylprolyl Isomerase A Pseudogene 6	Pseudo gene	9	GC14M068421	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=PPIAP6
RNU6-474P	RNA, U6 Small Nuclear 474, Pseudogene	Pseudo gene	9	GC02P203782	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=RNU6-474P
RNU6-933P	RNA, U6 Small Nuclear 933, Pseudogene	Pseudo gene	9	GC11M060985	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=RNU6-933P
RNU6-959P	RNA, U6 Small Nuclear 959, Pseudogene	Pseudo gene	9	GC02P191121	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=RNU6-959P
RPL21P97	Ribosomal Protein L21 Pseudogene 97	Pseudo gene	9	GC11P009694	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=RPL21P97
RPL32P23	Ribosomal Protein L32 Pseudogene 23	Pseudo gene	9	GC10M006072	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=RPL32P23
RPL7AP70	Ribosomal Protein L7a Pseudogene 70	Pseudo gene	9	GC22P035817	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=RPL7AP70

RPL8P5	Ribosomal Protein L8 Pseudogene 5	Pseudo gene	9	GC22P 035819	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL8P5
RPS2P29	Ribosomal Protein S2 Pseudogene 29	Pseudo gene	9	GC06M 066211	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS2P29
RPS5P3	RPS5 Pseudogene 3	Pseudo gene	9	GC21M 033481	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS5P3
RTEL1P1	Regulator Of Telomere Elongation Helicase 1 Pseudogene 1	Pseudo gene	9	GC04P 112355	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RTEL1P1
ALG1L11 P	ALG1 Like 11, Pseudogene	Pseudo gene	8	GC08P 012178	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALG1L11P
DUTP6	Deoxyuridine Triphosphatase Pseudogene 6	Pseudo gene	8	GC01P 166838	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DUTP6
ENSG000 00205537	Novel Transcript, Antisense To VDR	RNA Gene	8	GC12P 047883	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000205537
ENSG000 00222529	Y RNA	RNA Gene	8	GC11P 118970	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000222529
ENSG000 00223808	Novel Transcript	RNA Gene	8	GC10P 008943	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000223808
ENSG000 00224478	Novel Transcript	RNA Gene	8	GC06P 160537	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000224478
ENSG000 00227217	Novel Transcript	RNA Gene	8	GC01P 157527	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000227217
ENSG000 00230686	Novel Transcript	RNA Gene	8	GC02P 191017	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000230686
ENSG000 00234211	Novel Transcript, Antisense To FCGR2B	RNA Gene	8	GC01M 161671	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000234211
ENSG000 00235237	Novel Transcript	RNA Gene	8	GC22P 037166	1.004 889	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=ENSG00000235237
ENSG00000235499	Novel Transcript (LOC100132318)	RNA Gene	8	GC02P073985	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000235499
ENSG00000236308	Novel Transcript, Antisense To CHUK	RNA Gene	8	GC10P100190	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000236308
ENSG00000238280	Novel Transcript	RNA Gene	8	GC10M062682	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000238280
ENSG00000239791	Novel Transcript	RNA Gene	8	GC16P041084	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000239791
ENSG00000254084	Novel Transcript	RNA Gene	8	GC08M101411	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000254084
ENSG00000254397	Novel Transcript	RNA Gene	8	GC11M009431	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000254397
ENSG00000255176	Novel Transcript	RNA Gene	8	GC11P118636	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000255176
ENSG00000257985	Novel Transcript, Antisense To A Novel Protein	RNA Gene	8	GC12P048011	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000257985
ENSG00000259598	Novel Transcript, Antisense To RASGRP1	RNA Gene	8	GC15P038524	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000259598
ENSG00000259840	Novel Transcript	RNA Gene	8	GC16M007030	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000259840
ENSG00000260304	Novel Transcript, Antisense To FUS	RNA Gene	8	GC16M031180	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000260304
ENSG00000260482	Novel Transcript	RNA Gene	8	GC16P023641	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000260482
ENSG00000262420	Novel Transcript, Antisense To TXNDC11	RNA Gene	8	GC16P011741	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000262420

ENSG00000263220	Novel Transcript, Antisense To RABEP1	RNA Gene	8	GC17M005364	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000263220
ENSG00000267303	Novel Transcript	Protein Coding	8	GC19M010315	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000267303
ENSG00000269514	Novel Transcript, Antisense To OR10AD1	RNA Gene	8	GC12P048198	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000269514
ENSG00000269667	Novel Transcript	RNA Gene	8	GC16P085990	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000269667
ENSG00000270120	Novel Transcript	RNA Gene	8	GC16P050712	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000270120
ENSG00000271553	Novel Transcript	RNA Gene	8	GC07P128667	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000271553
ETV7-AS1	ETV7 And PTX1 Antisense RNA 1	RNA Gene	8	GC06P084401	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ETV7-AS1
GAPDHP64	Glyceraldehyde-3-Phosphate Dehydrogenase Pseudogene 64	Pseudo gene	8	GC01M116713	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GAPDHP64
GLULP4	Glutamate-Ammonia Ligase Pseudogene 4	Pseudo gene	8	GC09P034917	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GLULP4
LINC02498	Long Intergenic Non-Protein Coding RNA 2498	RNA Gene	8	GC04P018282	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02498
LINC02621	Long Intergenic Non-Protein Coding RNA 2621	RNA Gene	8	GC10P062302	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02621
LINC02865	Long Intergenic Non-Protein Coding RNA 2865	RNA Gene	8	GC06P137946	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02865
LINC02943	Long Intergenic Non-Protein Coding RNA 2943	RNA Gene	8	GC21M039034	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02943
LOC101928272	Uncharacterized LOC101928272	RNA Gene	8	GC10M008849	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC101928272

						bin/carddisp.pl?gene=LOC101928272
LOC124902827	Small Nucleolar RNA U13	RNA Gene	8	GC11P009588	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124902827
PHB1P9	PHB1 Pseudogene 9	Pseudo gene	8	GC10P100251	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PHB1P9
RN7SL38P	RNA, 7SL, Cytoplasmic 38, Pseudogene	Pseudo gene	8	GC12P024706	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RN7SL38P
RN7SL688P	RNA, 7SL, Cytoplasmic 688, Pseudogene	Pseudo gene	8	GC11P118931	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RN7SL688P
RNU4ATAC4P	RNA, U4atac Small Nuclear 4, Pseudogene	Pseudo gene	8	GC01M067267	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU4ATAC4P
RNU6-1035P	RNA, U6 Small Nuclear 1035, Pseudogene	Pseudo gene	8	GC09M081725	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU6-1035P
RNU6-1149P	RNA, U6 Small Nuclear 1149, Pseudogene	Pseudo gene	8	GC21M042423	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU6-1149P
RNU6-387P	RNA, U6 Small Nuclear 387, Pseudogene	Pseudo gene	8	GC01P067417	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU6-387P
RNU6-481P	RNA, U6 Small Nuclear 481, Pseudogene	Pseudo gene	8	GC01P161401	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU6-481P
RNU6-704P	RNA, U6 Small Nuclear 704, Pseudogene	Pseudo gene	8	GC01M200904	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU6-704P
RNU6-979P	RNA, U6 Small Nuclear 979, Pseudogene	Pseudo gene	8	GC07M028119	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU6-979P
RNY4P14	RNY4 Pseudogene 14	Pseudo gene	8	GC13M039785	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNY4P14
UQCRC2P1	Ubiquinol-Cytochrome C Reductase Core Protein 2 Pseudogene 1	Pseudo gene	8	GC03M046311	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UQCRC2P1

ENSG00000200998	Y RNA	RNA Gene	7	GC04M078632	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000200998
ENSG00000226032	Novel Transcript	RNA Gene	7	GC06M159042	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000226032
ENSG00000232693	Novel Transcript, Sense Intronic To SPRED2	RNA Gene	7	GC02M065373	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000232693
ENSG00000245008	Novel Transcript, Antisense To FLI1	Uncategorized	7	GC11M128616	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000245008
ENSG00000254024	Novel Transcript	RNA Gene	7	GC08M101461	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000254024
ENSG00000257955	Novel Transcript	RNA Gene	7	GC12M048021	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000257955
ENSG00000267287	Novel Transcript	Uncategorized	7	GC18P079577	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000267287
ENSG00000285163	Novel Transcript	RNA Gene	7	GC16P085924	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000285163
ENSG00000287564	Novel Transcript	RNA Gene	7	GC10P031057	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000287564
LDHAP3	Lactate Dehydrogenase A Pseudogene 3	Pseudogene	7	GC02P041819	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LDHAP3
LINC02786	Long Intergenic Non-Protein Coding RNA 2786	RNA Gene	7	GC01M038132	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02786
LOC101927180	V-Type Proton ATPase Subunit F-Like	Protein Coding	7	GC12P048084	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC101927180
RN7SL563P	RNA, 7SL, Cytoplasmic 563, Pseudogene	Pseudogene	7	GC08M101397	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RN7SL563P
RNU6-376P	RNA, U6 Small Nuclear 376, Pseudogene	Pseudogene	7	GC11P118702	1.004889	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=RNU6-376P
RNU7-133P	RNA, U7 Small Nuclear 133 Pseudogene	Pseudo gene	7	GC06P014166	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU7-133P
RPL6P8	Ribosomal Protein L6 Pseudogene 8	Pseudo gene	7	GC03P160579	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL6P8
SETP16	SET Pseudogene 16	Pseudo gene	7	GC11M118833	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SETP16
lnc-LEF1-1		RNA Gene	7	GC04M108048	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-LEF1-1
BTF3L4P3	Basic Transcription Factor 3 Like 4 Pseudogene 3	Pseudo gene	6	GC06M137543	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BTF3L4P3
CDKN2AIPNLP3	CDKN2A Interacting Protein N-Terminal Like Pseudogene 3	Pseudo gene	6	GC13M039817	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDKN2AIPNLP3
ENSG00000225931	Novel Transcript	Uncategorized	6	GC01P002566	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000225931
ENSG00000242162	Pseudogene Similar To Part Of Sec61 Alpha 1 Subunit (S. Cerevisiae) (SEC61A1)	Pseudo gene	6	GC07M129066	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000242162
ENSG00000245869	Novel Transcript, Antisense To CXCR5	RNA Gene	6	GC11M118887	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000245869
ENSG00000253067		RNA Gene	6	GC05P132080	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000253067
ENSG00000273245	Novel Transcript	RNA Gene	6	GC02M073750	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000273245
ENSG00000273300	Novel Transcript, Antisense To UFD1L	RNA Gene	6	GC22P019454	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000273300
ENSG00000273342	Novel Transcript	RNA Gene	6	GC22P035925	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000273342

ENSG00000284825	Novel Transcript	RNA Gene	6	GC06M167116	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000284825
ENSG00000284957	Novel Transcript	RNA Gene	6	GC08M011479	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000284957
ENSG00000285040	Novel Transcript	RNA Gene	6	GC16M085963	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000285040
ENSG00000288583	Novel Transcript	RNA Gene	6	GC09P047456	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000288583
ENSG00000288749	Novel Transcript	RNA Gene	6	GC07P101291	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000288749
ENSG00000288915	Novel Transcript, Antisense To PRKCQ	RNA Gene	6	GC10P006493	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000288915
ENSG00000289398	Novel Transcript	RNA Gene	6	GC11P128313	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000289398
ENSG00000289525	Novel Transcript	RNA Gene	6	GC15M090911	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000289525
H3P5	H3 Histone Pseudogene 5	Pseudo gene	6	GC02P030211	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=H3P5
HSALNG0036266		RNA Gene	6	GC04P108027	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0036266
HSALNG0057943		RNA Gene	6	GC07M050313	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0057943
KNOP1P1	Lysine Rich Nucleolar Protein 1 Pseudogene 1	Pseudo gene	6	GC12P024583	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KNOP1P1
LOC124900752	Uncharacterized LOC124900752	Protein Coding	6	GC04P108168	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124900752
LOC124901411	Uncharacterized LOC124901411	RNA Gene	6	GC06P137695	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124901411

						bin/carddisp.pl?gene=LOC124901411
LOC124904333	Octapeptide-Repeat Protein T2-Like	Protein Coding	6	GC18P079419	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124904333
NONHSAG005220.2		RNA Gene	6	GC10P011006	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NONHSAG005220.2
NPM1P33	Nucleophosmin 1 Pseudogene 33	Pseudo gene	6	GC02M203772	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NPM1P33
P2RY10BP	P2Y Receptor Family Member 10B, Pseudogene	Pseudo gene	6	GC0XP079085	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RY10BP
POLR3GP2	RNA Polymerase III Subunit G Pseudogene 2	Pseudo gene	6	GC18P048478	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=POLR3GP2
RF00017-7224		RNA Gene	6	GC09M094967	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-7224
RN7SL335P	RNA, 7SL, Cytoplasmic 335, Pseudogene	Pseudo gene	6	GC04M122087	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RN7SL335P
RNA5SP287	RNA, 5S Ribosomal Pseudogene 287	Pseudo gene	6	GC09P081885	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNA5SP287
RNU1-61P	RNA, U1 Small Nuclear 61, Pseudogene	Pseudo gene	6	GC06M032549	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU1-61P
RNU6-420P	RNA, U6 Small Nuclear 420, Pseudogene	Pseudo gene	6	GC04P022121	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU6-420P
RPS2P9	Ribosomal Protein S2 Pseudogene 9	Pseudo gene	6	GC01P198950	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS2P9
TREHP1	Trehalase Pseudogene 1	Pseudo gene	6	GC11M118688	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TREHP1
VDAC1P9	Voltage Dependent Anion Channel 1 Pseudogene 9	Pseudo gene	6	GC01M157724	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VDAC1P9

hsa-miR-5096-032	RNA Gene	6	GC05M054039	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=hsa-miR-5096-032
lnc-ALPK1-2	RNA Gene	6	GC04P112286	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ALPK1-2
lnc-ANXA6-3	RNA Gene	6	GC05M151030	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ANXA6-3
lnc-CD247-1	RNA Gene	6	GC01M167430	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-CD247-1
lnc-FAM76B-1	RNA Gene	6	GC11M095571	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-FAM76B-1
lnc-IL10-5	RNA Gene	6	GC01M206769	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-IL10-5
lnc-KCNE1-1	RNA Gene	6	GC21M034577	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-KCNE1-1
lnc-MAP3K7-3	RNA Gene	6	GC06M090088	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-MAP3K7-3
lnc-PRDM1-3	RNA Gene	6	GC06P106132	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-PRDM1-3
lnc-RCAN1-1	RNA Gene	6	GC21M034514	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-RCAN1-1
lnc-RCSD1-5	RNA Gene	6	GC01P167418	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-RCSD1-5
lnc-SBF2-3	RNA Gene	6	GC11M009760	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-SBF2-3
lnc-TMEM50B-3	RNA Gene	6	GC21M033384	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-TMEM50B-3
lnc-VPS37C-3	RNA Gene	6	GC11M089558	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-VPS37C-3

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ENSG00000197376	Biorientation Of Chromosomes In Cell Division 1 Like 2 (BOD1L2) Pseudogene	Pseudo gene	5	GC12P048508	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000197376
ENSG00000220614	Ribosomal Protein L34 (RPL34) Pseudogene	Pseudo gene	5	GC06P083919	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000220614
ENSG00000224163	Pseudogene Similar To Part Of Filamin C, Gamma (Actin Binding Protein 280) (FLNC)	Pseudo gene	5	GC07M128915	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000224163
ENSG00000233196	Novel Pseudogene	Pseudo gene	5	GC01M186581	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000233196
ENSG00000240399	Ribosomal Protein L37 (RPL37) Pseudogene	Pseudo gene	5	GC12M048055	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000240399
ENSG00000271128	Chromosome 7 Open Reading Frame 73 (C7orf73) Pseudogene	Pseudo gene	5	GC05M134082	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000271128
ENSG00000271547	Chromosome 20 Open Reading Frame 27 (C20orf27) Pseudogene	Pseudo gene	5	GC12M049419	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000271547
ENSG00000272980	Novel Transcript	RNA Gene	5	GC06P167000	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000272980
ENSG00000273112	Novel Transcript, Readthrough Between FCGR2A And FCGR2C Polymorphic Pseudogene	RNA Gene	5	GC01P161704	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000273112
ENSG00000274425	Novel Transcript, Antisense To ICAM3	RNA Gene	5	GC19P010333	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000274425
ENSG00000280216	TEC	Uncategorized	5	GC22P039381	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000280216
ENSG00000284914	Novel Transcript	RNA Gene	5	GC06M167126	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000284914
ENSG00000285842	Novel Transcript	RNA Gene	5	GC11P095571	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000285842

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ENSG00000288064	Novel Transcript, Antisense To STAT4	RNA Gene	5	GC02P191045	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000288064
ENSG00000288711	Novel Protein	Protein Coding	5	GC21M034511	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000288711
HSALNG0001400		RNA Gene	5	GC01P019765	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0001400
HSALNG0007924		RNA Gene	5	GC01M161280	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0007924
HSALNG0008504		RNA Gene	5	GC01P173188	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0008504
HSALNG0021150		RNA Gene	5	GC02M191076	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0021150
HSALNG0021699		RNA Gene	5	GC02P203869	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0021699
HSALNG0024811		RNA Gene	5	GC03M027718	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0024811
HSALNG0035396		RNA Gene	5	GC04P078693	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0035396
HSALNG0035397		RNA Gene	5	GC04M078605	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0035397
HSALNG0036439		RNA Gene	5	GC04M112278	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0036439
HSALNG0045887		RNA Gene	5	GC05P151057	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0045887
HSALNG0045890		RNA Gene	5	GC05P151084	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0045890

HSALNG0049408	RNA Gene	5	GC06P084605	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049408
HSALNG0049409	RNA Gene	5	GC06P084606	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049409
HSALNG0049410	RNA Gene	5	GC06P084607	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049410
HSALNG0049413	RNA Gene	5	GC06P084608	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049413
HSALNG0049415	RNA Gene	5	GC06P084609	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049415
HSALNG0050281	RNA Gene	5	GC06M066833	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0050281
HSALNG0055144	RNA Gene	5	GC06P167112	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0055144
HSALNG0061260	RNA Gene	5	GC07M128933	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0061260
HSALNG0061261	RNA Gene	5	GC07P132005	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0061261
HSALNG0063445	RNA Gene	5	GC08M011494	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0063445
HSALNG0074141	RNA Gene	5	GC09M120870	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0074141
HSALNG0074148-001	RNA Gene	5	GC09M120932	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0074148-001
HSALNG0074148-002	RNA Gene	5	GC09M120934	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0074148-002

HSALNG0075250	RNA Gene	5	GC09M136393	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0075250
HSALNG0076038	RNA Gene	5	GC10P008048	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0076038
HSALNG0076041	RNA Gene	5	GC10M008055	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0076041
HSALNG0079213	RNA Gene	5	GC10M081925	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0079213
HSALNG0084559	RNA Gene	5	GC11P061825	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0084559
HSALNG0084560	RNA Gene	5	GC11M090798	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0084560
HSALNG0084561-001	RNA Gene	5	GC11P061842	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0084561-001
HSALNG0087578	RNA Gene	5	GC11P118845	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0087578
HSALNG0094037	RNA Gene	5	GC12P111432	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0094037
HSALNG0102522	RNA Gene	5	GC14M075477	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0102522
HSALNG0122747	RNA Gene	5	GC18M079391	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0122747
HSALNG0122748	RNA Gene	5	GC18P079392	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0122748
HSALNG0122749	RNA Gene	5	GC18P079394	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0122749

HSALNG0132765		RNA Gene	5	GC21M033400	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0132765
HSALNG0135279		RNA Gene	5	GC22M037128	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0135279
HSALNG0135499		RNA Gene	5	GC22P039433	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0135499
LOC124901069	Short Transmembrane Mitochondrial Protein 1-Like	Protein Coding	5	GC05M134083	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124901069
LOC124902436	Talanin	Protein Coding	5	GC10P062643	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124902436
LOC124902802	Protein GVQW1-Like	Protein Coding	5	GC11P009817	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124902802
LOC124903162	Uncharacterized LOC124903162	Protein Coding	5	GC13M040107	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124903162
LOC124904063	Uncharacterized LOC124904063	Protein Coding	5	GC17P078327	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124904063
LOC124909485	Uncharacterized LOC124909485	Protein Coding	5	GC03P058172	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124909485
LOC645481	Zinc Finger Protein 248 Pseudogene	Pseudo gene	5	GC04P026127	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC645481
MK280073-024		RNA Gene	5	GC01P173325	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MK280073-024
MK280144-573		RNA Gene	5	GC06M067897	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MK280144-573
MK280269-008		RNA Gene	5	GC10M070214	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MK280269-008
MN297545		RNA Gene	5	GC18M079398	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MN297545

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MN298114-116		RNA Gene	5	GC21P034282	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MN298114-116
MN309174-057		RNA Gene	5	GC10P092764	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MN309174-057
NDUFB9 P2	NADH:Ubiquinone Oxidoreductase Subunit B9 Pseudogene 2	Pseudo gene	5	GC07M131754	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NDUFB9P2
NONHSAG001750.2		RNA Gene	5	GC01P067182	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NONHSAG001750.2
NONHSAG001753.2		RNA Gene	5	GC01P067308	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NONHSAG001753.2
NONHSAG005179.2-001		RNA Gene	5	GC10P008054	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NONHSAG005179.2-001
NONHSAG005179.2-002		RNA Gene	5	GC10P008064	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NONHSAG005179.2-002
NONHSAG031883.2-001		RNA Gene	5	GC20P046119	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NONHSAG031883.2-001
NONHSAG043563.2		RNA Gene	5	GC06P085607	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NONHSAG043563.2
NONHSAG044958.2		RNA Gene	5	GC06P137874	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NONHSAG044958.2
RF00017-1167		RNA Gene	5	GC12M111251	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-1167
RF00017-4245		RNA Gene	5	GC05M054016	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-4245

RF00017-4626		RNA Gene	5	GC05P150704	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-4626
RF00017-5297		RNA Gene	5	GC06M105987	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-5297
RF00017-6101		RNA Gene	5	GC07P101334	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-6101
RF00017-649		RNA Gene	5	GC10P093424	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-649
RF00019-050		RNA Gene	5	GC15P042442	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00019-050
RF00026-588		RNA Gene	5	GC02P191125	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00026-588
RF00026-650		RNA Gene	5	GC21M042431	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00026-650
lnc-ADD2-2		RNA Gene	5	GC02M070456	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ADD2-2
lnc-ANKRD33B-6		RNA Gene	5	GC05P010698	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ANKRD33B-6
lnc-ANKRD33B-7		RNA Gene	5	GC05P010708	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ANKRD33B-7
lnc-ASAP1-6		RNA Gene	5	GC08M129855	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ASAP1-6
lnc-BAD-1		RNA Gene	5	GC11M064276	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-BAD-1
lnc-C5-1		RNA Gene	5	GC09M120924	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-C5-1
lnc-CASTOR1-1		RNA Gene	5	GC22M057165	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-CASTOR1-1

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lnc-CD83-11	RNA Gene	5	GC06P014094	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-CD83-11
lnc-CD83-7	RNA Gene	5	GC06P014100	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-CD83-7
lnc-CEP76-3	RNA Gene	5	GC18M024982	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-CEP76-3
lnc-CHP2-1	RNA Gene	5	GC16P023875	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-CHP2-1
lnc-CREB5-4	RNA Gene	5	GC07P028146	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-CREB5-4
lnc-CTNND2-10	RNA Gene	5	GC05M010743	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-CTNND2-10
lnc-CTNND2-6	RNA Gene	5	GC05M010707	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-CTNND2-6
lnc-CYP1B1-7	RNA Gene	5	GC02M037679	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-CYP1B1-7
lnc-DYDC1-12	RNA Gene	5	GC10M080453	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-DYDC1-12
lnc-ECHDC3-8	RNA Gene	5	GC10P011253	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-ECHDC3-8
lnc-FAM109A-1	RNA Gene	5	GC12M111536	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-FAM109A-1
lnc-FAM109A-2	RNA Gene	5	GC12M111405	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-FAM109A-2
lnc-FAM133B-2	RNA Gene	5	GC07M092611	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-FAM133B-2

lnc-FNDC1-8	RNA Gene	5	GC06P160581	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-FNDC1-8
lnc-GATA3-19-001	RNA Gene	5	GC10P008992	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-GATA3-19-001
lnc-GATA3-20	RNA Gene	5	GC10P009028	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-GATA3-20
lnc-GIN1-2	RNA Gene	5	GC05M103281	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-GIN1-2
lnc-HLA-DQA1-10	RNA Gene	5	GC06P085069	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-HLA-DQA1-10
lnc-HLA-DQA1-9	RNA Gene	5	GC06P085071	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-HLA-DQA1-9
lnc-HLA-DRB1-7	RNA Gene	5	GC06M032609	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-HLA-DRB1-7
lnc-HLA-DRB5-1-002	RNA Gene	5	GC06M032459	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-HLA-DRB5-1-002
lnc-IGSF3-3	RNA Gene	5	GC01M116740	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-IGSF3-3
lnc-IL2RA-4	RNA Gene	5	GC10M006071	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-IL2RA-4
lnc-IL2RB-1	RNA Gene	5	GC22M037139	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-IL2RB-1
lnc-IRF5-3	RNA Gene	5	GC07P132040	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-IRF5-3
lnc-KIN-10	RNA Gene	5	GC10M008992	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-KIN-10
lnc-MCUR1-13	RNA Gene	5	GC06M014092	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-MCUR1-13

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lnc-OLIG3-1	RNA Gene	5	GC06M137671	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-OLIG3-1
lnc-PFKFB3-3	RNA Gene	5	GC10P006343	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-PFKFB3-3
lnc-PLA2G1B-1	RNA Gene	5	GC12M120353	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-PLA2G1B-1
lnc-PQLC1-16	RNA Gene	5	GC18M079397	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-PQLC1-16
lnc-PTPRC-10	RNA Gene	5	GC01P199165	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-PTPRC-10
lnc-PTTG1-5	RNA Gene	5	GC05P160447	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-PTTG1-5
lnc-PUS10-2	RNA Gene	5	GC02M060834	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-PUS10-2
lnc-RAB1A-13	RNA Gene	5	GC02M065341	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-RAB1A-13
lnc-RPLP1-6	RNA Gene	5	GC15P117550	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-RPLP1-6
lnc-RTKN2-5	RNA Gene	5	GC10M062022	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-RTKN2-5
lnc-RTTN-6	RNA Gene	5	GC18M069930	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-RTTN-6
lnc-SLC35G5-2	RNA Gene	5	GC08P011494	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-SLC35G5-2
lnc-SNN-1	RNA Gene	5	GC16P012273	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=1nc-SNN-1

lnc-SWAP70-4	RNA Gene	5	GC11P009764	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-SWAP70-4
lnc-TLE3-16	RNA Gene	5	GC15M069721	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-TLE3-16
lnc-TMEM187-3	RNA Gene	5	GC0XP154020	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-TMEM187-3
lnc-TNFRSF14-1	RNA Gene	5	GC01P003932	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-TNFRSF14-1
lnc-TRPC3-4	RNA Gene	5	GC04M122150	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-TRPC3-4
lnc-VWCE-2	RNA Gene	5	GC11M061138	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-VWCE-2
lnc-WDHD1-3	RNA Gene	5	GC14M054843	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-WDHD1-3
lnc-YDJC-2	RNA Gene	5	GC22M021640	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-YDJC-2
lnc-ZEB1-2	RNA Gene	5	GC10P031133	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ZEB1-2
lnc-ZFC3H1-13	RNA Gene	5	GC12M072432	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ZFC3H1-13
piR-32940	RNA Gene	5	GC11P061829	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-32940
piR-36182-002	RNA Gene	5	GC01P160440	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-36182-002
piR-43107-023	RNA Gene	5	GC01M167452	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-43107-023
piR-44098	RNA Gene	5	GC11M009755	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-44098

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piR-52079-162		RNA Gene	5	GC04M112286	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-52079-162
piR-56037-112		RNA Gene	5	GC09P120932	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-56037-112
ENSG00000220412	Protein Tyrosine Phosphatase, Non-Receptor Type 11 (PTPN11) Pseudogene	Pseudo gene	4	GC06M137706	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000220412
ENSG00000254478	Cytochrome C Oxidase Subunit VIIc (COX7C) Pseudogene	Pseudo gene	4	GC11P118821	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000254478
ENSG00000259970	Novel Transcript	RNA Gene	4	GC03M049684	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000259970
ENSG00000260678	Zinc Finger Protein (ZNF) Pseudogene	Pseudo gene	4	GC16M037188	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000260678
ENSG00000275106	Novel Transcript	Uncategorized	4	GC07M128952	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000275106
ENSG00000279549	Novel Transcript	Uncategorized	4	GC11M061143	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000279549
ENSG00000288975	Novel Transcript	RNA Gene	4	GC11P128628	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000288975
HSALNG0001255		RNA Gene	4	GC01P017846	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0001255
HSALNG0001405		RNA Gene	4	GC01P019861	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0001405
HSALNG0007948-001		RNA Gene	4	GC01P161702	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0007948-001
HSALNG0007948-002		RNA Gene	4	GC01P161703	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=

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HSALNG0009100	RNA Gene	4	GC01P 186657	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0009100
HSALNG0009535	RNA Gene	4	GC01P 199237	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0009535
HSALNG0009536	RNA Gene	4	GC01M 199344	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0009536
HSALNG0009608	RNA Gene	4	GC01P 200902	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0009608
HSALNG0009609	RNA Gene	4	GC01P 200908	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0009609
HSALNG0013961	RNA Gene	4	GC02P 030217	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0013961
HSALNG0013962	RNA Gene	4	GC02P 030226	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0013962
HSALNG0015539	RNA Gene	4	GC02M 065344	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0015539
HSALNG0016005	RNA Gene	4	GC02M 073986	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0016005
HSALNG0021147	RNA Gene	4	GC02P 191035	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0021147
HSALNG0021534	RNA Gene	4	GC02P 201187	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0021534
HSALNG0021690	RNA Gene	4	GC02M 203744	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0021690
HSALNG0026407	RNA Gene	4	GC03M 058193	1.004 889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0026407

HSALNG0032205	RNA Gene	4	GC04P000972	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0032205
HSALNG0033465	RNA Gene	4	GC04M026097	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0033465
HSALNG0035363	RNA Gene	4	GC04M077554	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0035363
HSALNG0035365	RNA Gene	4	GC04M077627	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0035365
HSALNG0049303	RNA Gene	4	GC06P084583	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049303
HSALNG0049304	RNA Gene	4	GC06P084584	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049304
HSALNG0049423	RNA Gene	4	GC06P084611	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0049423
HSALNG0058921	RNA Gene	4	GC07P075447	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0058921
HSALNG0061263	RNA Gene	4	GC07P132006	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0061263
HSALNG0067380	RNA Gene	4	GC08M101435	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0067380
HSALNG0068535	RNA Gene	4	GC08M128542	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0068535
HSALNG0068536-001	RNA Gene	4	GC08P128544	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0068536-001
HSALNG0072212	RNA Gene	4	GC09P081829	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0072212

HSALNG0074144	RNA Gene	4	GC09P120897	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0074144
HSALNG0075945	RNA Gene	4	GC10M006346	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0075945
HSALNG0078331	RNA Gene	4	GC10P062683	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0078331
HSALNG0078621	RNA Gene	4	GC10M070124	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0078621
HSALNG0080050	RNA Gene	4	GC10M099531	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0080050
HSALNG0080051	RNA Gene	4	GC10P099533	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0080051
HSALNG0080384	RNA Gene	4	GC10P103659	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0080384
HSALNG0084497	RNA Gene	4	GC11M090779	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0084497
HSALNG0084770	RNA Gene	4	GC11P064273	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0084770
HSALNG0085864	RNA Gene	4	GC11M076569	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0085864
HSALNG0085865	RNA Gene	4	GC11P077996	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0085865
HSALNG0087579	RNA Gene	4	GC11P118854	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0087579
HSALNG0087581	RNA Gene	4	GC11M118867	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0087581
HSALNG0088091-002	RNA Gene	4	GC11P128262	1.004889	https://www.genecards.org/cgi-

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HSALNG0088092	RNA Gene	4	GC11M128259	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0088092
HSALNG0092390	RNA Gene	4	GC12P072287	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0092390
HSALNG0094038	RNA Gene	4	GC12P111446	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0094038
HSALNG0096509	RNA Gene	4	GC13M039754	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0096509
HSALNG0101767	RNA Gene	4	GC14M061406	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0101767
HSALNG0101768	RNA Gene	4	GC14P061442	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0101768
HSALNG0101769	RNA Gene	4	GC14P061525	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0101769
HSALNG0102088	RNA Gene	4	GC14M068248	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0102088
HSALNG0102109	RNA Gene	4	GC14M068741	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0102109
HSALNG0102110	RNA Gene	4	GC14P068744	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0102110
HSALNG0106869	RNA Gene	4	GC15P118498	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0106869
HSALNG0109614	RNA Gene	4	GC16M011691	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0109614
HSALNG0109615	RNA Gene	4	GC16M011707	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0109615

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HSALNG0113252	RNA Gene	4	GC16M085958	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0113252
HSALNG0119020	RNA Gene	4	GC17P078232	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0119020
HSALNG0119021	RNA Gene	4	GC17P078236	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0119021
HSALNG0123927	RNA Gene	4	GC19M010406	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0123927
HSALNG0124504	RNA Gene	4	GC19P067670	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0124504
HSALNG0124505	RNA Gene	4	GC19P067671	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0124505
HSALNG0131362	RNA Gene	4	GC20M059817	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0131362
HSALNG0131698	RNA Gene	4	GC20M063850	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0131698
HSALNG0132884-001	RNA Gene	4	GC21P035319	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0132884-001
HSALNG0132884-002	RNA Gene	4	GC21P035358	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0132884-002
HSALNG0132885	RNA Gene	4	GC21M035349	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0132885
HSALNG0133192	RNA Gene	4	GC21P041149	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0133192
HSALNG0133311	RNA Gene	4	GC21M042422	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0133311

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HSALNG0134046		RNA Gene	4	GC22P035814	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0134046
HSALNG0134239		RNA Gene	4	GC22P037082	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0134239
HSALNG0140819		RNA Gene	4	GC0XP153988	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0140819
KR153194-030		RNA Gene	4	GC11P118807	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KR153194-030
KR1532266		RNA Gene	4	GC09M123385	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KR153226
LOC105369568	Uncharacterized LOC105369568	RNA Gene	4	GC11M128598	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC105369568
LOC105369750	Uncharacterized LOC105369750	RNA Gene	4	GC12P048012	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC105369750
LOC105376481	Uncharacterized LOC105376481	RNA Gene	4	GC10P031055	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC105376481
LOC105377296	Uncharacterized LOC105377296	RNA Gene	4	GC04M077580	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC105377296
LOC107984079	Uncharacterized LOC107984079	RNA Gene	4	GC03P058536	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC107984079
LOC107984788	Uncharacterized LOC107984788	RNA Gene	4	GC15P118770	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC107984788
LOC124900645	Uncharacterized LOC124900645	RNA Gene	4	GC04P000968	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124900645
LOC124901449	Uncharacterized LOC124901449	Protein Coding	4	GC06P160592	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124901449

LOC124901993	Uncharacterized LOC124901993	Protein Coding	4	GC08P101312	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124901993
LOC124902375	Uncharacterized LOC124902375	RNA Gene	4	GC10P011186	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124902375
LOC124902435	Uncharacterized LOC124902435	RNA Gene	4	GC10M061998	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124902435
LOC124903019	Uncharacterized LOC124903019	RNA Gene	4	GC12M111432	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124903019
LOC124903774	Uncharacterized LOC124903774	RNA Gene	4	GC16M050728	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124903774
MK280144-020		RNA Gene	4	GC01P067362	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MK280144-020
MK280144-291		RNA Gene	4	GC18P017623	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MK280144-291
MN298230		RNA Gene	4	GC05P160444	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MN298230
MN298231		RNA Gene	4	GC05M160458	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MN298231
MN308685		RNA Gene	4	GC01P017083	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MN308685
MN308836		RNA Gene	4	GC01P183559	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MN308836
MN308841		RNA Gene	4	GC01P186678	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MN308841
MN309368		RNA Gene	4	GC11M064281	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MN309368
NONHSAG019426.2		RNA Gene	4	GC16P050713	1.004889	https://www.genecards.org/cgi-

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NONHSAG031883.2-002	RNA Gene	4	GC20P046128	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NONHSAG031883.2-002
OA987689	RNA Gene	4	GC21M041119	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OA987689
RF00017-1458	RNA Gene	4	GC14P068292	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-1458
RF00017-3141	RNA Gene	4	GC02P203756	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-3141
RF00017-3469	RNA Gene	4	GC22M037214	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-3469
RF00017-4512	RNA Gene	4	GC05P134091	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-4512
RF00017-4513	RNA Gene	4	GC05P134110	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-4513
RF00017-4900	RNA Gene	4	GC06P014082	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-4900
RF00017-5281	RNA Gene	4	GC06M090261	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-5281
RF00017-5936	RNA Gene	4	GC07M074515	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-5936
RF00017-5942	RNA Gene	4	GC07M074617	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-5942
RF00017-6030	RNA Gene	4	GC07P092606	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-6030
RF00017-621	RNA Gene	4	GC10M070222	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-621

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RF00017-6905	RNA Gene	4	GC08M132150	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-6905
RF00017-7230	RNA Gene	4	GC09M094978	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00017-7230
RF00019-027	RNA Gene	4	GC13M039786	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00019-027
RF00026-971	RNA Gene	4	GC07M028122	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00026-971
RF00951-116	RNA Gene	4	GC04M026079	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00951-116
RF00994-491	RNA Gene	4	GC02P070538	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF00994-491
RF01016-017	RNA Gene	4	GC07M092634	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RF01016-017
lnc-AHNAK2-1	RNA Gene	4	GC14M104926	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-AHNAK2-1
lnc-AHNAK2-2	RNA Gene	4	GC14M104927	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-AHNAK2-2
lnc-AHNAK2-3	RNA Gene	4	GC14M104925	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-AHNAK2-3
lnc-AHNAK2-4	RNA Gene	4	GC14M104948	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-AHNAK2-4
lnc-ARPC5-2	RNA Gene	4	GC01M183560	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ARPC5-2
lnc-CALHM3-2	RNA Gene	4	GC10M103642	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-CALHM3-2

lnc-FCRL2-1	RNA Gene	4	GC01M157697	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-FCRL2-1
lnc-FCRL3-2	RNA Gene	4	GC01M157612	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-FCRL3-2
lnc-GATA3-19-002	RNA Gene	4	GC10P009002	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-GATA3-19-002
lnc-LONRF2-2	RNA Gene	4	GC02M100088	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-LONRF2-2
lnc-LONRF2-3	RNA Gene	4	GC02M100036	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-LONRF2-3
lnc-NUP88-2	RNA Gene	4	GC17M006180	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-NUP88-2
lnc-PSMD5-5	RNA Gene	4	GC09M120864	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-PSMD5-5
lnc-SLC37A1-2	RNA Gene	4	GC21P042439	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-SLC37A1-2
lnc-TMEM106C-4	RNA Gene	4	GC12P048036	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-TMEM106C-4
lnc-TNPO3-9	RNA Gene	4	GC07M128953	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-TNPO3-9
lnc-YRDC-3	RNA Gene	4	GC01M037827	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-YRDC-3
lnc-ZBTB7C-8	RNA Gene	4	GC18M048521	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ZBTB7C-8
lnc-ZBTB7C-9	RNA Gene	4	GC18M048411	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ZBTB7C-9
lnc-ZNF785-4	RNA Gene	4	GC16M037197	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ZNF785-4

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lnc-ZBP2-1	RNA Gene	4	GC17P039887	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=lnc-ZBP2-1
piR-30934	RNA Gene	4	GC02P073990	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-30934
piR-31199-079	RNA Gene	4	GC12P120338	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-31199-079
piR-31508-004	RNA Gene	4	GC01P116736	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-31508-004
piR-32214-368	RNA Gene	4	GC02M037712	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-32214-368
piR-32297-006	RNA Gene	4	GC14P075506	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-32297-006
piR-32314-017	RNA Gene	4	GC04P026097	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-32314-017
piR-32461-022	RNA Gene	4	GC10M062677	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-32461-022
piR-33303-125	RNA Gene	4	GC04M077625	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-33303-125
piR-34822-252	RNA Gene	4	GC04M122090	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-34822-252
piR-36455	RNA Gene	4	GC12M111444	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-36455
piR-37170-024	RNA Gene	4	GC14P068303	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-37170-024
piR-38259	RNA Gene	4	GC12M111535	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-38259

piR-38580-086	RNA Gene	4	GC14M068290	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-38580-086
piR-39341-038	RNA Gene	4	GC10P031110	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-39341-038
piR-39701-054	RNA Gene	4	GC06M090275	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-39701-054
piR-39904-007	RNA Gene	4	GC14M075433	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-39904-007
piR-40610	RNA Gene	4	GC22P038498	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-40610
piR-41306-234	RNA Gene	4	GC06P137911	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-41306-234
piR-48007	RNA Gene	4	GC12M111540	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-48007
piR-48077	RNA Gene	4	GC19P068867	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-48077
piR-48156	RNA Gene	4	GC21M035356	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-48156
piR-48209-054	RNA Gene	4	GC10P006468	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-48209-054
piR-48222-172	RNA Gene	4	GC02P037723	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-48222-172
piR-48325-110	RNA Gene	4	GC21M039092	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-48325-110
piR-49399-010	RNA Gene	4	GC06P086729	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-49399-010
piR-50346	RNA Gene	4	GC12M111541	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-50346

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piR-50444-644	RNA Gene	4	GC09M094818	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-50444-644
piR-51327	RNA Gene	4	GC12M111437	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-51327
piR-51449	RNA Gene	4	GC12P111448	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-51449
piR-52008-011	RNA Gene	4	GC02M203881	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-52008-011
piR-52079-091	RNA Gene	4	GC18M069859	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-52079-091
piR-52916-031	RNA Gene	4	GC06M159081	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-52916-031
piR-53184	RNA Gene	4	GC22P038660	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-53184
piR-54014	RNA Gene	4	GC19P010470	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-54014
piR-55194-146	RNA Gene	4	GC15P120150	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-55194-146
piR-56480-015	RNA Gene	4	GC12M111439	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-56480-015
piR-56883-151	RNA Gene	4	GC05P132118	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-56883-151
piR-57135-050	RNA Gene	4	GC06P106162	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-57135-050
piR-57461-124	RNA Gene	4	GC02M201198	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-57461-124

piR-60051-103		RNA Gene	4	GC09P123403	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-60051-103
piR-61240-151		RNA Gene	4	GC02M191093	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-61240-151
ENSG00000289491	Novel Protein	Protein Coding	3	GC16M037479	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENSG00000289491
HE856162		RNA Gene	3	GC03P017041	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HE856162
HSALNG0001265		RNA Gene	3	GC01M017316	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0001265
HSALNG0001266		RNA Gene	3	GC01M018068	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0001266
HSALNG0001267		RNA Gene	3	GC01P017351	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0001267
HSALNG0008511		RNA Gene	3	GC01P173345	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0008511
HSALNG0026408		RNA Gene	3	GC03P058194	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0026408
HSALNG0026409		RNA Gene	3	GC03P058202	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0026409
HSALNG0086584		RNA Gene	3	GC11M095569	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0086584
HSALNG0086587		RNA Gene	3	GC11M095590	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0086587
HSALNG0121440		RNA Gene	3	GC18P048493	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0121440
HSALNG0134045		RNA Gene	3	GC22M019748	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0134045

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LOC105374465	Uncharacterized LOC105374465	RNA Gene	3	GC02M037719	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=LOC105374465
LOC105374939	Uncharacterized LOC105374939	RNA Gene	3	GC06P014098	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=LOC105374939
LOC107986672	Uncharacterized LOC107986672	RNA Gene	3	GC06M167127	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=LOC107986672
LOC124902927	Uncharacterized LOC124902927	RNA Gene	3	GC12M048022	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=LOC124902927
LOC124903741	Uncharacterized LOC124903741	RNA Gene	3	GC16M085977	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=LOC124903741
RF00017-4901		RNA Gene	3	GC06M014110	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=RF00017-4901
lnc-PHYKPL-1		RNA Gene	3	GC05M178190	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=lnc-PHYKPL-1
piR-31162-423		RNA Gene	3	GC06P085737	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=piR-31162-423
piR-31432-579		RNA Gene	3	GC06P085771	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=piR-31432-579
piR-31432-580		RNA Gene	3	GC06M032594	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=piR-31432-580
piR-43099-508		RNA Gene	3	GC06P086515	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=piR-43099-508
piR-43583-375		RNA Gene	3	GC03M020778	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=piR-43583-375
piR-43583-471		RNA Gene	3	GC06P086540	1.004889	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=piR-43583-471

piR-45471-521		RNA Gene	3	GC06M032532	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-45471-521
piR-46662-570		RNA Gene	3	GC06M066009	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-46662-570
piR-46756-002		RNA Gene	3	GC06M032538	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-46756-002
piR-48049-069		RNA Gene	3	GC06M066004	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-48049-069
piR-50308-545		RNA Gene	3	GC06P086752	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-50308-545
piR-53431-591		RNA Gene	3	GC06P086858	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-53431-591
piR-55072-002		RNA Gene	3	GC21P044234	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-55072-002
piR-55654-437		RNA Gene	3	GC06P086927	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-55654-437
piR-61028-492		RNA Gene	3	GC06M066015	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-61028-492
HSALNG0025953		RNA Gene	2	GC03M049658	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSALNG0025953
LOC105371505	Uncharacterized LOC105371505	RNA Gene	2	GC17M006179	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC105371505
LOC124903678	Uncharacterized LOC124903678	RNA Gene	2	GC16P041517	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC124903678
hsa-miR-5095-132		RNA Gene	2	GC14M054885	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=hsa-miR-5095-132
piR-49732-109		RNA Gene	2	GC12M056617	1.004889	https://www.genecards.org/cgi-bin/carddisp.pl?gene=piR-49732-109

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P2RY12	Purinergic Receptor P2Y12	Protein Coding	46	GC03M151336	1.001303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RY12
P2RY1	Purinergic Receptor P2Y1	Protein Coding	45	GC03P152835	1.001303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RY1
P2RY2	Purinergic Receptor P2Y2	Protein Coding	44	GC11P073202	1.001303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RY2
P2RX1	Purinergic Receptor P2X 1	Protein Coding	42	GC17M003896	1.001303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RX1
P2RX2	Purinergic Receptor P2X 2	Protein Coding	42	GC12P132618	1.001303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RX2
P2RY6	Pyrimidinergic Receptor P2Y6	Protein Coding	40	GC11P073264	1.001303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RY6
P2RY4	Pyrimidinergic Receptor P2Y4	Protein Coding	39	GC0XM070258	1.001303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RY4
P2RX5	Purinergic Receptor P2X 5	Protein Coding	38	GC17M003672	1.001303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P2RX5
NOX5	NADPH Oxidase 5	Protein Coding	37	GC15P117544	1.001303	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOX5
HIVEP3	HIVEP Zinc Finger 3	Protein Coding	35	GC01M041506	1.000021	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HIVEP3
SNHG1	Small Nucleolar RNA Host Gene 1	RNA Gene	21	GC11M089641	1.000021	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNHG1
GRIN2D	Glutamate Ionotropic Receptor NMDA Type Subunit 2D	Protein Coding	47	GC19P067036	0.998033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GRIN2D
SCN9A	Sodium Voltage-Gated Channel Alpha Subunit 9	Protein Coding	47	GC02M166195	0.998033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SCN9A

HTR3B	5-Hydroxytryptamine Receptor 3B	Protein Coding	44	GC11P113956	0.998033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HTR3B
PPME1	Protein Phosphatase Methylesterase 1	Protein Coding	38	GC11P074170	0.998033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPME1
PPP2R5A	Protein Phosphatase 2 Regulatory Subunit B'Alpha	Protein Coding	38	GC01P212285	0.998033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPP2R5A
C5orf64	Chromosome 5 Putative Open Reading Frame 64	RNA Gene	28	GC05P061640	0.998033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C5orf64
SMIM23	Small Integral Membrane Protein 23	Protein Coding	22	GC05P171785	0.998033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMIM23
TRIB1	Tribbles Pseudokinase 1	Protein Coding	38	GC08P125430	0.993718	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIB1
TRIB2	Tribbles Pseudokinase 2	Protein Coding	37	GC02P012717	0.993718	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIB2
STK32B	Serine/Threonine Kinase 32B	Protein Coding	32	GC04P005020	0.988998	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STK32B
PHB1	Prohibitin 1	Protein Coding	36	GC17M049406	0.986121	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PHB1
JAG1	Jagged Canonical Notch Ligand 1	Protein Coding	48	GC20M010637	0.982082	https://www.genecards.org/cgi-bin/carddisp.pl?gene=JAG1
KAT5	Lysine Acetyltransferase 5	Protein Coding	46	GC11P065711	0.982082	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KAT5
INSR	Insulin Receptor	Protein Coding	51	GC19M007112	0.980465	https://www.genecards.org/cgi-bin/carddisp.pl?gene=INSR
FSHR	Follicle Stimulating Hormone Receptor	Protein Coding	46	GC02M048962	0.978965	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FSHR
CDKN1B	Cyclin Dependent Kinase Inhibitor 1B	Protein Coding	45	GC12P021339	0.978965	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDKN1B

						bin/carddisp.pl?gene=CDKN1B
ADAMTS3	ADAM Metallopeptidase With Thrombospondin Type 1 Motif 3	Protein Coding	41	GC04M072280	0.978965	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAMTS3
SUCLG2	Succinate-CoA Ligase GDP-Forming Subunit Beta	Protein Coding	40	GC03M067358	0.978965	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SUCLG2
ABL1	ABL Proto-Oncogene 1, Non-Receptor Tyrosine Kinase	Protein Coding	50	GC09P130713	0.969663	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABL1
ZNF300	Zinc Finger Protein 300	Protein Coding	36	GC05M150894	0.967315	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF300
SMARCA4	SWI/SNF Related, Matrix Associated, Actin Dependent Regulator Of Chromatin, Subfamily A, Member 4	Protein Coding	48	GC19P010932	0.963885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMARCA4
ARHGEF1	Rho Guanine Nucleotide Exchange Factor 1	Protein Coding	44	GC19P041883	0.963885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARHGEF1
PTPRK	Protein Tyrosine Phosphatase Receptor Type K	Protein Coding	44	GC06M127949	0.963885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPRK
PARG	Poly(ADP-Ribose) Glycohydrolase	Protein Coding	40	GC10M049818	0.963885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PARG
CCN5	Cellular Communication Network Factor 5	Protein Coding	29	GC20P044715	0.963885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCN5
MIR19B1	MicroRNA 19b-1	RNA Gene	18	GC13P091551	0.963885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR19B1
MIR19B2	MicroRNA 19b-2	RNA Gene	16	GC0XM134310	0.963885	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR19B2
PRKG1	Protein Kinase CGMP-Dependent 1	Protein Coding	48	GC10P050991	0.962127	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKG1
EBP	EBP Cholesterol Delta-Isomerase	Protein Coding	42	GC0XP048521	0.958073	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=EBP
EFS	Embryonal Fyn-Associated Substrate	Protein Coding	35	GC14M023356	0.957583	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EFS
PIK3CB	Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Beta	Protein Coding	46	GC03M138652	0.957089	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIK3CB
UBE2N	Ubiquitin Conjugating Enzyme E2 N	Protein Coding	45	GC12M093406	0.956232	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBE2N
DDB1	Damage Specific DNA Binding Protein 1	Protein Coding	43	GC11M089571	0.956232	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDB1
MIR499B	MicroRNA 499b	RNA Gene	10	GC20M034990	0.952944	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR499B
KCNA3	Potassium Voltage-Gated Channel Subfamily A Member 3	Protein Coding	43	GC01M110654	0.949855	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KCNA3
G6PD	Glucose-6-Phosphate Dehydrogenase	Protein Coding	48	GC0XM154551	0.947585	https://www.genecards.org/cgi-bin/carddisp.pl?gene=G6PD
CADM1	Cell Adhesion Molecule 1	Protein Coding	42	GC11M115169	0.942037	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CADM1
SAGE1	Sarcoma Antigen 1	Protein Coding	29	GC0XP135889	0.942037	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAGE1
IGHG3	Immunoglobulin Heavy Constant Gamma 3 (G3m Marker)	Protein Coding	29	GC14M112714	0.938649	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGHG3
PTGIR	Prostaglandin I2 Receptor	Protein Coding	45	GC19M065976	0.938271	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTGIR
RYR2	Ryanodine Receptor 2	Protein Coding	46	GC01P237042	0.935749	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RYR2
HUNK	Hormonally Up-Regulated Neu-Associated Kinase	Protein Coding	36	GC21P031873	0.935749	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HUNK

CYP51A1	Cytochrome P450 Family 51 Subfamily A Member 1	Protein Coding	42	GC07M092112	0.933388	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP51A1
CNN1	Calponin 1	Protein Coding	39	GC19P011539	0.933388	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNN1
SRSF6	Serine And Arginine Rich Splicing Factor 6	Protein Coding	38	GC20P043457	0.92952	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SRSF6
SIRPA	Signal Regulatory Protein Alpha	Protein Coding	42	GC20P001894	0.928178	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SIRPA
NR5A1	Nuclear Receptor Subfamily 5 Group A Member 1	Protein Coding	48	GC09M124481	0.923375	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR5A1
MIR200C	MicroRNA 200c	RNA Gene	21	GC12P021094	0.922258	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR200C
CYSLTR1	Cysteinyl Leukotriene Receptor 1	Protein Coding	41	GC0XM078271	0.919425	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYSLTR1
COMMD1	Copper Metabolism Domain Containing 1	Protein Coding	41	GC02P061888	0.918814	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COMMD1
WNT3A	Wnt Family Member 3A	Protein Coding	45	GC01P229293	0.916329	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WNT3A
GAD1	Glutamate Decarboxylase 1	Protein Coding	48	GC02P170813	0.916112	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GAD1
SLC22A2	Solute Carrier Family 22 Member 2	Protein Coding	44	GC06M160190	0.90956	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC22A2
DBP	D-Box Binding PAR BZIP Transcription Factor	Protein Coding	37	GC19M048630	0.907883	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DBP
MAZ	MYC Associated Zinc Finger Protein	Protein Coding	39	GC16P029806	0.905957	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAZ
ADPRH	ADP-Ribosylarginine Hydrolase	Protein Coding	34	GC03P119579	0.90055	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=ADPRH
TP53BP1	Tumor Protein P53 Binding Protein 1	Protein Coding	42	GC15M043403	0.895364	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TP53BP1
TRAF4	TNF Receptor Associated Factor 4	Protein Coding	41	GC17P054910	0.894301	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRAF4
SMOC2	SPARC Related Modular Calcium Binding 2	Protein Coding	42	GC06P168441	0.893829	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMOC2
UBC	Ubiquitin C	Protein Coding	41	GC12M124911	0.893829	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBC
ATP8B1	ATPase Phospholipid Transporting 8B1	Protein Coding	40	GC18M057646	0.893829	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP8B1
FMN2	Formin 2	Protein Coding	38	GC01P240014	0.893829	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FMN2
KCNK12	Potassium Two Pore Domain Channel Subfamily K Member 12	Protein Coding	38	GC02M047516	0.893829	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KCNK12
ZP4	Zona Pellucida Glycoprotein 4	Protein Coding	32	GC01M237877	0.893829	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZP4
SREBF1	Sterol Regulatory Element Binding Transcription Factor 1	Protein Coding	44	GC17M017810	0.891944	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SREBF1
CXCL14	C-X-C Motif Chemokine Ligand 14	Protein Coding	36	GC05M135617	0.890761	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CXCL14
ACE2	Angiotensin Converting Enzyme 2	Protein Coding	46	GC0XM015494	0.884451	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACE2
EPX	Eosinophil Peroxidase	Protein Coding	43	GC17P058192	0.883289	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EPX
PNPLA6	Patatin Like Phospholipase Domain Containing 6	Protein Coding	43	GC19P007534	0.883289	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PNPLA6

FARSB	Phenylalanyl-TRNA Synthetase Subunit Beta	Protein Coding	42	GC02M222570	0.883289	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FARSB
TOLLIP	Toll Interacting Protein	Protein Coding	42	GC11M001274	0.883289	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TOLLIP
PSIP1	PC4 And SFRS1 Interacting Protein 1	Protein Coding	38	GC09M015464	0.883289	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSIP1
FOXP2	Forkhead Box P2	Protein Coding	43	GC07P114086	0.882679	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOXP2
EMD	Emerin	Protein Coding	42	GC0XP154379	0.882679	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EMD
MUC5AC	Mucin 5AC, Oligomeric Mucus/Gel-Forming	Protein Coding	40	GC11P001810	0.880126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MUC5AC
ILK	Integrin Linked Kinase	Protein Coding	44	GC11P006604	0.876646	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ILK
P4HTM	Prolyl 4-Hydroxylase, Transmembrane	Protein Coding	36	GC03P049627	0.876646	https://www.genecards.org/cgi-bin/carddisp.pl?gene=P4HTM
FUT7	Fucosyltransferase 7	Protein Coding	40	GC09M137030	0.866573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FUT7
DUSP7	Dual Specificity Phosphatase 7	Protein Coding	38	GC03M052048	0.865589	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DUSP7
CYP24A1	Cytochrome P450 Family 24 Subfamily A Member 1	Protein Coding	45	GC20M054153	0.855808	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP24A1
NR3C2	Nuclear Receptor Subfamily 3 Group C Member 2	Protein Coding	45	GC04M148078	0.855808	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR3C2
SRD5A1	Steroid 5 Alpha-Reductase 1	Protein Coding	42	GC05P006633	0.855808	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SRD5A1
VAV3	Vav Guanine Nucleotide Exchange Factor 3	Protein Coding	42	GC01M107571	0.855808	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VAV3

						bin/carddisp.pl?gene=VAV3
TBXT	T-Box Transcription Factor T	Protein Coding	33	GC06M166158	0.851548	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TBXT
PADI1	Peptidyl Arginine Deiminase 1	Protein Coding	37	GC01P017205	0.850721	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PADI1
PRKRA	Protein Activator Of Interferon Induced Protein Kinase EIF2AK2	Protein Coding	40	GC02M178431	0.848315	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKRA
CA1	Carbonic Anhydrase 1	Protein Coding	46	GC08M085327	0.846249	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CA1
SERPING1	Serpin Family G Member 1	Protein Coding	45	GC11P057597	0.846249	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SERPING1
COTL1	Coactosin Like F-Actin Binding Protein 1	Protein Coding	40	GC16M084566	0.842726	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COTL1
CORT	Cortistatin	Protein Coding	35	GC01P010508	0.837322	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CORT
GCGR	Glucagon Receptor	Protein Coding	45	GC17P081804	0.836011	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GCGR
TXNRD2	Thioredoxin Reductase 2	Protein Coding	45	GC22M019863	0.835236	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TXNRD2
CDR1	Cerebellar Degeneration Related Protein 1	Protein Coding	32	GC0XM140782	0.835019	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDR1
CARD11	Caspase Recruitment Domain Family Member 11	Protein Coding	45	GC07M002906	0.828873	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CARD11
CPE	Carboxypeptidase E	Protein Coding	44	GC04P165361	0.828873	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CPE
PDE5A	Phosphodiesterase 5A	Protein Coding	44	GC04M119494	0.828873	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDE5A

APOA2	Apolipoprotein A2	Protein Coding	43	GC01M161222	0.828873	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APOA2
IL31RA	Interleukin 31 Receptor A	Protein Coding	42	GC05P055840	0.828873	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL31RA
INSL3	Insulin Like 3	Protein Coding	39	GC19M017816	0.828873	https://www.genecards.org/cgi-bin/carddisp.pl?gene=INSL3
PHF11	PHD Finger Protein 11	Protein Coding	35	GC13P049495	0.828873	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PHF11
TMEM79	Transmembrane Protein 79	Protein Coding	34	GC01P156252	0.828873	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMEM79
SLC1A1	Solute Carrier Family 1 Member 1	Protein Coding	47	GC09P004490	0.828172	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC1A1
ARG2	Arginase 2	Protein Coding	43	GC14P067619	0.828172	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARG2
SH3BP2	SH3 Domain Binding Protein 2	Protein Coding	40	GC04P002794	0.828172	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SH3BP2
MAPK11	Mitogen-Activated Protein Kinase 11	Protein Coding	45	GC22M050263	0.817537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAPK11
MAPK12	Mitogen-Activated Protein Kinase 12	Protein Coding	45	GC22M057729	0.817537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAPK12
HNRNPD	Heterogeneous Nuclear Ribonucleoprotein D	Protein Coding	41	GC04M082352	0.817537	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HNRNPD
SPPL2A	Signal Peptide Peptidase Like 2A	Protein Coding	40	GC15M050702	0.800444	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPPL2A
PSMC6	Proteasome 26S Subunit, ATPase 6	Protein Coding	39	GC14P052707	0.800444	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMC6
MAGI1	Membrane Associated Guanylate Kinase, WW	Protein Coding	38	GC03M065330	0.800444	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAGI1

	And PDZ Domain Containing 1					bin/cdddisp.pl?gene=MAGI1
ZNF395	Zinc Finger Protein 395	Protein Coding	32	GC08M 028345	0.800 444	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ZNF395
NCSTN	Nicastrin	Protein Coding	45	GC01P 160343	0.799 1	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=NCSTN
UGT2B1 7	UDP Glucuronosyltransferase Family 2 Member B17	Protein Coding	41	GC04M 068537	0.799 1	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=UGT2B17
TRIM5	Tripartite Motif Containing 5	Protein Coding	40	GC11M 006531	0.799 1	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=TRIM5
FIP1L1	Factor Interacting With PAPOLA And CPSF1	Protein Coding	39	GC04P 053427	0.799 1	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=FIP1L1
SBDS	SBDS Ribosome Maturation Factor	Protein Coding	41	GC07M 066987	0.792 955	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=SBDS
PTGDR2	Prostaglandin D2 Receptor 2	Protein Coding	40	GC11M 060850	0.792 955	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=PTGDR2
KRT9	Keratin 9	Protein Coding	41	GC17M 041565	0.792 552	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=KRT9
SLC9A3	Solute Carrier Family 9 Member A3	Protein Coding	46	GC05M 000472	0.789 809	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=SLC9A3
HMGCS2	3-Hydroxy-3- Methylglutaryl-CoA Synthase 2	Protein Coding	45	GC01M 119747	0.789 809	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=HMGCS2
PRCP	Prolylcarboxypeptidase	Protein Coding	45	GC11M 090534	0.789 809	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=PRCP
ABCA7	ATP Binding Cassette Subfamily A Member 7	Protein Coding	44	GC19P 002825	0.789 809	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=ABCA7
EFEMP2	EGF Containing Fibulin Extracellular Matrix Protein 2	Protein Coding	44	GC11M 089827	0.789 809	https://www.ncbi.nlm.nih.gov/ncbi/cdd/cdddisp.pl?gene=EFEMP2

NPPA	Natriuretic Peptide A	Protein Coding	44	GC01M011846	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NPPA
S1PR3	Sphingosine-1-Phosphate Receptor 3	Protein Coding	43	GC09P089316	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=S1PR3
PALB2	Partner And Localizer Of BRCA2	Protein Coding	42	GC16M023603	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PALB2
PLSCR1	Phospholipid Scramblase 1	Protein Coding	42	GC03M146515	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLSCR1
S1PR2	Sphingosine-1-Phosphate Receptor 2	Protein Coding	42	GC19M010223	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=S1PR2
NDUFAB1	NADH:Ubiquinone Oxidoreductase Subunit AB1	Protein Coding	41	GC16M023582	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NDUFAB1
BNIP3	BCL2 Interacting Protein 3	Protein Coding	40	GC10M131966	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BNIP3
CLEC1B	C-Type Lectin Domain Family 1 Member B	Protein Coding	38	GC12M021103	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLEC1B
KIR2DL4	Killer Cell Immunoglobulin Like Receptor, Two Ig Domains And Long Cytoplasmic Tail 4	Protein Coding	38	GC19P067383	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIR2DL4
SEZ6L	Seizure Related 6 Homolog Like	Protein Coding	38	GC22P026169	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEZ6L
ABLIM1	Actin Binding LIM Protein 1	Protein Coding	37	GC10M114487	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABLIM1
FBXO38	F-Box Protein 38	Protein Coding	37	GC05P148383	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FBXO38
PSRC1	Proline And Serine Rich Coiled-Coil 1	Protein Coding	37	GC01M109279	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSRC1

DCTN5	Dynactin Subunit 5	Protein Coding	36	GC16P024282	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DCTN5
LAIR2	Leukocyte Associated Immunoglobulin Like Receptor 2	Protein Coding	36	GC19P067370	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LAIR2
ZFAND6	Zinc Finger AN1-Type Containing 6	Protein Coding	36	GC15P117829	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZFAND6
ZDHHC1	Zinc Finger DHHC-Type Containing 1	Protein Coding	35	GC16M067394	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZDHHC1
ZGPAT	Zinc Finger CCCH-Type And G-Patch Domain Containing	Protein Coding	35	GC20P063707	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZGPAT
KLHDC1	Kelch Domain Containing 1	Protein Coding	34	GC14P049693	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLHDC1
NDST3	N-Deacetylase And N-Sulfotransferase 3	Protein Coding	34	GC04P118033	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NDST3
TRAFD1	TRAF-Type Zinc Finger Domain Containing 1	Protein Coding	34	GC12P112125	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRAFD1
FAM135A	Family With Sequence Similarity 135 Member A	Protein Coding	33	GC06P070412	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAM135A
HIGD1C	HIG1 Hypoxia Inducible Domain Family Member 1C	Protein Coding	28	GC12P050932	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HIGD1C
SLC35F4	Solute Carrier Family 35 Member F4	Protein Coding	27	GC14M057563	0.789809	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC35F4
C3AR1	Complement C3a Receptor 1	Protein Coding	41	GC12M008058	0.783075	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C3AR1
SLC3A2	Solute Carrier Family 3 Member 2	Protein Coding	40	GC11P062856	0.782247	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC3A2
ITIH4	Inter-Alpha-Trypsin Inhibitor Heavy Chain 4	Protein Coding	42	GC03M052812	0.781451	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=ITI4
FABP5	Fatty Acid Binding Protein 5	Protein Coding	41	GC08P081282	0.77223	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FABP5
TNFSF12 - TNFSF13	TNFSF12-TNFSF13 Readthrough	Protein Coding	23	GC17P011168	0.769389	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFSF12-TNFSF13
SLC26A4	Solute Carrier Family 26 Member 4	Protein Coding	42	GC07P107660	0.766114	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC26A4
COL4A3	Collagen Type IV Alpha 3 Chain	Protein Coding	44	GC02P227164	0.766052	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL4A3
LMNB2	Lamin B2	Protein Coding	42	GC19M005364	0.766052	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LMNB2
NAA80	N-Alpha-Acetyltransferase 80, NatH Catalytic Subunit	Protein Coding	25	GC03M051240	0.764308	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NAA80
PTGES2	Prostaglandin E Synthase 2	Protein Coding	41	GC09M128120	0.761813	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTGES2
SPR	Sepiapterin Reductase	Protein Coding	49	GC02P072850	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPR
TSC2	TSC Complex Subunit 2	Protein Coding	48	GC16P011696	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSC2
ATP1A3	ATPase Na ⁺ /K ⁺ Transporting Subunit Alpha 3	Protein Coding	46	GC19M041966	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP1A3
LIG4	DNA Ligase 4	Protein Coding	46	GC13M108207	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LIG4
NFS1	NFS1 Cysteine Desulfurase	Protein Coding	45	GC20M035668	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NFS1
AGXT	Alanine--Glyoxylate And Serine--Pyruvate Aminotransferase	Protein Coding	44	GC02P240868	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AGXT

SLC7A9	Solute Carrier Family 7 Member 9	Protein Coding	44	GC19M032830	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC7A9
TAF1	TATA-Box Binding Protein Associated Factor 1	Protein Coding	44	GC0XP071366	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAF1
CHRNA1	Cholinergic Receptor Nicotinic Alpha 1 Subunit	Protein Coding	43	GC02M174747	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHRNA1
CHRNE	Cholinergic Receptor Nicotinic Epsilon Subunit	Protein Coding	43	GC17M004897	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHRNE
C7	Complement C7	Protein Coding	42	GC05P040909	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C7
PNKD	PNKD Metallo-Beta-Lactamase Domain Containing	Protein Coding	42	GC02P218270	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PNKD
SGCE	Sarcoglycan Epsilon	Protein Coding	42	GC07M094524	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SGCE
RAPSN	Receptor Associated Protein Of The Synapse	Protein Coding	41	GC11M089370	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAPSN
AKAP12	A-Kinase Anchoring Protein 12	Protein Coding	40	GC06P151239	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AKAP12
NHEJ1	Non-Homologous End Joining Factor 1	Protein Coding	40	GC02M219119	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NHEJ1
CALB2	Calbindin 2	Protein Coding	39	GC16P071358	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CALB2
PTMA	Prothymosin Alpha	Protein Coding	39	GC02P231707	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTMA
PRRT2	Proline Rich Transmembrane Protein 2	Protein Coding	38	GC16P029811	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRRT2
HOGA1	4-Hydroxy-2-Oxoglutarate Aldolase 1	Protein Coding	37	GC10P097586	0.761076	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=HOGA1
NLRP4	NLR Family Pyrin Domain Containing 4	Protein Coding	36	GC19P055836	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NLRP4
LRRC56	Leucine Rich Repeat Containing 56	Protein Coding	34	GC11P000518	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRRC56
SUCO	SUN Domain Containing Ossification Factor	Protein Coding	33	GC01P172532	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SUCO
TAF1L	TATA-Box Binding Protein Associated Factor 1 Like	Protein Coding	33	GC09M032619	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TAF1L
UBTD1	Ubiquitin Domain Containing 1	Protein Coding	33	GC10P097498	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBTD1
TERC	Telomerase RNA Component	RNA Gene	29	GC03M169765	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TERC
EVPLL	Envoplakin Like	Protein Coding	27	GC17P054656	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EVPLL
MIR449C	MicroRNA 449c	RNA Gene	18	GC05M055173	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR449C
MYAS1	Myasthenia Gravis With Thymus Hyperplasia	Genetic Locus	2	GC06U990322	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MYAS1
THM	Thymoma	Genetic Locus	2	GC00U990370	0.761076	https://www.genecards.org/cgi-bin/carddisp.pl?gene=THM
CSF2RB	Colony Stimulating Factor 2 Receptor Subunit Beta	Protein Coding	46	GC22P036913	0.738352	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSF2RB
CLIC1	Chloride Intracellular Channel 1	Protein Coding	40	GC06M065968	0.738352	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLIC1
EGFL8	EGF Like Domain Multiple 8	Protein Coding	34	GC06P083721	0.738352	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EGFL8

ATF1	Activating Transcription Factor 1	Protein Coding	43	GC12P050763	0.737481	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATF1
PDK1	Pyruvate Dehydrogenase Kinase 1	Protein Coding	45	GC02P172555	0.736053	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDK1
RAB7A	RAB7A, Member RAS Oncogene Family	Protein Coding	45	GC03P134197	0.734205	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAB7A
IBD5	Inflammatory Bowel Disease 5	Genetic Locus	5	GC05U990104	0.732442	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IBD5
KIR3DL2	Killer Cell Immunoglobulin Like Receptor, Three Ig Domains And Long Cytoplasmic Tail 2	Protein Coding	39	GC19P067386	0.731972	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIR3DL2
CD5L	CD5 Molecule Like	Protein Coding	38	GC01M157800	0.731972	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD5L
DEFA5	Defensin Alpha 5	Protein Coding	37	GC08M007057	0.731972	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DEFA5
DEFA6	Defensin Alpha 6	Protein Coding	36	GC08M006924	0.731972	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DEFA6
E2F1	E2F Transcription Factor 1	Protein Coding	42	GC20M033675	0.72554	https://www.genecards.org/cgi-bin/carddisp.pl?gene=E2F1
CORIN	Corin, Serine Peptidase	Protein Coding	43	GC04M047596	0.716256	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CORIN
UBTF	Upstream Binding Transcription Factor	Protein Coding	41	GC17M044205	0.716256	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBTF
LMNB1	Lamin B1	Protein Coding	45	GC05P126776	0.709613	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LMNB1
DPYD	Dihydropyrimidine Dehydrogenase	Protein Coding	50	GC01M097015	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DPYD

SNCA	Synuclein Alpha	Protein Coding	48	GC04M089724	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNCA
DUSP6	Dual Specificity Phosphatase 6	Protein Coding	47	GC12M089347	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DUSP6
ITGA3	Integrin Subunit Alpha 3	Protein Coding	46	GC17P050055	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGA3
ABCC4	ATP Binding Cassette Subfamily C Member 4	Protein Coding	45	GC13M095019	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCC4
GNRHR	Gonadotropin Releasing Hormone Receptor	Protein Coding	45	GC04M067737	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GNRHR
LHCGR	Luteinizing Hormone/Choriogonadotropin Receptor	Protein Coding	45	GC02M048686	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LHCGR
MOG	Myelin Oligodendrocyte Glycoprotein	Protein Coding	45	GC06P083635	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MOG
NR0B1	Nuclear Receptor Subfamily 0 Group B Member 1	Protein Coding	45	GC0XM030304	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR0B1
ADRA2C	Adrenoceptor Alpha 2C	Protein Coding	44	GC04P003766	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADRA2C
KCNA4	Potassium Voltage-Gated Channel Subfamily A Member 4	Protein Coding	44	GC11M030009	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KCNA4
NEFL	Neurofilament Light Chain	Protein Coding	44	GC08M024950	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NEFL
FLRT3	Fibronectin Leucine Rich Transmembrane Protein 3	Protein Coding	43	GC20M014322	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FLRT3
GMPS	Guanine Monophosphate Synthase	Protein Coding	43	GC03P155870	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GMPS
RNASEH1	Ribonuclease H1	Protein Coding	43	GC02M003522	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNASEH1

						bin/carddisp.pl?gene=RNASEH1
FSHB	Follicle Stimulating Hormone Subunit Beta	Protein Coding	42	GC11P030210	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FSHB
HTT	Huntingtin	Protein Coding	42	GC04P003041	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HTT
IL17RD	Interleukin 17 Receptor D	Protein Coding	42	GC03M057089	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL17RD
LGI1	Leucine Rich Glioma Inactivated 1	Protein Coding	42	GC10P093757	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LGI1
POLR3A	RNA Polymerase III Subunit A	Protein Coding	42	GC10M078577	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=POLR3A
SPRY4	Sprouty RTK Signaling Antagonist 4	Protein Coding	42	GC05M142310	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SPRY4
TGM3	Transglutaminase 3	Protein Coding	42	GC20P002296	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TGM3
CTSE	Cathepsin E	Protein Coding	41	GC01M206009	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTSE
CYP4V2	Cytochrome P450 Family 4 Subfamily V Member 2	Protein Coding	41	GC04P186191	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP4V2
FCER1A	Fc Epsilon Receptor Ia	Protein Coding	41	GC01P159259	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FCER1A
HS6ST1	Heparan Sulfate 6-O-Sulfotransferase 1	Protein Coding	41	GC02M128236	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HS6ST1
IGBP1	Immunoglobulin Binding Protein 1	Protein Coding	41	GC0XP070133	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGBP1
IGHMBP2	Immunoglobulin Mu DNA Binding Protein 2	Protein Coding	41	GC11P068903	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGHMBP2

KISS1	KiSS-1 Metastasis Suppressor	Protein Coding	41	GC01M204190	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KISS1
PROKR2	Prokineticin Receptor 2	Protein Coding	41	GC20M005409	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PROKR2
RCC1	Regulator Of Chromosome Condensation 1	Protein Coding	41	GC01P028505	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RCC1
MS4A2	Membrane Spanning 4-Domains A2	Protein Coding	40	GC11P060088	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MS4A2
PACSIN2	Protein Kinase C And Casein Kinase Substrate In Neurons 2	Protein Coding	40	GC22M042835	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PACSIN2
SFTPA2	Surfactant Protein A2	Protein Coding	40	GC10M081851	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SFTPA2
FEZF1	FEZ Family Zinc Finger 1	Protein Coding	39	GC07M122301	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FEZF1
MADCAM1	Mucosal Vascular Addressin Cell Adhesion Molecule 1	Protein Coding	39	GC19P002778	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MADCAM1
CSAD	Cysteine Sulfinic Acid Decarboxylase	Protein Coding	38	GC12M053160	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSAD
LHB	Luteinizing Hormone Subunit Beta	Protein Coding	38	GC19M049015	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LHB
NUDT15	Nudix Hydrolase 15	Protein Coding	38	GC13P048037	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NUDT15
WDR11	WD Repeat Domain 11	Protein Coding	38	GC10P120851	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WDR11
CRLF2	Cytokine Receptor Like Factor 2	Protein Coding	37	GC0XM001190	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CRLF2
NSMF	NMDA Receptor Synaptonuclear Signaling	Protein Coding	37	GC09M137447	0.705716	https://www.genecards.org/cgi-

	And Neuronal Migration Factor					bin/carddisp.pl?gene=NSMF
SNRPC	Small Nuclear Ribonucleoprotein Polypeptide C	Protein Coding	37	GC06P083816	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNRPC
ANOS1	Anosmin 1	Protein Coding	36	GC0XM008528	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANOS1
CSN3	Casein Kappa	Protein Coding	36	GC04P070242	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSN3
UGT1A8	UDP Glucuronosyltransferase Family 1 Member A8	Protein Coding	36	GC02P233618	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UGT1A8
NDNF	Neuron Derived Neurotrophic Factor	Protein Coding	35	GC04M121035	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NDNF
ADM2	Adrenomedullin 2	Protein Coding	34	GC22P050481	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADM2
CNOT11	CCR4-NOT Transcription Complex Subunit 11	Protein Coding	30	GC02P101252	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNOT11
DEFB103A	Defensin Beta 103A	Protein Coding	26	GC08P007881	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DEFB103A
LINC01194	Long Intergenic Non-Protein Coding RNA 1194	RNA Gene	17	GC05P012578	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01194
ZFAT-AS1	ZFAT Antisense RNA 1	RNA Gene	16	GC08P134643	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZFAT-AS1
MIR3681	MicroRNA 3681	RNA Gene	12	GC02P012199	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR3681
MT-TR	Mitochondrially Encoded TRNA-Arg (CGN)	RNA Gene	12	GCMT P010407	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MT-TR
LOC110806263	TERT 5' Regulatory Region	Biological Region	3	GC05P001294	0.705716	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC110806263

TENM3	Teneurin Transmembrane Protein 3	Protein Coding	37	GC04P181448	0.700934	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TENM3
IL27RA	Interleukin 27 Receptor Subunit Alpha	Protein Coding	39	GC19P014031	0.700063	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IL27RA
ZBTB7A	Zinc Finger And BTB Domain Containing 7A	Protein Coding	37	GC19M005443	0.700063	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZBTB7A
FASN	Fatty Acid Synthase	Protein Coding	47	GC17M082078	0.698669	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FASN
WDR5	WD Repeat Domain 5	Protein Coding	42	GC09P134135	0.688472	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WDR5
SOAT1	Sterol O-Acyltransferase 1	Protein Coding	43	GC01P179262	0.683136	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOAT1
PSEN1	Presenilin 1	Protein Coding	50	GC14P073136	0.678235	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSEN1
EPHX1	Epoxide Hydrolase 1	Protein Coding	44	GC01P225810	0.672335	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EPHX1
IDO2	Indoleamine 2,3-Dioxygenase 2	Protein Coding	36	GC08P039965	0.672335	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IDO2
PRKAB1	Protein Kinase AMP-Activated Non-Catalytic Subunit Beta 1	Protein Coding	45	GC12P119632	0.671612	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKAB1
PPARGC1A	PPARG Coactivator 1 Alpha	Protein Coding	44	GC04M023755	0.671612	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPARGC1A
TUBB	Tubulin Beta Class I	Protein Coding	48	GC06P083675	0.664799	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TUBB
FOXP1	Forkhead Box P1	Protein Coding	44	GC03M070926	0.664799	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOXP1
PRICKLE2	Prickle Planar Cell Polarity Protein 2	Protein Coding	38	GC03M064079	0.664799	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRICKLE2

						bin/carddisp.pl?gene=PRICKLE2
MRPL23	Mitochondrial Ribosomal Protein L23	Protein Coding	36	GC11P001948	0.664799	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MRPL23
VAR1	Valyl-TRNA Synthetase 1	Protein Coding	35	GC06M065973	0.664799	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VAR1
VWA7	Von Willebrand Factor A Domain Containing 7	Protein Coding	31	GC06M065969	0.664799	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VWA7
SNHG32	Small Nucleolar RNA Host Gene 32	RNA Gene	22	GC06P087379	0.664799	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNHG32
LINC00243	Long Intergenic Non-Protein Coding RNA 243	RNA Gene	18	GC06M065884	0.664799	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC00243
SNORD48	Small Nucleolar RNA, C/D Box 48	RNA Gene	17	GC06P083715	0.664799	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNORD48
FARSA	Phenylalanyl-TRNA Synthetase Subunit Alpha	Protein Coding	41	GC19M012922	0.659761	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FARSA
CALCB	Calcitonin Related Polypeptide Beta	Protein Coding	37	GC11P014904	0.659761	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CALCB
TINAGL1	Tubulointerstitial Nephritis Antigen Like 1	Protein Coding	37	GC01P031576	0.659761	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TINAGL1
TRAT1	T Cell Receptor Associated Transmembrane Adaptor 1	Protein Coding	36	GC03P108823	0.659749	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRAT1
SETD6	SET Domain Containing 6, Protein Lysine Methyltransferase	Protein Coding	35	GC16P058514	0.659749	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SETD6
UHRF1	Ubiquitin Like With PHD And Ring Finger Domains 1	Protein Coding	38	GC19P004960	0.648814	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UHRF1
OPRL1	Opioid Related Nociceptin Receptor 1	Protein Coding	45	GC20P064080	0.641638	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OPRL1

PDPK1	3-Phosphoinositide Dependent Protein Kinase 1	Protein Coding	47	GC16P002537	0.636199	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDPK1
FUCA1	Alpha-L-Fucosidase 1	Protein Coding	46	GC01M023845	0.63606	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FUCA1
TNNI2	Troponin I2, Fast Skeletal Type	Protein Coding	43	GC11P001865	0.63606	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNNI2
SMAD1	SMAD Family Member 1	Protein Coding	41	GC04P145481	0.63606	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMAD1
NOG	Noggin	Protein Coding	45	GC17P056593	0.635476	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOG
HSD3B2	Hydroxy-Delta-5-Steroid Dehydrogenase, 3 Beta- And Steroid Delta- Isomerase 2	Protein Coding	45	GC01P119414	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSD3B2
PPP2R1A	Protein Phosphatase 2 Scaffold Subunit Aalpha	Protein Coding	45	GC19P067249	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPP2R1A
MAP3K12	Mitogen-Activated Protein Kinase Kinase Kinase 12	Protein Coding	44	GC12M053479	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP3K12
CYP4F3	Cytochrome P450 Family 4 Subfamily F Member 3	Protein Coding	42	GC19P015640	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP4F3
TCP1	T-Complex 1	Protein Coding	42	GC06M159778	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TCP1
DNAJB1	DnaJ Heat Shock Protein Family (Hsp40) Member B1	Protein Coding	41	GC19M014514	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNAJB1
CRHBP	Corticotropin Releasing Hormone Binding Protein	Protein Coding	40	GC05P076952	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CRHBP
DNAJA1	DnaJ Heat Shock Protein Family (Hsp40) Member A1	Protein Coding	40	GC09P033025	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNAJA1

IGF2BP3	Insulin Like Growth Factor 2 mRNA Binding Protein 3	Protein Coding	40	GC07M023316	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGF2BP3
RPL9	Ribosomal Protein L9	Protein Coding	40	GC04M039452	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL9
TRPC1	Transient Receptor Potential Cation Channel Subfamily C Member 1	Protein Coding	40	GC03P142724	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRPC1
TIMM50	Translocase Of Inner Mitochondrial Membrane 50	Protein Coding	38	GC19P039480	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TIMM50
RBM39	RNA Binding Motif Protein 39	Protein Coding	37	GC20M035703	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RBM39
ZC3H12A	Zinc Finger CCCH-Type Containing 12A	Protein Coding	36	GC01P037474	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZC3H12A
H2BC12L	H2B Clustered Histone 12 Like	Protein Coding	23	GC21P043569	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=H2BC12L
MIR3926-1	MicroRNA 3926-1	RNA Gene	12	GC08M012727	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR3926-1
MRPS17P7	Mitochondrial Ribosomal Protein S17 Pseudogene 7	Pseudo gene	6	GC18M057763	0.632033	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MRPS17P7
DAB2	DAB Adaptor Protein 2	Protein Coding	41	GC05M039371	0.622343	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DAB2
MUC2	Mucin 2, Oligomeric Mucus/Gel-Forming	Protein Coding	39	GC11P001074	0.622343	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MUC2
MUC17	Mucin 17, Cell Surface Associated	Protein Coding	36	GC07P101020	0.622343	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MUC17
MUC3A	Mucin 3A, Cell Surface Associated	Protein Coding	35	GC07P100949	0.622343	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MUC3A
MUC3B	Mucin 3B, Cell Surface Associated	Protein Coding	19	GC07U903146	0.622343	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MUC3B

						bin/carddisp.pl?gene=MUC3B
TRAF3	TNF Receptor Associated Factor 3	Protein Coding	45	GC14P109708	0.606795	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRAF3
PPIB	Peptidylprolyl Isomerase B	Protein Coding	48	GC15M064155	0.598059	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPIB
ACTB	Actin Beta	Protein Coding	47	GC07M005527	0.598059	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACTB
ABCC6	ATP Binding Cassette Subfamily C Member 6	Protein Coding	45	GC16M016148	0.598059	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCC6
CEBPA	CCAAT Enhancer Binding Protein Alpha	Protein Coding	45	GC19M033299	0.598059	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEBPA
FBLN5	Fibulin 5	Protein Coding	45	GC14M091869	0.598059	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FBLN5
SCUBE3	Signal Peptide, CUB Domain And EGF Like Domain Containing 3	Protein Coding	39	GC06P083821	0.595897	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SCUBE3
CUX1	Cut Like Homeobox 1	Protein Coding	43	GC07P101815	0.594615	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CUX1
KPNB1	Karyopherin Subunit Beta 1	Protein Coding	42	GC17P047649	0.594615	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KPNB1
SOX4	SRY-Box Transcription Factor 4	Protein Coding	42	GC06P021593	0.594615	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOX4
MIP	Major Intrinsic Protein Of Lens Fiber	Protein Coding	40	GC12M056449	0.594615	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIP
BDKRB2	Bradykinin Receptor B2	Protein Coding	43	GC14P096205	0.581992	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BDKRB2
ITGBL1	Integrin Subunit Beta Like 1	Protein Coding	36	GC13P101454	0.576676	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGBL1

ITPR1	Inositol 1,4,5-Trisphosphate Receptor Type 1	Protein Coding	47	GC03P004486	0.561536	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITPR1
ATR	ATR Serine/Threonine Kinase	Protein Coding	50	GC03M142449	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATR
SLC9A1	Solute Carrier Family 9 Member A1	Protein Coding	49	GC01M027135	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC9A1
PHGDH	Phosphoglycerate Dehydrogenase	Protein Coding	48	GC01P119660	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PHGDH
SCNN1B	Sodium Channel Epithelial 1 Subunit Beta	Protein Coding	48	GC16P023278	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SCNN1B
ESRRB	Estrogen Related Receptor Beta	Protein Coding	47	GC14P076310	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ESRRB
RARA	Retinoic Acid Receptor Alpha	Protein Coding	47	GC17P040309	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RARA
CHAT	Choline O-Acetyltransferase	Protein Coding	46	GC10P049609	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHAT
GLUL	Glutamate-Ammonia Ligase	Protein Coding	46	GC01M182378	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GLUL
KAT2B	Lysine Acetyltransferase 2B	Protein Coding	46	GC03P020043	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KAT2B
SDHA	Succinate Dehydrogenase Complex Flavoprotein Subunit A	Protein Coding	46	GC05P000208	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SDHA
DRD5	Dopamine Receptor D5	Protein Coding	45	GC04P009783	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DRD5
MYCN	MYCN Proto-Oncogene, BHLH Transcription Factor	Protein Coding	45	GC02P015949	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MYCN
CBLB	Cbl Proto-Oncogene B	Protein Coding	44	GC03M105655	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CBLB

						bin/carddisp.pl?gene=CBLB
DOT1L	DOT1 Like Histone Lysine Methyltransferase	Protein Coding	44	GC19P002935	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DOT1L
EIF4EBP1	Eukaryotic Translation Initiation Factor 4E Binding Protein 1	Protein Coding	44	GC08P038469	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EIF4EBP1
F2RL3	F2R Like Thrombin Or Trypsin Receptor 3	Protein Coding	44	GC19P016888	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=F2RL3
GJA8	Gap Junction Protein Alpha 8	Protein Coding	44	GC01P147902	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GJA8
KLF4	Kruppel Like Factor 4	Protein Coding	44	GC09M107484	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLF4
PSMA7	Proteasome 20S Subunit Alpha 7	Protein Coding	44	GC20M062136	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMA7
CCT5	Chaperonin Containing TCP1 Subunit 5	Protein Coding	43	GC05P010236	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCT5
COL4A6	Collagen Type IV Alpha 6 Chain	Protein Coding	43	GC0XM108155	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL4A6
RUVBL2	RuvB Like AAA ATPase 2	Protein Coding	43	GC19P048993	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RUVBL2
ACP2	Acid Phosphatase 2, Lysosomal	Protein Coding	42	GC11M089360	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACP2
ATP6AP1	ATPase H ⁺ Transporting Accessory Protein 1	Protein Coding	42	GC0XP154428	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP6AP1
ATP6V0D1	ATPase H ⁺ Transporting V0 Subunit D1	Protein Coding	42	GC16M067438	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP6V0D1
ERLIN1	ER Lipid Raft Associated 1	Protein Coding	42	GC10M100150	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ERLIN1

KDM6B	Lysine Demethylase 6B	Protein Coding	42	GC17P007834	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KDM6B
LAMA5	Laminin Subunit Alpha 5	Protein Coding	42	GC20M062307	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LAMA5
LGR5	Leucine Rich Repeat Containing G Protein-Coupled Receptor 5	Protein Coding	42	GC12P071439	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LGR5
NMT1	N-Myristoyltransferase 1	Protein Coding	42	GC17P055763	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NMT1
PSMA1	Proteasome 20S Subunit Alpha 1	Protein Coding	42	GC11M014505	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMA1
PSMA5	Proteasome 20S Subunit Alpha 5	Protein Coding	42	GC01M109399	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMA5
RPS20	Ribosomal Protein S20	Protein Coding	42	GC08M056067	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS20
TREM2	Triggering Receptor Expressed On Myeloid Cells 2	Protein Coding	42	GC06M066157	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TREM2
UBE2D2	Ubiquitin Conjugating Enzyme E2 D2	Protein Coding	42	GC05P139526	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBE2D2
EXOSC2	Exosome Component 2	Protein Coding	41	GC09P130693	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EXOSC2
GALE	UDP-Galactose-4-Epimerase	Protein Coding	41	GC01M023795	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GALE
GNB2	G Protein Subunit Beta 2	Protein Coding	41	GC07P100673	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GNB2
GRPR	Gastrin Releasing Peptide Receptor	Protein Coding	41	GC0XP016141	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GRPR
HAX1	HCLS1 Associated Protein X-1	Protein Coding	41	GC01P154273	0.55848	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=HAX1
HNRNPU	Heterogeneous Nuclear Ribonucleoprotein U	Protein Coding	41	GC01M244844	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HNRNPU
INHA	Inhibin Subunit Alpha	Protein Coding	41	GC02P219569	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=INHA
KLF6	Kruppel Like Factor 6	Protein Coding	41	GC10M003779	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLF6
MATR3	Matrin 3	Protein Coding	41	GC05P139274	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MATR3
PSMA2	Proteasome 20S Subunit Alpha 2	Protein Coding	41	GC07M042916	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMA2
PSMB6	Proteasome 20S Subunit Beta 6	Protein Coding	41	GC17P004796	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMB6
RBCK1	RANBP2-Type And C3HC4-Type Zinc Finger Containing 1	Protein Coding	41	GC20P000407	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RBCK1
BNIP3L	BCL2 Interacting Protein 3 Like	Protein Coding	40	GC08P026383	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BNIP3L
CDO1	Cysteine Dioxygenase Type 1	Protein Coding	40	GC05M115804	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDO1
DEF6	DEF6 Guanine Nucleotide Exchange Factor	Protein Coding	40	GC06P083820	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DEF6
FHL3	Four And A Half LIM Domains 3	Protein Coding	40	GC01M038118	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FHL3
KPNA1	Karyopherin Subunit Alpha 1	Protein Coding	40	GC03M122421	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KPNA1
MTCH2	Mitochondrial Carrier 2	Protein Coding	40	GC11M047604	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTCH2

MUC4	Mucin 4, Cell Surface Associated	Protein Coding	40	GC03M195746	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MUC4
NADSYN1	NAD Synthetase 1	Protein Coding	40	GC11P071454	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NADSYN1
RANBP9	RAN Binding Protein 9	Protein Coding	40	GC06M013621	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RANBP9
RNF31	Ring Finger Protein 31	Protein Coding	40	GC14P024146	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNF31
SLC9A2	Solute Carrier Family 9 Member A2	Protein Coding	40	GC02P102620	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC9A2
UCK2	Uridine-Cytidine Kinase 2	Protein Coding	40	GC01P165796	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UCK2
UNC13B	Unc-13 Homolog B	Protein Coding	40	GC09P035161	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UNC13B
CD93	CD93 Molecule	Protein Coding	39	GC20M023079	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD93
DDX17	DEAD-Box Helicase 17	Protein Coding	39	GC22M038483	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDX17
GP5	Glycoprotein V Platelet	Protein Coding	39	GC03M194395	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GP5
GTF2F1	General Transcription Factor IIF Subunit 1	Protein Coding	39	GC19M006417	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GTF2F1
LCN1	Lipocalin 1	Protein Coding	39	GC09P135521	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LCN1
MOV10	Mov10 RISC Complex RNA Helicase	Protein Coding	39	GC01P112673	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MOV10
SHARPIN	SHANK Associated RH Domain Interactor	Protein Coding	39	GC08M144098	0.55848	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=SHARPIN
UBR2	Ubiquitin Protein Ligase E3 Component N-Recognin 2	Protein Coding	39	GC06P083911	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBR2
ARID3A	AT-Rich Interaction Domain 3A	Protein Coding	38	GC19P002812	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARID3A
BAG2	BAG Cochaperone 2	Protein Coding	38	GC06P057172	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BAG2
HNRNPF	Heterogeneous Nuclear Ribonucleoprotein F	Protein Coding	38	GC10M043385	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HNRNPF
HNRNPH1	Heterogeneous Nuclear Ribonucleoprotein H1	Protein Coding	38	GC05M179614	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HNRNPH1
HNRNPR	Heterogeneous Nuclear Ribonucleoprotein R	Protein Coding	38	GC01M023303	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HNRNPR
HSPA14	Heat Shock Protein Family A (Hsp70) Member 14	Protein Coding	38	GC10P014858	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPA14
IPO7	Importin 7	Protein Coding	38	GC11P009384	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IPO7
RPS11	Ribosomal Protein S11	Protein Coding	38	GC19P049496	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS11
RPS8	Ribosomal Protein S8	Protein Coding	38	GC01P044775	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS8
ALDOC	Aldolase, Fructose-Bisphosphate C	Protein Coding	37	GC17M035139	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALDOC
MAEA	Macrophage Erythroblast Attacher, E3 Ubiquitin Ligase	Protein Coding	37	GC04P001289	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAEA
PCDH18	Protocadherin 18	Protein Coding	37	GC04M137518	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PCDH18

SH3RF1	SH3 Domain Containing Ring Finger 1	Protein Coding	37	GC04M169094	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SH3RF1
SLA	Src Like Adaptor	Protein Coding	37	GC08M133040	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLA
STOM	Stomatin	Protein Coding	37	GC09M121338	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STOM
ARID5A	AT-Rich Interaction Domain 5A	Protein Coding	36	GC02P096536	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARID5A
ATP5F1A	ATP Synthase F1 Subunit Alpha	Protein Coding	36	GC18M046081	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP5F1A
HS3ST3A1	Heparan Sulfate-Glucosamine 3-Sulfotransferase 3A1	Protein Coding	36	GC17M013494	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HS3ST3A1
LAS1L	LAS1 Like Ribosome Biogenesis Factor	Protein Coding	36	GC0XM065440	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LAS1L
MYCL	MYCL Proto-Oncogene, BHLH Transcription Factor	Protein Coding	36	GC01M039895	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MYCL
NASP	Nuclear Autoantigenic Sperm Protein	Protein Coding	36	GC01P045583	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NASP
RNF25	Ring Finger Protein 25	Protein Coding	36	GC02M218663	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNF25
SGTA	Small Glutamine Rich Tetratricopeptide Repeat Co-Chaperone Alpha	Protein Coding	36	GC19M002754	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SGTA
LRTM1	Leucine Rich Repeats And Transmembrane Domains 1	Protein Coding	35	GC03M054928	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRTM1
TBCC	Tubulin Folding Cofactor C	Protein Coding	35	GC06M042744	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TBCC
CCNDBP1	Cyclin D1 Binding Protein 1	Protein Coding	34	GC15P043185	0.55848	https://www.genecards.org/cgi-

						bin/cdddisp.pl?gene=CCNDBP1
SUGP1	SURP And G-Patch Domain Containing 1	Protein Coding	34	GC19M019276	0.55848	https://www.genecards.org/cgi-bin/cdddisp.pl?gene=SUGP1
UBL4A	Ubiquitin Like 4A	Protein Coding	34	GC0XM154483	0.55848	https://www.genecards.org/cgi-bin/cdddisp.pl?gene=UBL4A
PCID2	PCI Domain Containing 2	Protein Coding	33	GC13M113167	0.55848	https://www.genecards.org/cgi-bin/cdddisp.pl?gene=PCID2
GRWD1	Glutamate Rich WD Repeat Containing 1	Protein Coding	32	GC19P048445	0.55848	https://www.genecards.org/cgi-bin/cdddisp.pl?gene=GRWD1
SPART	Spartin	Protein Coding	32	GC13M036687	0.55848	https://www.genecards.org/cgi-bin/cdddisp.pl?gene=SPART
M1AP	Meiosis 1 Associated Protein	Protein Coding	31	GC02M074557	0.55848	https://www.genecards.org/cgi-bin/cdddisp.pl?gene=M1AP
CLECL1	C-Type Lectin Like 1	Pseudo gene	30	GC12M021099	0.55848	https://www.genecards.org/cgi-bin/cdddisp.pl?gene=CLECL1
KRBOX4	KRAB Box Domain Containing 4	Protein Coding	30	GC0XP046587	0.55848	https://www.genecards.org/cgi-bin/cdddisp.pl?gene=KRBOX4
CLEC2A	C-Type Lectin Domain Family 2 Member A	Protein Coding	29	GC12M021101	0.55848	https://www.genecards.org/cgi-bin/cdddisp.pl?gene=CLEC2A
MTARC1	Mitochondrial Amidoxime Reducing Component 1	Protein Coding	26	GC01P220788	0.55848	https://www.genecards.org/cgi-bin/cdddisp.pl?gene=MTARC1
AARD	Alanine And Arginine Rich Domain Containing Protein	Protein Coding	25	GC08P116938	0.55848	https://www.genecards.org/cgi-bin/cdddisp.pl?gene=AARD
MIR595	MicroRNA 595	RNA Gene	17	GC07M158532	0.55848	https://www.genecards.org/cgi-bin/cdddisp.pl?gene=MIR595
MIR1908	MicroRNA 1908	RNA Gene	16	GC11M061815	0.55848	https://www.genecards.org/cgi-bin/cdddisp.pl?gene=MIR1908

NR2F2-AS1	NR2F2 Antisense RNA 1	RNA Gene	16	GC15M117279	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR2F2-AS1
TRBV19	T Cell Receptor Beta Variable 19	Protein Coding	16	GC07P148316	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRBV19
MIR3614	MicroRNA 3614	RNA Gene	14	GC17M056891	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR3614
MIR1246	MicroRNA 1246	RNA Gene	13	GC02M176600	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR1246
MIR1972-2	MicroRNA 1972-2	RNA Gene	13	GC16P070030	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR1972-2
MIR5100	MicroRNA 5100	RNA Gene	13	GC10P043180	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR5100
MIR1972-1	MicroRNA 1972-1	RNA Gene	12	GC16M015697	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR1972-1
MIR371B	MicroRNA 371b	RNA Gene	12	GC19M053787	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR371B
MIR4728	MicroRNA 4728	RNA Gene	12	GC17P039726	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR4728
UBA52P6	Ubiquitin A-52 Residue Ribosomal Protein Fusion Product 1 Pseudogene 6	Pseudo gene	10	GC09P022032	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBA52P6
NPM1P7	Nucleophosmin 1 Pseudogene 7	Pseudo gene	9	GC12P021195	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NPM1P7
RNU2-3P	RNA, U2 Small Nuclear 3, Pseudogene	Pseudo gene	9	GC15P095745	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU2-3P
AAVS1	Adeno-Associated Virus Integration Site 1	Genetic Locus	6	GC19U990001	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AAVS1
RPS14P10	Ribosomal Protein S14 Pseudogene 10	Pseudo gene	6	GC07P131665	0.55848	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=RPS14P10
RPL39P10	Ribosomal Protein L39 Pseudogene 10	Pseudogene	5	GC01M239053	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL39P10
IBD15	Inflammatory Bowel Disease-15	Genetic Locus	2	GC10U901075	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IBD15
IBD18	Inflammatory Bowel Disease-18	Genetic Locus	2	GC05U901053	0.55848	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IBD18
POMGNT2	Protein O-Linked Mannose N-Acetylglucosaminyltransferase 2 (Beta 1,4-)	Protein Coding	36	GC03M043121	0.553841	https://www.genecards.org/cgi-bin/carddisp.pl?gene=POMGNT2
DCC	DCC Netrin 1 Receptor	Protein Coding	45	GC18P052340	0.548455	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DCC
THSD7A	Thrombospondin Type 1 Domain Containing 7A	Protein Coding	36	GC07M011371	0.548455	https://www.genecards.org/cgi-bin/carddisp.pl?gene=THSD7A
BCAT1	Branched Chain Amino Acid Transaminase 1	Protein Coding	44	GC12M024732	0.545865	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCAT1
FGF11	Fibroblast Growth Factor 11	Protein Coding	38	GC17P011161	0.53919	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGF11
BDKRB1	Bradykinin Receptor B1	Protein Coding	41	GC14P096296	0.539168	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BDKRB1
SLC29A3	Solute Carrier Family 29 Member 3	Protein Coding	43	GC10P071320	0.538765	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC29A3
EEF2	Eukaryotic Translation Elongation Factor 2	Protein Coding	47	GC19M003976	0.537908	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EEF2
PLA1A	Phospholipase A1 Member A	Protein Coding	38	GC03P119597	0.518574	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLA1A
MLXIPL	MLX Interacting Protein Like	Protein Coding	41	GC07M073593	0.512319	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MLXIPL

TFAP2A	Transcription Factor AP-2 Alpha	Protein Coding	45	GC06M010393	0.511037	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TFAP2A
SLC25A1	Solute Carrier Family 25 Member 1	Protein Coding	45	GC22M019355	0.501772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC25A1
DLAT	Dihydrolipoamide S-Acetyltransferase	Protein Coding	44	GC11P112026	0.501772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DLAT
PROX1	Prospero Homeobox 1	Protein Coding	42	GC01P213983	0.501772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PROX1
CHD3	Chromodomain Helicase DNA Binding Protein 3	Protein Coding	41	GC17P011184	0.501772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHD3
RPS9	Ribosomal Protein S9	Protein Coding	41	GC19P069272	0.501772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS9
SLC25A6	Solute Carrier Family 25 Member 6	Protein Coding	40	GC0XM001386	0.501772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC25A6
HYDIN	HYDIN Axonemal Central Pair Apparatus Protein	Protein Coding	37	GC16M070920	0.501772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HYDIN
MARS1	Methionyl-TRNA Synthetase 1	Protein Coding	36	GC12P057476	0.501772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MARS1
MZB1	Marginal Zone B And B1 Cell Specific Protein	Protein Coding	33	GC05M139387	0.501772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MZB1
VPS13C	Vacuolar Protein Sorting 13 Homolog C	Protein Coding	33	GC15M061852	0.501772	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VPS13C
CAMK2G	Calcium/Calmodulin Dependent Protein Kinase II Gamma	Protein Coding	46	GC10M073812	0.495198	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAMK2G
CD3E	CD3 Epsilon Subunit Of T-Cell Receptor Complex	Protein Coding	45	GC11P118304	0.495198	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD3E
RABEP2	Rabaptin, RAB GTPase Binding Effector Protein 2	Protein Coding	33	GC16M036985	0.491658	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=RABEP2
CEACAM3	CEA Cell Adhesion Molecule 3	Protein Coding	41	GC19P041796	0.488322	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEACAM3
CSNK2A1	Casein Kinase 2 Alpha 1	Protein Coding	48	GC20M000472	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSNK2A1
ACACA	Acetyl-CoA Carboxylase Alpha	Protein Coding	46	GC17M037084	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACACA
JUP	Junction Plakoglobin	Protein Coding	46	GC17M041754	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=JUP
NR1H4	Nuclear Receptor Subfamily 1 Group H Member 4	Protein Coding	46	GC12P100473	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR1H4
USP9X	Ubiquitin Specific Peptidase 9 X-Linked	Protein Coding	46	GC0XP041085	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=USP9X
AKR1B1	Aldo-Keto Reductase Family 1 Member B	Protein Coding	45	GC07M134442	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AKR1B1
ETV6	ETS Variant Transcription Factor 6	Protein Coding	45	GC12P011649	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ETV6
PPARD	Peroxisome Proliferator Activated Receptor Delta	Protein Coding	45	GC06P083822	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPARD
CNTN2	Contactin 2	Protein Coding	44	GC01P205043	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNTN2
CS	Citrate Synthase	Protein Coding	43	GC12M056271	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CS
BCL10	BCL10 Immune Signaling Adaptor	Protein Coding	42	GC01M085265	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCL10
MTTP	Microsomal Triglyceride Transfer Protein	Protein Coding	42	GC04P099563	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTTP

MEGF10	Multiple EGF Like Domains 10	Protein Coding	41	GC05P127230	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MEGF10
COLQ	Collagen Like Tail Subunit Of Asymmetric Acetylcholinesterase	Protein Coding	40	GC03M020745	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COLQ
PPIG	Peptidylprolyl Isomerase G	Protein Coding	40	GC02P169584	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPIG
SORBS1	Sorbin And SH3 Domain Containing 1	Protein Coding	40	GC10M095311	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SORBS1
GNPTG	N-Acetylglucosamine-1-Phosphate Transferase Subunit Gamma	Protein Coding	39	GC16P001351	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GNPTG
RC3H1	Ring Finger And CCCH-Type Domains 1	Protein Coding	35	GC01M173931	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RC3H1
SNTG1	Syntrophin Gamma 1	Protein Coding	33	GC08P049909	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNTG1
LOC101929710	Uncharacterized LOC101929710	RNA Gene	13	GC05P095962	0.474901	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC101929710
PPP3CA	Protein Phosphatase 3 Catalytic Subunit Alpha	Protein Coding	50	GC04M101024	0.473039	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPP3CA
RHBDF2	Rhomoid 5 Homolog 2	Protein Coding	42	GC17M076470	0.468146	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RHBDF2
SRGN	Serglycin	Protein Coding	38	GC10P069088	0.468146	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SRGN
RNU11	RNA, U11 Small Nuclear	RNA Gene	17	GC01P028797	0.468146	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNU11
CLTC	Clathrin Heavy Chain	Protein Coding	45	GC17P059619	0.46747	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLTC

KCNA2	Potassium Voltage-Gated Channel Subfamily A Member 2	Protein Coding	45	GC01M110519	0.466486	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KCNA2
CGB5	Chorionic Gonadotropin Subunit Beta 5	Protein Coding	33	GC19P049043	0.466486	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CGB5
AQP9	Aquaporin 9	Protein Coding	41	GC15P058138	0.458626	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AQP9
RPL4	Ribosomal Protein L4	Protein Coding	40	GC15M066498	0.452445	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL4
YWHAG	Tyrosine 3-Monooxygenase/Tryptophan 5-Monooxygenase Activation Protein Gamma	Protein Coding	47	GC07M076839	0.438759	https://www.genecards.org/cgi-bin/carddisp.pl?gene=YWHAG
CNTRF	Ciliary Neurotrophic Factor Receptor	Protein Coding	42	GC09M034551	0.438759	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNTRF
HMG2	High Mobility Group Nucleosomal Binding Domain 2	Protein Coding	39	GC01P026473	0.438759	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HMG2
TSPAN32	Tetraspanin 32	Protein Coding	35	GC11P002302	0.438759	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSPAN32
PPP2CA	Protein Phosphatase 2 Catalytic Subunit Alpha	Protein Coding	48	GC05M134194	0.429069	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPP2CA
DUSP2	Dual Specificity Phosphatase 2	Protein Coding	40	GC02M098251	0.429069	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DUSP2
PTPN18	Protein Tyrosine Phosphatase Non-Receptor Type 18	Protein Coding	38	GC02P130356	0.429069	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPN18
RIDA	Reactive Intermediate Imine Deaminase A Homolog	Protein Coding	29	GC08M098103	0.429069	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RIDA
CTSV	Cathepsin V	Protein Coding	40	GC09M097029	0.427418	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTSV
ADORA1	Adenosine A1 Receptor	Protein Coding	45	GC01P203090	0.42508	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=ADORA1
KLK3	Kallikrein Related Peptidase 3	Protein Coding	45	GC19P050854	0.408265	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLK3
IGHV3-33	Immunoglobulin Heavy Variable 3-33	Protein Coding	16	GC14M112850	0.408265	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGHV3-33
AP2A1	Adaptor Related Protein Complex 2 Subunit Alpha 1	Protein Coding	38	GC19P067127	0.402623	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AP2A1
NR4A3	Nuclear Receptor Subfamily 4 Group A Member 3	Protein Coding	43	GC09P099821	0.401341	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NR4A3
ITPR2	Inositol 1,4,5-Trisphosphate Receptor Type 2	Protein Coding	45	GC12M026336	0.397066	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITPR2
NPR2	Natriuretic Peptide Receptor 2	Protein Coding	48	GC09P047173	0.387662	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NPR2
MASP1	MBL Associated Serine Protease 1	Protein Coding	47	GC03M187216	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MASP1
SOS1	SOS Ras/Rac Guanine Nucleotide Exchange Factor 1	Protein Coding	46	GC02M039031	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOS1
FZD5	Frizzled Class Receptor 5	Protein Coding	45	GC02M207762	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FZD5
EHMT1	Euchromatic Histone Lysine Methyltransferase 1	Protein Coding	44	GC09P137618	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EHMT1
RALBP1	RalA Binding Protein 1	Protein Coding	43	GC18P009465	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RALBP1
HDAC10	Histone Deacetylase 10	Protein Coding	42	GC22M050245	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HDAC10
NRIP1	Nuclear Receptor Interacting Protein 1	Protein Coding	42	GC21M014961	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NRIP1

SETD7	SET Domain Containing 7, Histone Lysine Methyltransferase	Protein Coding	42	GC04M139495	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SETD7
SP100	SP100 Nuclear Antigen	Protein Coding	40	GC02P230415	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SP100
ENAM	Enamelin	Protein Coding	39	GC04P070628	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENAM
WWTR1	WW Domain Containing Transcription Regulator 1	Protein Coding	39	GC03M149517	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WWTR1
MRGPRX2	MAS Related GPR Family Member X2	Protein Coding	36	GC11M019077	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MRGPRX2
SAMD9	Sterile Alpha Motif Domain Containing 9	Protein Coding	36	GC07M093099	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SAMD9
JPH4	Junctophilin 4	Protein Coding	34	GC14M023568	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=JPH4
OTUD1	OTU Deubiquitinase 1	Protein Coding	32	GC10P023439	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OTUD1
MIRLET7I	MicroRNA Let-7i	RNA Gene	21	GC12P062606	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIRLET7I
MOXD2P	Monooxygenase DBH Like 2, Pseudogene	Pseudo gene	14	GC07M142254	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MOXD2P
LOC110740340	CYP2D6 Promoter	Biological Region	2	GC22P043272	0.380906	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC110740340
HCST	Hematopoietic Cell Signal Transducer	Protein Coding	35	GC19P066557	0.376471	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HCST
ABCA4	ATP Binding Cassette Subfamily A Member 4	Protein Coding	45	GC01M093992	0.365205	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCA4
CD37	CD37 Molecule	Protein Coding	41	GC19P049335	0.365205	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD37

						bin/carddisp.pl?gene=CD37
TPPP3	Tubulin Polymerization Promoting Protein Family Member 3	Protein Coding	36	GC16M067389	0.365205	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TPPP3
KIR2DS5	Killer Cell Immunoglobulin Like Receptor, Two Ig Domains And Short Cytoplasmic Tail 5	Protein Coding	23	GC19Mr00079	0.355146	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KIR2DS5
USP4	Ubiquitin Specific Peptidase 4	Protein Coding	42	GC03M049277	0.322824	https://www.genecards.org/cgi-bin/carddisp.pl?gene=USP4
PRKD1	Protein Kinase D1	Protein Coding	48	GC14M029576	0.307566	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKD1
RORA	RAR Related Orphan Receptor A	Protein Coding	46	GC15M060488	0.307566	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RORA
RPS2	Ribosomal Protein S2	Protein Coding	41	GC16M007099	0.307566	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS2
SOX13	SRY-Box Transcription Factor 13	Protein Coding	40	GC01P204074	0.307566	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOX13
CAPNS1	Calpain Small Subunit 1	Protein Coding	39	GC19P066563	0.307566	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAPNS1
ATP6V1G2	ATPase H ⁺ Transporting V1 Subunit G2	Protein Coding	37	GC06M065955	0.307566	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP6V1G2
SLC25A16	Solute Carrier Family 25 Member 16	Protein Coding	37	GC10M068477	0.307566	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC25A16
PLD5	Phospholipase D Family Member 5	Protein Coding	35	GC01M242082	0.307566	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLD5
ZNF330	Zinc Finger Protein 330	Protein Coding	35	GC04P141220	0.307566	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF330
TMEM258	Transmembrane Protein 258	Protein Coding	30	GC11M061768	0.307566	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=TMEM258
CRLF1	Cytokine Receptor Like Factor 1	Protein Coding	42	GC19M018572	0.30223	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CRLF1
ADAM33	ADAM Metallopeptidase Domain 33	Protein Coding	37	GC20M003669	0.30223	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAM33
HMGA1	High Mobility Group AT-Hook 1	Protein Coding	44	GC06P083808	0.279838	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HMGA1
CD7	CD7 Molecule	Protein Coding	38	GC17M082314	0.279838	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD7
VEGFB	Vascular Endothelial Growth Factor B	Protein Coding	42	GC11P064234	0.278854	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VEGFB
OMD	Osteomodulin	Protein Coding	39	GC09M094205	0.278854	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OMD
DPP9	Dipeptidyl Peptidase 9	Protein Coding	41	GC19M004675	0.264812	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DPP9
NCL	Nucleolin	Protein Coding	41	GC02M231453	0.264812	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCL
MAP2K2	Mitogen-Activated Protein Kinase Kinase 2	Protein Coding	50	GC19M004090	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP2K2
ADAM9	ADAM Metallopeptidase Domain 9	Protein Coding	47	GC08P038996	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAM9
CHRM2	Cholinergic Receptor Muscarinic 2	Protein Coding	46	GC07P136868	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHRM2
PRKCI	Protein Kinase C Iota	Protein Coding	46	GC03P170222	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKCI
ADORA2B	Adenosine A2b Receptor	Protein Coding	45	GC17P015851	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADORA2B

APAF1	Apoptotic Peptidase Activating Factor 1	Protein Coding	45	GC12P098645	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=APAF1
ATF6	Activating Transcription Factor 6	Protein Coding	45	GC01P161766	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATF6
CD3D	CD3 Delta Subunit Of T-Cell Receptor Complex	Protein Coding	45	GC11M118338	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD3D
FH	Fumarate Hydratase	Protein Coding	45	GC01M241499	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FH
PTPRD	Protein Tyrosine Phosphatase Receptor Type D	Protein Coding	45	GC09M008307	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPRD
CTSZ	Cathepsin Z	Protein Coding	44	GC20M058995	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTSZ
KMO	Kynurenine 3-Monooxygenase	Protein Coding	44	GC01P241532	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KMO
COL7A1	Collagen Type VII Alpha 1 Chain	Protein Coding	43	GC03M048564	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL7A1
PIAS1	Protein Inhibitor Of Activated STAT 1	Protein Coding	43	GC15P068054	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIAS1
TNFRSF21	TNF Receptor Superfamily Member 21	Protein Coding	43	GC06M047231	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF21
CYP3A7	Cytochrome P450 Family 3 Subfamily A Member 7	Protein Coding	42	GC07M099705	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP3A7
GRK6	G Protein-Coupled Receptor Kinase 6	Protein Coding	42	GC05P177403	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GRK6
HBA1	Hemoglobin Subunit Alpha 1	Protein Coding	42	GC16P011598	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HBA1
ITGA11	Integrin Subunit Alpha 11	Protein Coding	42	GC15M068296	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGA11

						bin/carddisp.pl?gene=ITGA11
PSMD2	Proteasome 26S Subunit Ubiquitin Receptor, Non-ATPase 2	Protein Coding	42	GC03P184298	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMD2
DBT	Dihydrolipoamide Branched Chain Transacylase E2	Protein Coding	41	GC01M100186	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DBT
DPP10	Dipeptidyl Peptidase Like 10	Protein Coding	41	GC02P114442	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DPP10
ENDOG	Endonuclease G	Protein Coding	41	GC09P128818	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ENDOG
RGS2	Regulator Of G Protein Signaling 2	Protein Coding	41	GC01P192809	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RGS2
SDCCAG8	SHH Signaling And Ciliogenesis Regulator SDCCAG8	Protein Coding	41	GC01P243255	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SDCCAG8
GREM2	Gremlin 2, DAN Family BMP Antagonist	Protein Coding	40	GC01M240489	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GREM2
METTL3	Methyltransferase 3, N6-Adenosine-Methyltransferase Complex Catalytic Subunit	Protein Coding	40	GC14M021498	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=METTL3
RGS7	Regulator Of G Protein Signaling 7	Protein Coding	40	GC01M240767	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RGS7
WDFY3	WD Repeat And FYVE Domain Containing 3	Protein Coding	40	GC04M084669	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WDFY3
ZBTB17	Zinc Finger And BTB Domain Containing 17	Protein Coding	40	GC01M015943	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZBTB17
ECE2	Endothelin Converting Enzyme 2	Protein Coding	39	GC03P184276	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ECE2
TNNI3K	TNNI3 Interacting Kinase	Protein Coding	39	GC01P074235	0.251126	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=TNNI3K
ZNF423	Zinc Finger Protein 423	Protein Coding	39	GC16M049487	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNNI3K
AGMAT	Agmatinase	Protein Coding	38	GC01M015571	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AGMAT
CD207	CD207 Molecule	Protein Coding	38	GC02M070830	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD207
CEP170	Centrosomal Protein 170	Protein Coding	38	GC01M243124	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEP170
OPN3	Opsin 3	Protein Coding	38	GC01M241590	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OPN3
PDPR	Pyruvate Dehydrogenase Phosphatase Regulatory Subunit	Protein Coding	38	GC16P070113	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDPR
TNFRSF19	TNF Receptor Superfamily Member 19	Protein Coding	38	GC13P023570	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNFRSF19
ATRN	Attractin	Protein Coding	37	GC20P003471	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATRN
CHML	CHM Like Rab Escort Protein	Protein Coding	37	GC01M241628	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHML
KLHL12	Kelch Like Family Member 12	Protein Coding	37	GC01M202891	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLHL12
PLA2G2E	Phospholipase A2 Group IIE	Protein Coding	37	GC01M019920	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLA2G2E
SRRM1	Serine And Arginine Repetitive Matrix 1	Protein Coding	37	GC01P024631	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SRRM1
NRAP	Nebulin Related Anchoring Protein	Protein Coding	36	GC10M113588	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NRAP

RTCB	RNA 2',3'-Cyclic Phosphate And 5'-OH Ligase	Protein Coding	35	GC22M032387	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RTCB
CCDC91	Coiled-Coil Domain Containing 91	Protein Coding	34	GC12P028133	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCDC91
METTL7B	Methyltransferase Like 7B	Protein Coding	34	GC12P055681	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=METTL7B
WDR64	WD Repeat Domain 64	Protein Coding	30	GC01P241652	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WDR64
MCCD1	Mitochondrial Coiled-Coil Domain 1	Protein Coding	29	GC06P031528	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MCCD1
OVOS2	Alpha-2-Macroglobulin Like 1 Pseudogene	Pseudo gene	23	GC12M031111	0.251126	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OVOS2
BCAR1	BCAR1 Scaffold Protein, Cas Family Member	Protein Coding	42	GC16M075228	0.241437	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCAR1
DPP8	Dipeptidyl Peptidase 8	Protein Coding	38	GC15M065442	0.241437	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DPP8
C1QTNF3	C1q And TNF Related 3	Protein Coding	36	GC05M034017	0.241437	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C1QTNF3
CFL1	Cofilin 1	Protein Coding	44	GC11M065823	0.214991	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CFL1
CDH2	Cadherin 2	Protein Coding	50	GC18M027950	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDH2
BMPRI1A	Bone Morphogenetic Protein Receptor Type 1A	Protein Coding	48	GC10P092414	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BMPRI1A
XPO1	Exportin 1	Protein Coding	46	GC02M061445	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XPO1

GALNT2	Polypeptide N-Acetylgalactosaminyltransferase 2	Protein Coding	45	GC01P230057	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GALNT2
IGFBP7	Insulin Like Growth Factor Binding Protein 7	Protein Coding	44	GC04M057030	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IGFBP7
CHIA	Chitinase Acidic	Protein Coding	42	GC01P111291	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHIA
SOAT2	Sterol O-Acyltransferase 2	Protein Coding	42	GC12P053103	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOAT2
DUT	Deoxyuridine Triphosphatase	Protein Coding	41	GC15P048331	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DUT
BCL2A1	BCL2 Related Protein A1	Protein Coding	39	GC15M090460	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BCL2A1
HSPB2	Heat Shock Protein Family B (Small) Member 2	Protein Coding	38	GC11P111917	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPB2
DNAH10	Dynein Axonemal Heavy Chain 10	Protein Coding	37	GC12P123762	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNAH10
SLC5A12	Solute Carrier Family 5 Member 12	Protein Coding	37	GC11M026648	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC5A12
HOXD3	Homeobox D3	Protein Coding	36	GC02P176136	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HOXD3
GPHA2	Glycoprotein Hormone Subunit Alpha 2	Protein Coding	34	GC11M089739	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPHA2
RNASE7	Ribonuclease A Family Member 7	Protein Coding	34	GC14P021042	0.213709	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNASE7
CDK5	Cyclin Dependent Kinase 5	Protein Coding	50	GC07M151053	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDK5
ATP2A2	ATPase Sarcoplasmic/Endoplasmic	Protein Coding	49	GC12P110280	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP2A2

	c Reticulum Ca ²⁺ Transporting 2					bin/carddisp.pl?gene=ATP2A2
CAD	Carbamoyl-Phosphate Synthetase 2, Aspartate Transcarbamylase, And Dihydroorotase	Protein Coding	48	GC02P027217	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAD
DLD	Dihydrolipoamide Dehydrogenase	Protein Coding	48	GC07P107890	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DLD
DNM2	Dynamin 2	Protein Coding	48	GC19P010718	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNM2
F12	Coagulation Factor XII	Protein Coding	48	GC05M177402	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=F12
LAMB1	Laminin Subunit Beta 1	Protein Coding	48	GC07M107923	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LAMB1
AHCY	Adenosylhomocysteinase	Protein Coding	47	GC20M034827	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AHCY
USP7	Ubiquitin Specific Peptidase 7	Protein Coding	47	GC16M008892	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=USP7
YWHAE	Tyrosine 3-Monooxygenase/Tryptophan 5-Monooxygenase Activation Protein Epsilon	Protein Coding	47	GC17M003080	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=YWHAE
ABCB11	ATP Binding Cassette Subfamily B Member 11	Protein Coding	46	GC02M168922	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCB11
FGR	FGR Proto-Oncogene, Src Family Tyrosine Kinase	Protein Coding	46	GC01M027919	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FGR
HCK	HCK Proto-Oncogene, Src Family Tyrosine Kinase	Protein Coding	46	GC20P032052	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HCK
MAP4K4	Mitogen-Activated Protein Kinase Kinase Kinase Kinase 4	Protein Coding	46	GC02P101696	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MAP4K4
OAT	Ornithine Aminotransferase	Protein Coding	46	GC10M124397	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OAT

PROS1	Protein S	Protein Coding	46	GC03M093873	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PROS1
RANBP2	RAN Binding Protein 2	Protein Coding	46	GC02P108719	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RANBP2
RHO	Rhodopsin	Protein Coding	46	GC03P134215	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RHO
VLDLR	Very Low Density Lipoprotein Receptor	Protein Coding	46	GC09P002611	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VLDLR
ACLY	ATP Citrate Lyase	Protein Coding	45	GC17M041866	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ACLY
CACNA1E	Calcium Voltage-Gated Channel Subunit Alpha1 E	Protein Coding	45	GC01P181317	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CACNA1E
EIF2AK2	Eukaryotic Translation Initiation Factor 2 Alpha Kinase 2	Protein Coding	45	GC02M037099	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EIF2AK2
GANAB	Glucosidase II Alpha Subunit	Protein Coding	45	GC11M089627	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GANAB
GRM3	Glutamate Metabotropic Receptor 3	Protein Coding	45	GC07P086643	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GRM3
HSPA9	Heat Shock Protein Family A (Hsp70) Member 9	Protein Coding	45	GC05M138554	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSPA9
MYH10	Myosin Heavy Chain 10	Protein Coding	45	GC17M008474	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MYH10
PSAT1	Phosphoserine Aminotransferase 1	Protein Coding	45	GC09P078297	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSAT1
SLC25A12	Solute Carrier Family 25 Member 12	Protein Coding	45	GC02M171783	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC25A12
SLC25A13	Solute Carrier Family 25 Member 13	Protein Coding	45	GC07M096120	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC25A13

						bin/carddisp.pl?gene=SLC25A13
SLC26A3	Solute Carrier Family 26 Member 3	Protein Coding	45	GC07M107765	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC26A3
TUFM	Tu Translation Elongation Factor, Mitochondrial	Protein Coding	45	GC16M036978	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TUFM
YWHAB	Tyrosine 3-Monooxygenase/Tryptophan 5-Monooxygenase Activation Protein Beta	Protein Coding	45	GC20P044885	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=YWHAB
YWHAZ	Tyrosine 3-Monooxygenase/Tryptophan 5-Monooxygenase Activation Protein Zeta	Protein Coding	45	GC08M100917	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=YWHAZ
ALPI	Alkaline Phosphatase, Intestinal	Protein Coding	44	GC02P232456	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALPI
ARAF	A-Raf Proto-Oncogene, Serine/Threonine Kinase	Protein Coding	44	GC0XP047572	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARAF
CDK9	Cyclin Dependent Kinase 9	Protein Coding	44	GC09P128023	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDK9
CNTN1	Contactin 1	Protein Coding	44	GC12P040692	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNTN1
CTPS1	CTP Synthase 1	Protein Coding	44	GC01P040979	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTPS1
DDOST	Dolichyl-Diphosphooligosaccharide --Protein Glycosyltransferase Non-Catalytic Subunit	Protein Coding	44	GC01M020651	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDOST
DDX3X	DEAD-Box Helicase 3 X-Linked	Protein Coding	44	GC0XP041333	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDX3X
EIF2B4	Eukaryotic Translation Initiation Factor 2B Subunit Delta	Protein Coding	44	GC02M027364	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EIF2B4
EIF4A1	Eukaryotic Translation Initiation Factor 4A1	Protein Coding	44	GC17P007572	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EIF4A1

						bin/carddisp.pl?gene=EIF4A1
GFRA1	GNDF Family Receptor Alpha 1	Protein Coding	44	GC10M116056	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GFRA1
GNAI1	G Protein Subunit Alpha I1	Protein Coding	44	GC07P079769	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GNAI1
HELLS	Helicase, Lymphoid Specific	Protein Coding	44	GC10P094501	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HELLS
KLK2	Kallikrein Related Peptidase 2	Protein Coding	44	GC19P050861	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLK2
MCM3	Minichromosome Maintenance Complex Component 3	Protein Coding	44	GC06M052264	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MCM3
MCM5	Minichromosome Maintenance Complex Component 5	Protein Coding	44	GC22P035400	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MCM5
MIB1	MIB E3 Ubiquitin Protein Ligase 1	Protein Coding	44	GC18P021704	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIB1
MYL3	Myosin Light Chain 3	Protein Coding	44	GC03M046836	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MYL3
PDHB	Pyruvate Dehydrogenase E1 Subunit Beta	Protein Coding	44	GC03M058428	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDHB
PGRMC1	Progesterone Receptor Membrane Component 1	Protein Coding	44	GC0XP119236	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PGRMC1
PRKD2	Protein Kinase D2	Protein Coding	44	GC19M046674	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRKD2
PTGFR	Prostaglandin F Receptor	Protein Coding	44	GC01P078303	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTGFR
PXN	Paxillin	Protein Coding	44	GC12M120210	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PXN

SKI	SKI Proto-Oncogene	Protein Coding	44	GC01P002228	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SKI
SLC27A4	Solute Carrier Family 27 Member 4	Protein Coding	44	GC09P128340	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC27A4
SMC1A	Structural Maintenance Of Chromosomes 1A	Protein Coding	44	GC0XM053374	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMC1A
SMC3	Structural Maintenance Of Chromosomes 3	Protein Coding	44	GC10P110567	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMC3
TRPM7	Transient Receptor Potential Cation Channel Subfamily M Member 7	Protein Coding	44	GC15M050552	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRPM7
TUBB4A	Tubulin Beta 4A Class IVa	Protein Coding	44	GC19M006496	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TUBB4A
ABCD3	ATP Binding Cassette Subfamily D Member 3	Protein Coding	43	GC01P094385	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCD3
ALDH18A1	Aldehyde Dehydrogenase 18 Family Member A1	Protein Coding	43	GC10M095605	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALDH18A1
CD151	CD151 Molecule (Raph Blood Group)	Protein Coding	43	GC11P001795	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD151
CHD2	Chromodomain Helicase DNA Binding Protein 2	Protein Coding	43	GC15P092900	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHD2
CKB	Creatine Kinase B	Protein Coding	43	GC14M103519	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CKB
DOCK2	Dedicator Of Cytokinesis 2	Protein Coding	43	GC05P169637	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DOCK2
DYNC1H1	Dynein Cytoplasmic 1 Heavy Chain 1	Protein Coding	43	GC14P109704	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DYNC1H1
EMX2	Empty Spiracles Homeobox 2	Protein Coding	43	GC10P117542	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EMX2

						bin/carddisp.pl?gene=EMX2
HIF1AN	Hypoxia Inducible Factor 1 Subunit Alpha Inhibitor	Protein Coding	43	GC10P100529	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HIF1AN
KLK4	Kallikrein Related Peptidase 4	Protein Coding	43	GC19M066193	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLK4
MCM7	Minichromosome Maintenance Complex Component 7	Protein Coding	43	GC07M100092	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MCM7
NDRG1	N-Myc Downstream Regulated 1	Protein Coding	43	GC08M133237	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NDRG1
RPL10	Ribosomal Protein L10	Protein Coding	43	GC0XP154389	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL10
RUVBL1	RuvB Like AAA ATPase 1	Protein Coding	43	GC03M128064	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RUVBL1
SLC25A3	Solute Carrier Family 25 Member 3	Protein Coding	43	GC12P098593	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC25A3
SMURF1	SMAD Specific E3 Ubiquitin Protein Ligase 1	Protein Coding	43	GC07M099027	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMURF1
SYT2	Synaptotagmin 2	Protein Coding	43	GC01M202559	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SYT2
ZBTB16	Zinc Finger And BTB Domain Containing 16	Protein Coding	43	GC11P114059	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZBTB16
CRBN	Cereblon	Protein Coding	42	GC03M003144	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CRBN
DLG1	Discs Large MAGUK Scaffold Protein 1	Protein Coding	42	GC03M197042	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DLG1
DPM1	Dolichyl-Phosphate Mannosyltransferase Subunit 1, Catalytic	Protein Coding	42	GC20M050934	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DPM1

EEA1	Early Endosome Antigen 1	Protein Coding	42	GC12M092770	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EEA1
EIF4A3	Eukaryotic Translation Initiation Factor 4A3	Protein Coding	42	GC17M080135	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EIF4A3
FUT8	Fucosyltransferase 8	Protein Coding	42	GC14P065411	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FUT8
HBA2	Hemoglobin Subunit Alpha 2	Protein Coding	42	GC16P011600	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HBA2
HOXA1	Homeobox A1	Protein Coding	42	GC07M027092	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HOXA1
LRPPRC	Leucine Rich Pentatricopeptide Repeat Containing	Protein Coding	42	GC02M043886	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRPPRC
MCM6	Minichromosome Maintenance Complex Component 6	Protein Coding	42	GC02M135839	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MCM6
NCOR2	Nuclear Receptor Corepressor 2	Protein Coding	42	GC12M124324	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCOR2
NOP56	NOP56 Ribonucleoprotein	Protein Coding	42	GC20P004223	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NOP56
PAPPA	Pappalysin 1	Protein Coding	42	GC09P118958	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PAPPA
PDE7A	Phosphodiesterase 7A	Protein Coding	42	GC08M065736	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDE7A
PPP2R2A	Protein Phosphatase 2 Regulatory Subunit Balpha	Protein Coding	42	GC08P026292	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPP2R2A
PSMC3	Proteasome 26S Subunit, ATPase 3	Protein Coding	42	GC11M089365	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PSMC3
RARS2	Arginyl-TRNA Synthetase 2, Mitochondrial	Protein Coding	42	GC06M087514	0.177573	https://www.genecards.org/cgi-

						bin/cdddisp.pl?gene=RARS2
ROBO2	Roundabout Guidance Receptor 2	Protein Coding	42	GC03P075955	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=ROBO2
RPN1	Ribophorin I	Protein Coding	42	GC03M128619	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=RPN1
RPS3	Ribosomal Protein S3	Protein Coding	42	GC11P077882	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=RPS3
SLC1A5	Solute Carrier Family 1 Member 5	Protein Coding	42	GC19M065991	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=SLC1A5
SLC25A11	Solute Carrier Family 25 Member 11	Protein Coding	42	GC17M004937	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=SLC25A11
SLC25A5	Solute Carrier Family 25 Member 5	Protein Coding	42	GC0XP119468	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=SLC25A5
SLIT1	Slit Guidance Ligand 1	Protein Coding	42	GC10M096998	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=SLIT1
SNRNP200	Small Nuclear Ribonucleoprotein U5 Subunit 200	Protein Coding	42	GC02M098261	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=SNRNP200
ST6GAL1	ST6 Beta-Galactoside Alpha-2,6-Sialyltransferase 1	Protein Coding	42	GC03P186930	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=ST6GAL1
TSPAN7	Tetraspanin 7	Protein Coding	42	GC0XP038561	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=TSPAN7
TUBB4B	Tubulin Beta 4B Class IVb	Protein Coding	42	GC09P137241	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=TUBB4B
VDAC2	Voltage Dependent Anion Channel 2	Protein Coding	42	GC10P075210	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=VDAC2
ADCYAP1	Adenylate Cyclase Activating Polypeptide 1	Protein Coding	41	GC18P000895	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/cdddisp.pl?gene=ADCYAP1

ATXN10	Ataxin 10	Protein Coding	41	GC22P045673	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATXN10
CACNB1	Calcium Voltage-Gated Channel Auxiliary Subunit Beta 1	Protein Coding	41	GC17M039173	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CACNB1
CADPS	Calcium Dependent Secretion Activator	Protein Coding	41	GC03M062398	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CADPS
CCT7	Chaperonin Containing TCP1 Subunit 7	Protein Coding	41	GC02P073233	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCT7
CD82	CD82 Molecule	Protein Coding	41	GC11P044586	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD82
CHKA	Choline Kinase Alpha	Protein Coding	41	GC11M068052	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CHKA
CYFIP2	Cytoplasmic FMR1 Interacting Protein 2	Protein Coding	41	GC05P157267	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CYFIP2
DUSP10	Dual Specificity Phosphatase 10	Protein Coding	41	GC01M221701	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DUSP10
EFTUD2	Elongation Factor Tu GTP Binding Domain Containing 2	Protein Coding	41	GC17M044952	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EFTUD2
EIF3A	Eukaryotic Translation Initiation Factor 3 Subunit A	Protein Coding	41	GC10M119034	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EIF3A
FUT6	Fucosyltransferase 6	Protein Coding	41	GC19M005830	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FUT6
GPM6A	Glycoprotein M6A	Protein Coding	41	GC04M175632	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPM6A
GPSM2	G Protein Signaling Modulator 2	Protein Coding	41	GC01P108875	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPSM2
KLK15	Kallikrein Related Peptidase 15	Protein Coding	41	GC19M050825	0.177573	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=KLK15
LRP1B	LDL Receptor Related Protein 1B	Protein Coding	41	GC02M140231	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRP1B
MLYCD	Malonyl-CoA Decarboxylase	Protein Coding	41	GC16P083899	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MLYCD
MSRB3	Methionine Sulfoxide Reductase B3	Protein Coding	41	GC12P065279	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MSRB3
NRG3	Neuregulin 3	Protein Coding	41	GC10P092362	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NRG3
NRXN3	Neurexin 3	Protein Coding	41	GC14P078170	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NRXN3
PAICS	Phosphoribosylaminoimidazole Carboxylase And Phosphoribosylaminoimidazolesuccinocarboxamide Synthase	Protein Coding	41	GC04P056410	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PAICS
PHB2	Prohibitin 2	Protein Coding	41	GC12M006965	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PHB2
PLXND1	Plexin D1	Protein Coding	41	GC03M129555	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLXND1
PRPF8	Pre-mRNA Processing Factor 8	Protein Coding	41	GC17M001650	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRPF8
PUF60	Poly(U) Binding Splicing Factor 60	Protein Coding	41	GC08M143816	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PUF60
RBX1	Ring-Box 1	Protein Coding	41	GC22P040951	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RBX1
RPL7A	Ribosomal Protein L7a	Protein Coding	41	GC09P133348	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL7A
RPS15A	Ribosomal Protein S15a	Protein Coding	41	GC16M018781	0.177573	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=RPS15A
RPS27	Ribosomal Protein S27	Protein Coding	41	GC01P153991	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS27
SBF1	SET Binding Factor 1	Protein Coding	41	GC22M057734	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SBF1
SEPHS1	Selenophosphate Synthetase 1	Protein Coding	41	GC10M013317	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEPHS1
SMYD2	SET And MYND Domain Containing 2	Protein Coding	41	GC01P214281	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMYD2
TRIM28	Tripartite Motif Containing 28	Protein Coding	41	GC19P058544	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIM28
TUBA1B	Tubulin Alpha 1b	Protein Coding	41	GC12M049127	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TUBA1B
TUBA1C	Tubulin Alpha 1c	Protein Coding	41	GC12P049188	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TUBA1C
UBE2T	Ubiquitin Conjugating Enzyme E2 T	Protein Coding	41	GC01M202332	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=UBE2T
VAV2	Vav Guanine Nucleotide Exchange Factor 2	Protein Coding	41	GC09M133761	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=VAV2
ADAM28	ADAM Metallopeptidase Domain 28	Protein Coding	40	GC08P024294	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAM28
ARF4	ADP Ribosylation Factor 4	Protein Coding	40	GC03M057572	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARF4
ARR3	Arrestin 3	Protein Coding	40	GC0XP070269	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARR3
ATAD3A	ATPase Family AAA Domain Containing 3A	Protein Coding	40	GC01P003886	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATAD3A

AUTS2	Activator Of Transcription And Developmental Regulator AUTS2	Protein Coding	40	GC07P069598	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=AUTS2
CCT4	Chaperonin Containing TCP1 Subunit 4	Protein Coding	40	GC02M061868	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCT4
CD300A	CD300a Molecule	Protein Coding	40	GC17P074466	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD300A
CDC37	Cell Division Cycle 37, HSP90 Cochaperone	Protein Coding	40	GC19M010391	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDC37
CFHR3	Complement Factor H Related 3	Protein Coding	40	GC01P196774	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CFHR3
CNOT1	CCR4-NOT Transcription Complex Subunit 1	Protein Coding	40	GC16M058519	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNOT1
COIL	Coilin	Protein Coding	40	GC17M056938	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COIL
ERP44	Endoplasmic Reticulum Protein 44	Protein Coding	40	GC09M099979	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ERP44
FANCI	FA Complementation Group I	Protein Coding	40	GC15P089243	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FANCI
FOSB	FosB Proto-Oncogene, AP-1 Transcription Factor Subunit	Protein Coding	40	GC19P045467	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOSB
HSD17B12	Hydroxysteroid 17-Beta Dehydrogenase 12	Protein Coding	40	GC11P043652	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSD17B12
KTN1	Kinectin 1	Protein Coding	40	GC14P055559	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KTN1
LPO	Lactoperoxidase	Protein Coding	40	GC17P058218	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LPO
LRRC32	Leucine Rich Repeat Containing 32	Protein Coding	40	GC11M076657	0.177573	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=LRR32
MTHFD1L	Methylenetetrahydrofolate Dehydrogenase (NADP+ Dependent) 1 Like	Protein Coding	40	GC06P150865	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTHFD1L
NCAPD3	Non-SMC Condensin II Complex Subunit D3	Protein Coding	40	GC11M134150	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCAPD3
NMBR	Neuromedin B Receptor	Protein Coding	40	GC06M142059	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NMBR
NSMAF	Neutral Sphingomyelinase Activation Associated Factor	Protein Coding	40	GC08M058569	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NSMAF
PARD6A	Par-6 Family Cell Polarity Regulator Alpha	Protein Coding	40	GC16P067661	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PARD6A
PCBP2	Poly(RC) Binding Protein 2	Protein Coding	40	GC12P053452	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PCBP2
PDSS2	Decaprenyl Diphosphate Synthase Subunit 2	Protein Coding	40	GC06M107152	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDSS2
PRMT3	Protein Arginine Methyltransferase 3	Protein Coding	40	GC11P020409	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRMT3
RPLP2	Ribosomal Protein Lateral Stalk Subunit P2	Protein Coding	40	GC11P001790	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPLP2
RPS3A	Ribosomal Protein S3A	Protein Coding	40	GC04P151099	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPS3A
SOX11	SRY-Box Transcription Factor 11	Protein Coding	40	GC02P005703	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SOX11
SRSF1	Serine And Arginine Rich Splicing Factor 1	Protein Coding	40	GC17M058000	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SRSF1
SRSF2	Serine And Arginine Rich Splicing Factor 2	Protein Coding	40	GC17M076734	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SRSF2

TLN1	Talin 1	Protein Coding	40	GC09M035696	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TLN1
TRIP13	Thyroid Hormone Receptor Interactor 13	Protein Coding	40	GC05P000892	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIP13
TUBB6	Tubulin Beta 6 Class V	Protein Coding	40	GC18P012307	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TUBB6
USP22	Ubiquitin Specific Peptidase 22	Protein Coding	40	GC17M020999	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=USP22
XPOT	Exportin For TRNA	Protein Coding	40	GC12P064404	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=XPOT
ALDH1L2	Aldehyde Dehydrogenase 1 Family Member L2	Protein Coding	39	GC12M105019	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ALDH1L2
CCT6A	Chaperonin Containing TCP1 Subunit 6A	Protein Coding	39	GC07P056051	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCT6A
CCT8	Chaperonin Containing TCP1 Subunit 8	Protein Coding	39	GC21M029055	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCT8
CSE1L	Chromosome Segregation 1 Like	Protein Coding	39	GC20P049046	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSE1L
CST6	Cystatin E/M	Protein Coding	39	GC11P070022	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CST6
DNER	Delta/Notch Like EGF Repeat Containing	Protein Coding	39	GC02M229357	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNER
IPO5	Importin 5	Protein Coding	39	GC13P097953	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IPO5
IRS4	Insulin Receptor Substrate 4	Protein Coding	39	GC0XM108720	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IRS4
MYBBP1A	MYB Binding Protein 1a	Protein Coding	39	GC17M004538	0.177573	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=MYBBP1A
NXF1	Nuclear RNA Export Factor 1	Protein Coding	39	GC11M089638	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=NXF1
RAB11FIP2	RAB11 Family Interacting Protein 2	Protein Coding	39	GC10M118004	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=RAB11FIP2
RAB5C	RAB5C, Member RAS Oncogene Family	Protein Coding	39	GC17M042124	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=RAB5C
RCN2	Reticulocalbin 2	Protein Coding	39	GC15P076931	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=RCN2
SMARCD3	SWI/SNF Related, Matrix Associated, Actin Dependent Regulator Of Chromatin, Subfamily D, Member 3	Protein Coding	39	GC07M151238	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=SMARCD3
UBE3C	Ubiquitin Protein Ligase E3C	Protein Coding	39	GC07P157138	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=UBE3C
UPF1	UPF1 RNA Helicase And ATPase	Protein Coding	39	GC19P018831	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=UPF1
ABCB9	ATP Binding Cassette Subfamily B Member 9	Protein Coding	38	GC12M122920	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=ABCB9
ABCF2	ATP Binding Cassette Subfamily F Member 2	Protein Coding	38	GC07M151211	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=ABCF2
AGR2	Anterior Gradient 2, Protein Disulphide Isomerase Family Member	Protein Coding	38	GC07M017058	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=AGR2
ARAP3	ArfGAP With RhoGAP Domain, Ankyrin Repeat And PH Domain 3	Protein Coding	38	GC05M141653	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=ARAP3
ARHGAP24	Rho GTPase Activating Protein 24	Protein Coding	38	GC04P085475	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=ARHGAP24
CCDC22	Coiled-Coil Domain Containing 22	Protein Coding	38	GC0XP050747	0.177573	https://www.ncbi.nlm.nih.gov/ncbi/cdd/bin/carddisp.pl?gene=CCDC22

						bin/carddisp.pl?gene=CCDC22
CDK18	Cyclin Dependent Kinase 18	Protein Coding	38	GC01P205504	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CDK18
COL19A1	Collagen Type XIX Alpha 1 Chain	Protein Coding	38	GC06P069866	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COL19A1
DDX21	DEx D-Box Helicase 21	Protein Coding	38	GC10P068956	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DDX21
DNAL4	Dynein Axonemal Light Chain 4	Protein Coding	38	GC22M038778	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNAL4
DOK5	Docking Protein 5	Protein Coding	38	GC20P054476	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DOK5
DUSP19	Dual Specificity Phosphatase 19	Protein Coding	38	GC02P183078	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DUSP19
EEF1G	Eukaryotic Translation Elongation Factor 1 Gamma	Protein Coding	38	GC11M089615	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EEF1G
ELL2	Elongation Factor For RNA Polymerase II 2	Protein Coding	38	GC05M095885	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ELL2
EPB41L2	Erythrocyte Membrane Protein Band 4.1 Like 2	Protein Coding	38	GC06M130820	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EPB41L2
LRRC4C	Leucine Rich Repeat Containing 4C	Protein Coding	38	GC11M040118	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRRC4C
MARCKS	Myristoylated Alanine Rich Protein Kinase C Substrate	Protein Coding	38	GC06P113857	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MARCKS
MDN1	Midasin AAA ATPase 1	Protein Coding	38	GC06M089642	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MDN1
MGAT3	Beta-1,4-Mannosyl-Glycoprotein 4-Beta-N-Acetylglucosaminyltransferase	Protein Coding	38	GC22P039447	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MGAT3

MTSS1	MTSS I-BAR Domain Containing 1	Protein Coding	38	GC08M124550	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTSS1
PARVB	Parvin Beta	Protein Coding	38	GC22P043999	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PARVB
PGRMC2	Progesterone Receptor Membrane Component 2	Protein Coding	38	GC04M128269	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PGRMC2
PIGF	Phosphatidylinositol Glycan Anchor Biosynthesis Class F	Protein Coding	38	GC02M046580	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIGF
PIK3AP1	Phosphoinositide-3-Kinase Adaptor Protein 1	Protein Coding	38	GC10M096593	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PIK3AP1
PLCH1	Phospholipase C Eta 1	Protein Coding	38	GC03M155381	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PLCH1
POU6F2	POU Class 6 Homeobox 2	Protein Coding	38	GC07P038977	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=POU6F2
PTPRR	Protein Tyrosine Phosphatase Receptor Type R	Protein Coding	38	GC12M070638	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPRR
RNF213	Ring Finger Protein 213	Protein Coding	38	GC17P080260	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNF213
RPL23	Ribosomal Protein L23	Protein Coding	38	GC17M038847	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RPL23
SF3B3	Splicing Factor 3b Subunit 3	Protein Coding	38	GC16P070523	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SF3B3
SFXN1	Sideroflexin 1	Protein Coding	38	GC05P175477	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SFXN1
SSR1	Signal Sequence Receptor Subunit 1	Protein Coding	38	GC06M007268	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SSR1

TIMM44	Translocase Of Inner Mitochondrial Membrane 44	Protein Coding	38	GC19M007926	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TIMM44
TNRC6A	Trinucleotide Repeat Containing Adaptor 6A	Protein Coding	38	GC16P024611	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TNRC6A
USP30	Ubiquitin Specific Peptidase 30	Protein Coding	38	GC12P109027	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=USP30
ABI3	ABI Family Member 3	Protein Coding	37	GC17P049210	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ABI3
ADAM2	ADAM Metallopeptidase Domain 2	Protein Coding	37	GC08M039743	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAM2
ANO2	Anoctamin 2	Protein Coding	37	GC12M005532	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANO2
ATP11C	ATPase Phospholipid Transporting 11C	Protein Coding	37	GC0XM139726	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP11C
BAG4	BAG Cochaperone 4	Protein Coding	37	GC08P038176	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BAG4
CAND1	Cullin Associated And Neddylation Dissociated 1	Protein Coding	37	GC12P067270	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CAND1
CD248	CD248 Molecule	Protein Coding	37	GC11M066314	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD248
CD300LB	CD300 Molecule Like Family Member B	Protein Coding	37	GC17M074520	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD300LB
COPG1	COPI Coat Complex Subunit Gamma 1	Protein Coding	37	GC03P129249	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COPG1
CRISP3	Cysteine Rich Secretory Protein 3	Protein Coding	37	GC06M049727	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CRISP3
CST7	Cystatin F	Protein Coding	37	GC20P024949	0.177573	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=CST7
CTSW	Cathepsin W	Protein Coding	37	GC11P065879	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CTSW
DAND5	DAN Domain BMP Antagonist Family Member 5	Protein Coding	37	GC19P012965	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DAND5
DEPTOR	DEP Domain Containing MTOR Interacting Protein	Protein Coding	37	GC08P119873	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DEPTOR
EXOSC1	Exosome Component 1	Protein Coding	37	GC10M097435	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EXOSC1
FMNL2	Formin Like 2	Protein Coding	37	GC02P152335	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FMNL2
GPR158	G Protein-Coupled Receptor 158	Protein Coding	37	GC10P025174	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GPR158
GRK3	G Protein-Coupled Receptor Kinase 3	Protein Coding	37	GC22P036163	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GRK3
HNRNPU L1	Heterogeneous Nuclear Ribonucleoprotein U Like 1	Protein Coding	37	GC19P041262	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HNRNPUL1
IFI35	Interferon Induced Protein 35	Protein Coding	37	GC17P043006	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFI35
IFT74	Intraflagellar Transport 74	Protein Coding	37	GC09P026947	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IFT74
INTS6	Integrator Complex Subunit 6	Protein Coding	37	GC13M051334	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=INTS6
IPMK	Inositol Polyphosphate Multikinase	Protein Coding	37	GC10M058191	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IPMK
ITGA10	Integrin Subunit Alpha 10	Protein Coding	37	GC01M145891	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ITGA10

LARS1	Leucyl-TRNA Synthetase 1	Protein Coding	37	GC05M146114	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LARS1
LRRTM4	Leucine Rich Repeat Transmembrane Neuronal 4	Protein Coding	37	GC02M076747	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRRTM4
MPRIIP	Myosin Phosphatase Rho Interacting Protein	Protein Coding	37	GC17P017042	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MPRIIP
OXER1	Oxoeicosanoid Receptor 1	Protein Coding	37	GC02M042762	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OXER1
PPP1R12B	Protein Phosphatase 1 Regulatory Subunit 12B	Protein Coding	37	GC01P202348	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPP1R12B
RALGAP A2	Ral GTPase Activating Protein Catalytic Subunit Alpha 2	Protein Coding	37	GC20M020374	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RALGAPA2
RBM14	RNA Binding Motif Protein 14	Protein Coding	37	GC11P070099	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RBM14
RNPS1	RNA Binding Protein With Serine Rich Domain 1	Protein Coding	37	GC16M002253	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RNPS1
SCUBE1	Signal Peptide, CUB Domain And EGF Like Domain Containing 1	Protein Coding	37	GC22M043197	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SCUBE1
SMYD1	SET And MYND Domain Containing 1	Protein Coding	37	GC02P088075	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SMYD1
SRPRB	SRP Receptor Subunit Beta	Protein Coding	37	GC03P133784	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SRPRB
STAC	SH3 And Cysteine Rich Domain	Protein Coding	37	GC03P036421	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=STAC
TCHH	Trichohyalin	Protein Coding	37	GC01M152106	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TCHH

ASCL2	Achaete-Scute Family BHLH Transcription Factor 2	Protein Coding	36	GC11M003304	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ASCL2
ATAD3B	ATPase Family AAA Domain Containing 3B	Protein Coding	36	GC01P003884	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATAD3B
CCDC40	Coiled-Coil Domain Containing 40	Protein Coding	36	GC17P080037	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCDC40
EAPP	E2F Associated Phosphoprotein	Protein Coding	36	GC14M034516	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EAPP
EYS	Eyes Shut Homolog	Protein Coding	36	GC06M063719	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EYS
IPO4	Importin 4	Protein Coding	36	GC14M024181	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IPO4
JAKMIP1	Janus Kinase And Microtubule Interacting Protein 1	Protein Coding	36	GC04M006026	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=JAKMIP1
LAYN	Layilin	Protein Coding	36	GC11P111717	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LAYN
LINGO2	Leucine Rich Repeat And Ig Domain Containing 2	Protein Coding	36	GC09M028340	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINGO2
MMS19	MMS19 Homolog, Cytosolic Iron-Sulfur Assembly Component	Protein Coding	36	GC10M097458	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MMS19
MRGPRX1	MAS Related GPR Family Member X1	Protein Coding	36	GC11M018955	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MRGPRX1
NAV1	Neuron Navigator 1	Protein Coding	36	GC01P201563	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NAV1
RAB3C	RAB3C, Member RAS Oncogene Family	Protein Coding	36	GC05P058582	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RAB3C
SNX6	Sorting Nexin 6	Protein Coding	36	GC14M034561	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNX6

						bin/carddisp.pl?gene=SNX6
SRRM2	Serine/Arginine Repetitive Matrix 2	Protein Coding	36	GC16P011722	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SRRM2
TMEM132D	Transmembrane Protein 132D	Protein Coding	36	GC12M129071	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMEM132D
TPTE	Transmembrane Phosphatase With Tensin Homology	Protein Coding	36	GC21P010521	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TPTE
TSPAN4	Tetraspanin 4	Protein Coding	36	GC11P001793	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSPAN4
TTC26	Tetratricopeptide Repeat Domain 26	Protein Coding	36	GC07P139135	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TTC26
TXNRD3	Thioredoxin Reductase 3	Protein Coding	36	GC03M126577	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TXNRD3
COQ8A	Coenzyme Q8A	Protein Coding	35	GC01P226939	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=COQ8A
CPNE8	Copine 8	Protein Coding	35	GC12M038646	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CPNE8
IARS1	Isoleucyl-TRNA Synthetase 1	Protein Coding	35	GC09M094184	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IARS1
MEF2B	Myocyte Enhancer Factor 2B	Protein Coding	35	GC19M019150	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MEF2B
NCOA5	Nuclear Receptor Coactivator 5	Protein Coding	35	GC20M046060	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NCOA5
RACK1	Receptor For Activated C Kinase 1	Protein Coding	35	GC05M181795	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RACK1
TRIM6	Tripartite Motif Containing 6	Protein Coding	35	GC11P005596	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIM6

WDR6	WD Repeat Domain 6	Protein Coding	35	GC03P049007	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=WDR6
CD300C	CD300c Molecule	Protein Coding	34	GC17M074544	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD300C
CD300E	CD300e Molecule	Protein Coding	34	GC17M074609	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD300E
CNTNAP5	Contactin Associated Protein Family Member 5	Protein Coding	34	GC02P124025	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CNTNAP5
FAIM2	Fas Apoptotic Inhibitory Molecule 2	Protein Coding	34	GC12M049866	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FAIM2
FOXQ1	Forkhead Box Q1	Protein Coding	34	GC06P001312	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FOXQ1
FRY	FRY Microtubule Binding Protein	Protein Coding	34	GC13P031883	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FRY
NTPCR	Nucleoside-Triphosphatase, Cancer-Related	Protein Coding	34	GC01P232950	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NTPCR
OTOR	Otoraplin	Protein Coding	34	GC20P016748	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=OTOR
PDCD11	Programmed Cell Death 11	Protein Coding	34	GC10P103396	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PDCD11
PGAM5	PGAM Family Member 5, Mitochondrial Serine/Threonine Protein Phosphatase	Protein Coding	34	GC12P132710	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PGAM5
SGCZ	Sarcoglycan Zeta	Protein Coding	34	GC08M014089	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SGCZ
SHISA6	Shisa Family Member 6	Protein Coding	34	GC17P011241	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SHISA6
SYT9	Synaptotagmin 9	Protein Coding	34	GC11P007238	0.177573	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=SYT9
TBC1D14	TBC1 Domain Family Member 14	Protein Coding	34	GC04P006910	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TBC1D14
ANKFN1	Ankyrin Repeat And Fibronectin Type III Domain Containing 1	Protein Coding	33	GC17P055882	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANKFN1
ARMC3	Armadillo Repeat Containing 3	Protein Coding	33	GC10P022928	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ARMC3
ATP5F1B	ATP Synthase F1 Subunit Beta	Protein Coding	33	GC12M056646	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP5F1B
ATP5PO	ATP Synthase Peripheral Stalk Subunit OSCP	Protein Coding	33	GC21M033904	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP5PO
BEND7	BEN Domain Containing 7	Protein Coding	33	GC10M013392	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BEND7
C15orf48	Chromosome 15 Open Reading Frame 48	Protein Coding	33	GC15P045430	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C15orf48
CEP131	Centrosomal Protein 131	Protein Coding	33	GC17M081189	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CEP131
KMT5B	Lysine Methyltransferase 5B	Protein Coding	33	GC11M090188	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KMT5B
NELFE	Negative Elongation Factor Complex Member E	Protein Coding	33	GC06M031952	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NELFE
NPBWR1	Neuropeptides B And W Receptor 1	Protein Coding	33	GC08P052938	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NPBWR1
PTPA	Protein Phosphatase 2 Phosphatase Activator	Protein Coding	33	GC09P129111	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTPA
SLC38A10	Solute Carrier Family 38 Member 10	Protein Coding	33	GC17M081244	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SLC38A10

SNX31	Sorting Nexin 31	Protein Coding	33	GC08M100572	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SNX31
SYT8	Synaptotagmin 8	Protein Coding	33	GC11P001858	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SYT8
CCT8L2	Chaperonin Containing TCP1 Subunit 8 Like 2	Protein Coding	32	GC22M016593	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CCT8L2
DNASE2B	Deoxyribonuclease 2 Beta	Protein Coding	32	GC01P084398	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNASE2B
EFCAB6	EF-Hand Calcium Binding Domain 6	Protein Coding	32	GC22M057620	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EFCAB6
MON2	MON2 Homolog, Regulator Of Endosome-To-Golgi Trafficking	Protein Coding	32	GC12P062466	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MON2
TMEM182	Transmembrane Protein 182	Protein Coding	32	GC02P102744	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMEM182
TSPAN17	Tetraspanin 17	Protein Coding	32	GC05P176647	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TSPAN17
ZNF385D	Zinc Finger Protein 385D	Protein Coding	32	GC03M021412	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF385D
ZNF804B	Zinc Finger Protein 804B	Protein Coding	32	GC07P088759	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF804B
CD300LD	CD300 Molecule Like Family Member D	Protein Coding	31	GC17M074579	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CD300LD
CSRNP1	Cysteine And Serine Rich Nuclear Protein 1	Protein Coding	31	GC03M039159	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CSRNP1
PROX2	Prospero Homeobox 2	Protein Coding	31	GC14M074852	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PROX2
PYCR3	Pyrroline-5-Carboxylate Reductase 3	Protein Coding	31	GC08M143604	0.177573	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=PYCR3
ATP5F1C	ATP Synthase F1 Subunit Gamma	Protein Coding	30	GC10P007789	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP5F1C
C4orf17	Chromosome 4 Open Reading Frame 17	Protein Coding	30	GC04P099511	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C4orf17
RELL1	RELT Like 1	Protein Coding	30	GC04M037592	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=RELL1
TTLL2	Tubulin Tyrosine Ligase Like 2	Protein Coding	30	GC06P167325	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TTLL2
GCN1	GCN1 Activator Of EIF2AK4	Protein Coding	29	GC12M120128	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GCN1
SEPTIN6	Septin 6	Protein Coding	29	GC0XM119616	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SEPTIN6
TMEM255B	Transmembrane Protein 255B	Protein Coding	29	GC13P113759	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TMEM255B
TOPAZ1	Testis And Ovary Specific TOPAZ 1	Protein Coding	29	GC03P044283	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TOPAZ1
EMC9	ER Membrane Protein Complex Subunit 9	Protein Coding	28	GC14M024138	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=EMC9
MTARC2	Mitochondrial Amidoxime Reducing Component 2	Protein Coding	28	GC01P220748	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MTARC2
REC114	REC114 Meiotic Recombination Protein	Protein Coding	28	GC15P073443	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=REC114
TENT2	Terminal Nucleotidyltransferase 2	Protein Coding	28	GC05P079613	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TENT2
TRIM6-TRIM34	TRIM6-TRIM34 Readthrough	Protein Coding	26	GC11P005597	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=TRIM6-TRIM34

BAGE2	BAGE Family Member 2, Pseudogene	Pseudo gene	21	GC21P010413	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BAGE2
CFAP92	Cilia And Flagella Associated Protein 92 (Putative)	Protein Coding	21	GC03M130351	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CFAP92
BORCS8-MEF2B	BORCS8-MEF2B Readthrough	Protein Coding	20	GC19M019146	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=BORCS8-MEF2B
NPSR1-AS1	NPSR1 Antisense RNA 1	RNA Gene	20	GC07M034387	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NPSR1-AS1
CLRN1-AS1	CLRN1 Antisense RNA 1	RNA Gene	18	GC03P150852	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=CLRN1-AS1
LINC00469	Long Intergenic Non-Protein Coding RNA 469	RNA Gene	18	GC17M073750	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC00469
MIR496	MicroRNA 496	RNA Gene	16	GC14P109999	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR496
ANKRD34C-AS1	ANKRD34C Antisense RNA 1	RNA Gene	14	GC15M090452	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ANKRD34C-AS1
GAS5-AS1	GAS5 Antisense RNA 1	RNA Gene	14	GC01P173863	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=GAS5-AS1
KLKP1	Kallikrein Pseudogene 1	Pseudo gene	14	GC19M066191	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=KLKP1
PRICKLE2-AS3	PRICKLE2 Antisense RNA 3	RNA Gene	14	GC03P064187	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PRICKLE2-AS3
C13orf42	Chromosome 13 Open Reading Frame 42	Protein Coding	13	GC13M051166	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=C13orf42
LACTB2-AS1	LACTB2 Antisense RNA 1	RNA Gene	13	GC08P070608	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LACTB2-AS1
LINC00331	Long Intergenic Non-Protein Coding RNA 331	RNA Gene	13	GC13M078787	0.177573	https://www.genecards.org/cgi-

						bin/carddisp.pl?gene=LINC00331
SYT9-AS1	SYT9 Antisense RNA 1	RNA Gene	13	GC11M007384	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=SYT9-AS1
ZNF815P	Zinc Finger Protein 815, Pseudogene	Pseudo gene	13	GC07P005823	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ZNF815P
FILNC1	FOXO Induced Long Non-Coding RNA 1	RNA Gene	12	GC06P139677	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FILNC1
HRES1	HTLV-1 Related Endogenous Sequence	Pseudo gene	12	GC01U990083	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HRES1
LINC00836	Long Intergenic Non-Protein Coding RNA 836	RNA Gene	12	GC10P025651	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC00836
LINC01342	Long Intergenic Non-Protein Coding RNA 1342	RNA Gene	12	GC01P003863	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC01342
LINC02367	Long Intergenic Non-Protein Coding RNA 2367	RNA Gene	12	GC12P021743	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LINC02367
NIPAL4-DT	NIPAL4 Divergent Transcript	RNA Gene	12	GC05M157364	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=NIPAL4-DT
ADAM3B	ADAM Metallopeptidase Domain 3B (Pseudogene)	Pseudo gene	11	GC16M049517	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ADAM3B
IATPR	ITGB1 Adjacent Tumor Promoting LncRNA	RNA Gene	11	GC10M033153	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=IATPR
DNMT3AP1	DNA Methyltransferase 3A Pseudogene 1	Pseudo gene	9	GC02M066819	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=DNMT3AP1
ERVK-18	Endogenous Retrovirus Group K Member 18	Protein Coding	9	GC01U903332	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ERVK-18
ERVK-24	Endogenous Retrovirus Group K Member 24	Protein Coding	9	GC22U900840	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ERVK-24

ISCA2P1	Iron-Sulfur Cluster Assembly 2 Pseudogene 1	Pseudo gene	9	GC22M026644	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ISCA2P1
LRRTM4-AS1	LRRTM4 Antisense RNA 1	RNA Gene	9	GC02P076986	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LRRTM4-AS1
LOC102724560	Cystathionine Beta-Synthase Like	Protein Coding	8	GC21M006444	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC102724560
FRAXA	Fragile Site, Folic Acid Type, Rare, Fra(X)(Q27.3) A	Biological Region	7	GC0XP147950	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=FRAXA
ERVK-11	Endogenous Retrovirus Group K Member 11	Protein Coding	6	GC03U901891	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ERVK-11
PPIAP33	Peptidylprolyl Isomerase A Pseudogene 33	Pseudo gene	5	GC09P007499	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=PPIAP33
ERVK-1	Endogenous Retrovirus Group K Member 1	Uncategorized	3	GC01U903451	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=ERVK-1
LOC101927484	Uncharacterized LOC101927484	RNA Gene	3	GC12M055023	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC101927484
LOC106627981	GBA Recombination Region	Biological Region	3	GC01P155233	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=LOC106627981
HSERP RODH	Human-Specific Endogenous Retroviral Insert PRODH Enhancer	Biological Region	2	GC22P037156	0.177573	https://www.genecards.org/cgi-bin/carddisp.pl?gene=HSERP RODH

Table S5. List of 244 common genes (data obtained from venny)

Common genes
IL6ST
TYK2
BLK
MIF
MMP2
ABCB1
PTGS2
ALOX5

PRKCQ
PTGS1
ADORA2A
HSD11B1
STS
CTSD
NR3C1
PTK2
ABCG2
MECP2
PRKCH
MAPK14
EGFR
AKT1
ESR1
AR
JAK1
JAK2
JAK3
KDR
MMP1
MMP3
MMP9
MMP13
NOS3
PDE2A
PIK3CA
PIK3CB
MAPK8
STAT3
BTK
TLR4
TNFRSF1A
TYMS
DDR1
PARP1
PTGES
CTSK
NOS2
P2RX7
PPARG
CASP1
ESR2
FLT1

BRAF
ADA
CNR2
CYP1A2
DHODH
MTOR
IGF1R
MDM2
ROS1
TSPO
CD38
CSF1R
HTR2A
CXCR2
PRKCA
REN
ADAMTS5
CCR1
ERBB2
ALOX15
HSP90AA1
CXCR1
MAP3K5
DDR2
PDE3A
PFKFB3
PPIA
PRKCB
RPS6KA3
TACR1
PER2
CDK2
CFTR
CNR1
CPB1
CRHR1
ADRA1A
ADRA2B
CYP3A5
F2R
FLT4
BRD4
GSK3B
HDAC1

INSR
KCNMA1
MET
NOS1
NOX4
PAK1
PDE7A
PDGFRA
ENPP2
PGR
RORC
SLC6A2
BRS3
CA1
SPHK1
MBD2
HDAC9
HDAC6
CDK4
PIM2
CHEK2
CHRM3
ADORA3
GPBAR1
CTSS
CYP1A1
CYP2B6
CYP2C19
CYP3A4
NQO1
AGTR1
DYRK1A
S1PR3
ELANE
EPHA3
AKT2
F10
FGFR1
FLT3
FPR1
BRD1
ALOX5AP
QPCT
GCK

HCRTR1
LCK
MAPT
MTNR1B
P2RX3
P2RY1
PDPK1
PIM1
PLK1
ATR
EGLN1
PPARA
PRCP
PRKCZ
MAPK9
MAPK10
PSEN1
SPHK2
PTGER4
RET
SCD
SMO
SRC
AURKA
TACR2
TACR3
TGFBR1
TRPV1
CA2
CASR
HDAC4
CDK1
SYK
MAP3K8
LRRK2
PRKCD
CYP2C9
OPRM1
TGFBR2
CCR8
PDGFRB
ALPL
MAPKAPK2
RIPK2

MAP2K6
HTR3A
MC4R
MAP2K3
HSP90AB1
BAD
PRKDC
FAAH
MTNR1A
HDAC2
GRM5
PLA2G7
EPHA2
AOC3
CAPN2
PTGER1
METAP2
DRD4
LTA4H
CETP
CPT1A
TOP1
DRD1
DRD3
OPRD1
LDHB
PKM
ITK
LYN
ACHE
CAPN1
CDC25B
ERN1
CCKAR
PTPN1
FYN
BACE2
SCN9A
ABL1
PTGIR
HUNK
ILK
NR3C2
GCGR

PDE5A
GNRHR
ADRA2C
MAP3K12
CSNK2A1
NR1H4
AKR1B1
CTSV
ADORA1
HDAC10
CHRM2
ADORA2B
ECE2
TNNI3K
FGR
HCK

Table S6. Result of PPI network analysis in String Database

	Identifier	Node degree
1	9606.ENSP00000362680	54
2	9606.ENSP00000335153	43
3	9606.ENSP00000264657	41
4	9606.ENSP00000263967	40
5	9606.ENSP00000451828	34
6	9606.ENSP00000337825	32
7	9606.ENSP00000346671	29
8	9606.ENSP00000428924	27
9	9606.ENSP00000275493	26
10	9606.ENSP00000378974	24
11	9606.ENSP00000371067	23
12	9606.ENSP00000444986	22
12	9606.ENSP00000343204	22
12	9606.ENSP00000341189	22
12	9606.ENSP00000229795	22
16	9606.ENSP00000405330	20
17	9606.ENSP00000363117	19
17	9606.ENSP00000367830	19
17	9606.ENSP00000362649	19
20	9606.ENSP00000289153	18

Table S7. Results of KEGG analysis in ShinyGO 0.76 platform.

Enrichment FDR	nGenes	Pathway Genes	Fold Enrichment	Pathway	URL	Genes
1.11E-13	58	530	3.120662	Pathways in cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05200	BAD NOS2 FLT4 MAPK9 PIK3CB PTGS2 FGFR1 HSP90AA1 GSK3B MMP2 ESR1 HSP90AB1 JAK2 ABL1 MMP9 PIM2 AKT2 JAK3 MET TGFBR1 MAPK8 MAPK10 PDGFRB HDAC1 PIK3CA FLT3 CDK2 SMO PPARG IL6ST PDGFRA CDK4 MDM2 EGLN1 PIM1 ESR2 IGF1R ERBB2 AKT1 AGTR1 EGFR PRKCA BRAF PTGER1 JAK1 TGFBR2 RET PRKCB STAT3 AR PTK2 PTGER4 NQO1 F2R CSF1R HDAC2 MMP1 MTOR
1.31E-13	35	240	4.797242	Calcium signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04020	CD38 NOS2 FLT4 SPHK2 TACR2 FGFR1 P2RX7 NOS1 HTR2A FLT1 MET P2RX3 PDGFRB TACR1 ADRA1A KDR ADORA2A CHRM3 PDGFRA ERBB2 AGTR1 EGFR PRKCA PTGER1 CCKAR NOS3 RET PRKCB GRM5 TACR3 ADORA2B SPHK1 CHRM2 F2R DRD1
1.31E-13	42	350	3.983165	Neuroactive ligand-receptor interaction	http://www.genome.jp/kegg-bin/show_pathway?hsa04080	TACR2 P2RX7 TSPO BRS3 HTR2A GNRHR P2RX3 OPRM1 NR3C1 TACR1 OPRD1 CNR1 ADRA1A HCRTR1 ADORA2A CHRM3 MTNR1B AGTR1 DRD3 PTGIR PTGER1 CCKAR ADORA1 MC4R MTNR1A GRM5 TACR3 P2RY1 ADORA2B FPR1 PTGER4 CHRM2 F2R ADRA2C DRD1 CNR2 TRPV1 S1PR3 ADRA2B DRD4 ADORA3 GCGR
3.09E-12	19	100	8.494709	Progesterone-mediated oocyte maturation	http://www.genome.jp/kegg-bin/show_pathway?hsa04914	MAPK9 PIK3CB HSP90AA1 PGR AURKA HSP90AB1 CDC25B AKT2 MAPK8 MAPK10 MAPK14 PIK3CA CDK2 IGF1R AKT1 BRAF PLK1 CDK1 RPS6KA3
1.00E-11	22	108	6.663082	Insulin resistance	http://www.genome.jp/kegg-bin/show_pathway?hsa04931	MAPK9 PIK3CB PRKCQ TNFRSF1A PRKCZ GSK3B AKT2 MAPK8 MAPK10 CPT1A PIK3CA PDPK1 AKT1 PRKCD NOS3 PRKCB STAT3 INSR RPS6KA3 PPARA PTPN1 MTOR

2.15E-11	23	119	6.082942	Sphingolipid signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04071	FYN MAPK9 PIK3CB SPHK2 TNFRSF1A PRKCZ AKT2 MAPK8 MAPK10 MAPK14 OPRD1 CTSD PIK3CA PDPK1 AKT1 PRKCA ADORA1 NOS3 PRKCB SPHK1 MAP3K5 S1PR3 ADORA3
8.78E-11	22	95	5.987118	Endocrine resistance	http://www.genome.jp/kegg-bin/show_pathway?hsa01522	BAD MAPK9 PIK3CB MMP2 ESR1 MMP9 AKT2 MAPK8 MAPK10 MAPK14 PIK3CA CDK4 MDM2 ESR2 IGF1R ERBB2 AKT1 EGFR BRAF PTK2 SRC MTOR
1.69E-10	21	79	6.066667	EGFR tyrosine kinase inhibitor resistance	http://www.genome.jp/kegg-bin/show_pathway?hsa01521	BAD PIK3CB GSK3B JAK2 AKT2 MET PDGFRB PIK3CA KDR PDGFRA IGF1R ERBB2 AKT1 EGFR PRKCA BRAF JAK1 PRKCB STAT3 SRC MTOR
1.69E-10	30	210	4.20398	Rap1 signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04015	MAP2K3 FLT4 PIK3CB PRKCZ FGFR1 FLT1 AKT2 MET MAP2K6 MAPK14 PDGFRB CNR1 PIK3CA KDR ADORA2A PDGFRA IGF1R AKT1 EPHA2 EGFR PRKCA BRAF PRKCB P2RY1 ADORA2B FPR1 INSR F2R CSF1R SRC
2.25E-10	34	214	3.711886	Lipid and atherosclerosis	http://www.genome.jp/kegg-bin/show_pathway?hsa05417	BAD MAP2K3 MAPK9 PIK3CB TNFRSF1A HSP90AA1 GSK3B HSP90AB1 JAK2 MMP9 AKT2 MAPK8 MAP2K6 MAPK10 MAPK14 PIK3CA PPARG TLR4 CASP1 CYP2C9 CYP1A1 PDPK1 AKT1 MMP3 PRKCA NOS3 STAT3 PTK2 ERN1 MMP1 SRC CYP2B6 MAP3K5 LYN
4.32E-10	25	203	4.790249	Diabetic cardiomyopathy	http://www.genome.jp/kegg-bin/show_pathway?hsa05415	MAPK9 PIK3CB PRKCZ GSK3B MMP2 MMP9 AKT2 TGFBF1 MAPK8 MAPK10 MAPK14 CTSD PIK3CA AKT1 PARP1 REN AGTR1 PRKCA TGFBF2 PRKCD NOS3 PRKCB INSR PPARA MTOR
5.63E-10	36	294	3.414141	MAPK signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04010	MAP2K3 FLT4 MAPK9 TNFRSF1A FGFR1 CDC25B FLT1 AKT2 MET TGFBF1 MAPK8 MAP3K8 MAP2K6 MAPK10 MAPK14 PDGFRB FLT3 KDR PDGFRA MAP3K12 IGF1R ERBB2 AKT1 EPHA2 EGFR PAK1 PRKCA BRAF MAPKAPK2 TGFBF2 PRKCB INSR RPS6KA3 CSF1R MAP3K5 MAPT
1.86E-09	21	129	5.328829	Relaxin signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04926	NOS2 MAPK9 PIK3CB PRKCZ MMP2 NOS1 MMP9 AKT2 TGFBF1 MAPK8 MAPK10 MAPK14 PIK3CA MMP13 AKT1 EGFR PRKCA TGFBF2 NOS3 MMP1 SRC
2.03E-09	22	97	5.03794	Prostate cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05215	BAD PIK3CB FGFR1 HSP90AA1 GSK3B HSP90AB1 MMP9 AKT2 PDGFRB PIK3CA CDK2 PDGFRA MDM2 IGF1R PDPK1 ERBB2 AKT1 EGFR MMP3 BRAF AR MTOR
2.20E-09	19	84	5.848816	ErbB signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04012	BAD MAPK9 PIK3CB GSK3B ABL1 AKT2 MAPK8 MAPK10 PIK3CA ERBB2 AKT1 EGFR PAK1 PRKCA BRAF PRKCB PTK2 SRC MTOR
2.43E-09	28	200	3.953216	Focal adhesion	http://www.genome.jp/kegg-bin/show_pathway?hsa04510	BAD FYN FLT4 MAPK9 PIK3CB GSK3B FLT1 AKT2 MET MAPK8 MAPK10 PDGFRB PIK3CA KDR PDGFRA IGF1R PDPK1 ERBB2 AKT1 EGFR PAK1 PRKCA BRAF CAPN2 ILK PRKCB PTK2 SRC
3.39E-09	18	68	6.035714	Fc epsilon RI signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04664	BTK FYN MAP2K3 MAPK9 PIK3CB AKT2 MAPK8 MAP2K6 MAPK10 MAPK14 PIK3CA ALOX5AP PDPK1 AKT1 PRKCA SYK LYN ALOX5
4.09E-09	16	59	6.828283	VEGF signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04370	BAD PIK3CB SPHK2 PTGS2 AKT2 MAPK14 PIK3CA KDR AKT1 PRKCA MAPKAPK2 NOS3 PRKCB PTK2 SPHK1 SRC
5.27E-09	22	100	4.748404	AGE-RAGE signaling pathway in diabetic complications	http://www.genome.jp/kegg-bin/show_pathway?hsa04933	MAPK9 PIK3CB PRKCZ NOX4 MMP2 JAK2 AKT2 TGFBF1 MAPK8 MAPK10 MAPK14 PIK3CA CDK4 PIM1 AKT1 AGTR1 PRKCA TGFBF2 PRKCD NOS3 PRKCB STAT3
8.04E-09	37	354	3.007696	PI3K-Akt signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04151	BAD FLT4 PIK3CB FGFR1 HSP90AA1 GSK3B HSP90AB1 JAK2 FLT1 AKT2 JAK3 MET PDGFRB PIK3CA FLT3 CDK2 KDR PDGFRA CDK4 MDM2 TLR4 IGF1R PDPK1 ERBB2 AKT1 EPHA2 EGFR PRKCA JAK1 NOS3 SYK PTK2 INSR CHRM2 F2R CSF1R MTOR
1.59E-08	24	197	4.134557	Chemical carcinogenesis	http://www.genome.jp/kegg-bin/show_pathway?hsa05207	BAD PIK3CB HSP90AA1 PGR ESR1 HSP90AB1 JAK2 AKT2 PIK3CA ESR2 CYP1A1 CYP1A2 AKT1 EGFR PRKCA CYP3A4 PRKCB STAT3 AR RPS6KA3 PPARA SRC CYP2B6 MTOR
2.70E-08	19	148	5.025039	Phospholipase D signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04072	FYN PIK3CB SPHK2 AKT2 PDGFRB PIK3CA PDGFRA AKT1 AGTR1 EGFR PRKCA CXCR1 SYK GRM5 INSR SPHK1 CXCR2 F2R MTOR
7.39E-08	16	70	5.668763	Central carbon metabolism in cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05230	PIK3CB PKM FGFR1 AKT2 MET GCK LDHB PDGFRB PIK3CA FLT3 PDGFRA ERBB2 AKT1 EGFR RET MTOR
8.76E-08	17	98	5.233151	Inflammatory mediator regulation of TRP channels	http://www.genome.jp/kegg-bin/show_pathway?hsa04750	PRKCH MAP2K3 MAPK9 PIK3CB PRKCQ HTR2A MAPK8 MAP2K6 MAPK10 MAPK14 PIK3CA PRKCA PRKCD PRKCB PTGER4 TRPV1 SRC
8.76E-08	17	76	5.233151	Pancreatic cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05212	BAD MAPK9 PIK3CB AKT2 TGFBF1 MAPK8 MAPK10 PIK3CA CDK4 ERBB2 AKT1 EGFR BRAF JAK1 TGFBF2 STAT3 MTOR
1.36E-07	26	202	3.462569	Proteoglycans in cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05205	PIK3CB FGFR1 MMP2 ESR1 MMP9 AKT2 MET MAPK14 PIK3CA KDR SMO MDM2 TLR4 IGF1R PDPK1 ERBB2 AKT1 EGFR PAK1 PRKCA BRAF PRKCB STAT3 PTK2 SRC MTOR

1.44E-07	25	161	3.556397	Hepatitis B	http://www.genome.jp/kegg-bin/show_pathway?hsa05161	BAD MAP2K3 MAPK9 PIK3CB JAK2 MMP9 AKT2 TYK2 JAK3 TGFBR1 MAPK8 MAP2K6 MAPK10 MAPK14 PIK3CA CDK2 TLR4 AKT1 PRKCA BRAF JAK1 TGFBR2 PRKCB STAT3 SRC
2.00E-07	26	194	3.390432	Kaposi sarcoma-associated herpesvirus infection	http://www.genome.jp/kegg-bin/show_pathway?hsa05167	MAPK9 PIK3CB TNFRSF1A PTGS2 GSK3B JAK2 HCK AKT2 TYK2 MAPK8 MAP2K6 MAPK10 MAPK14 PIK3CA IL6ST CDK4 AKT1 JAK1 MAPKAPK2 CCR1 SYK STAT3 CCR8 SRC MTOR LYN
2.14E-07	19	109	4.404664	HIF-1 signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04066	NOS2 PIK3CB FLT1 AKT2 LDHB PIK3CA EGLN1 TLR4 IGF1R ERBB2 AKT1 EGFR PRKCA NOS3 PRKCB STAT3 PFKFB3 INSR MTOR
2.32E-07	16	72	5.180077	Non-small cell lung cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05223	BAD PIK3CB AKT2 JAK3 MET PIK3CA CDK4 PDPK1 ERBB2 AKT1 EGFR PRKCA BRAF RET PRKCB STAT3
2.37E-07	25	231	3.451797	Ras signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04014	BAD FLT4 MAPK9 PIK3CB FGFR1 ABL1 FLT1 AKT2 MET MAPK8 MAPK10 PDGFRB PIK3CA FLT3 KDR PDGFRA IGF1R AKT1 EPHA2 EGFR PAK1 PRKCA PRKCB INSR CSF1R
3.67E-07	19	119	4.247354	Neurotrophin signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04722	BAD MAPK9 PIK3CB PSEN1 GSK3B ABL1 RIPK2 AKT2 MAPK8 MAPK10 MAPK14 PIK3CA PDPK1 AKT1 BRAF MAPKAPK2 PRKCD RPS6KA3 MAP3K5
7.68E-07	17	138	4.496088	Estrogen signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04915	PIK3CB HSP90AA1 PGR MMP2 ESR1 HSP90AB1 MMP9 AKT2 OPRM1 CTSD PIK3CA ESR2 AKT1 EGFR PRKCD NOS3 SRC
7.79E-07	21	138	3.720126	Fluid shear stress and atherosclerosis	http://www.genome.jp/kegg-bin/show_pathway?hsa05418	MAPK9 PIK3CB TNFRSF1A PRKCZ HSP90AA1 MMP2 HSP90AB1 MMP9 AKT2 MAPK8 MAP2K6 MAPK10 MAPK14 PIK3CA KDR AKT1 NOS3 PTK2 NQO1 SRC MAP3K5
8.50E-07	15	70	5.029762	Prolactin signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04917	MAPK9 PIK3CB GSK3B ESR1 JAK2 AKT2 GCK MAPK8 MAPK10 MAPK14 PIK3CA ESR2 AKT1 STAT3 SRC
1.06E-06	19	131	3.964198	FoxO signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04068	MAPK9 PIK3CB AKT2 TGFBR1 MAPK8 MAPK10 MAPK14 PIK3CA CDK2 MDM2 IGF1R PDPK1 AKT1 EGFR BRAF TGFBR2 PLK1 STAT3 INSR
1.06E-06	17	119	4.372907	Growth hormone synthesis, secretion and action	http://www.genome.jp/kegg-bin/show_pathway?hsa04935	MAP2K3 MAPK9 PIK3CB GSK3B JAK2 AKT2 MAPK8 MAP2K6 MAPK10 MAPK14 PIK3CA AKT1 PRKCA PRKCB STAT3 PTK2 MTOR
1.13E-06	24	191	3.2657	Chemokine signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04062	FGR BAD PIK3CB PRKCZ GSK3B JAK2 HCK AKT2 JAK3 ITK PIK3CA AKT1 PAK1 BRAF CXCR1 CCR1 PRKCD PRKCB STAT3 PTK2 CCR8 CXCR2 SRC LYN
1.13E-06	11	46	6.885185	Type II diabetes mellitus	http://www.genome.jp/kegg-bin/show_pathway?hsa04930	MAPK9 PIK3CB PKM PRKCZ GCK MAPK8 MAPK10 PIK3CA PRKCD INSR MTOR
1.52E-06	21	126	3.552553	Osteoclast differentiation	http://www.genome.jp/kegg-bin/show_pathway?hsa04380	BTK FYN MAPK9 PIK3CB TNFRSF1A AKT2 TYK2 TGFBR1 MAPK8 MAP2K6 MAPK10 MAPK14 PIK3CA PPARG AKT1 CTSK JAK1 TGFBR2 SYK CSF1R LCK
1.94E-06	16	124	4.418301	Platelet activation	http://www.genome.jp/kegg-bin/show_pathway?hsa04611	BTK FYN PIK3CB PRKCZ PTGS1 AKT2 MAPK14 PIK3CA AKT1 PTGIR NOS3 SYK P2RY1 F2R SRC LYN
2.15E-06	27	383	2.897143	Alzheimer disease	http://www.genome.jp/kegg-bin/show_pathway?hsa05010	BAD NOS2 CAPN1 MAPK9 PIK3CB TNFRSF1A PTGS2 PSEN1 GSK3B NOX4 NOS1 CSNK2A1 AKT2 MAPK8 MAPK10 PIK3CA CHRM3 AKT1 BRAF CAPN2 GRM5 INSR ERN1 BACE2 MAP3K5 MTOR MAPT
3.40E-06	24	224	3.06576	Human cytomegalovirus infection	http://www.genome.jp/kegg-bin/show_pathway?hsa05163	PIK3CB TNFRSF1A PTGS2 GSK3B AKT2 MAP2K6 MAPK14 PIK3CA PDGFRA CDK4 MDM2 AKT1 EGFR PRKCA PTGER1 JAK1 CCR1 PRKCB STAT3 PTK2 PTGER4 CXCR2 SRC MTOR
3.73E-06	18	159	3.797753	Necroptosis	http://www.genome.jp/kegg-bin/show_pathway?hsa04217	CAPN1 MAPK9 TNFRSF1A HSP90AA1 HSP90AB1 JAK2 TYK2 JAK3 MAPK8 MAPK10 TLR4 CASP1 PARP1 ALOX15 JAK1 CAPN2 STAT3 PPIA
4.10E-06	16	137	4.17284	Insulin signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04910	BAD MAPK9 PIK3CB PRKCZ GSK3B AKT2 GCK MAPK8 MAPK10 PIK3CA PDPK1 AKT1 BRAF INSR PTPN1 MTOR
4.40E-06	22	203	3.202412	Viral carcinogenesis	http://www.genome.jp/kegg-bin/show_pathway?hsa05203	BAD HDAC9 PIK3CB PKM HDAC4 HDAC10 JAK3 HDAC1 PIK3CA CDK2 IL6ST CDK4 MDM2 JAK1 MAPKAPK2 SYK STAT3 CDK1 CCR8 HDAC2 SRC LYN
4.40E-06	14	75	4.694444	Glioma	http://www.genome.jp/kegg-bin/show_pathway?hsa05214	PIK3CB AKT2 PDGFRB PIK3CA PDGFRA CDK4 MDM2 IGF1R AKT1 EGFR PRKCA BRAF PRKCB MTOR
5.76E-06	21	161	3.258953	MicroRNAs in cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05206	PIK3CB HDAC4 PTGS2 ABCB1 ABL1 MMP9 CDC25B MET PDGFRB HDAC1 PIK3CA PDGFRA MDM2 PIM1 ERBB2 EGFR PRKCA PRKCB STAT3 HDAC2 MTOR
6.04E-06	23	246	3.041471	Shigellosis	http://www.genome.jp/kegg-bin/show_pathway?hsa05131	CAPN1 MAPK9 PIK3CB PRKCQ TNFRSF1A GSK3B RIPK2 AKT2 MAPK8 MAPK10 MAPK14 PIK3CA MDM2 TLR4 CASP1 AKT1 EGFR CAPN2 PRKCD ILK PTK2 SRC MTOR
6.46E-06	14	72	4.532567	Melanoma	http://www.genome.jp/kegg-bin/show_pathway?hsa05218	BAD PIK3CB FGFR1 AKT2 MET PDGFRB PIK3CA PDGFRA CDK4 MDM2 IGF1R AKT1 EGFR BRAF
6.52E-06	16	89	4.005926	PD-L1 expression and PD-1 checkpoint pathway in cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05235	MAP2K3 PIK3CB PRKCQ JAK2 CSNK2A1 AKT2 MAP2K6 MAPK14 PIK3CA TLR4 AKT1 EGFR JAK1 STAT3 LCK MTOR

7.62E-06	16	166	3.953216	CGMP-PKG signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04022	BAD AKT2 OPRD1 ADRA1A PDE5A AKT1 AGTR1 KCNMA1 ADORA1 NOS3 INSR PDE3A ADRA2C PDE2A ADRA2B ADORA3
7.62E-06	14	98	4.455744	Choline metabolism in cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05231	MAPK9 PIK3CB AKT2 MAPK8 MAPK10 PDGFRB PIK3CA PDGFRA PDPK1 AKT1 EGFR PRKCA PRKCB MTOR
7.65E-06	19	190	3.430556	Neutrophil extracellular trap formation	http://www.genome.jp/kegg-bin/show_pathway?hsa04613	HDAC9 PIK3CB HDAC6 HDAC10 AKT2 MAPK14 HDAC1 PIK3CA TLR4 CASP1 AKT1 PRKCA SYK PRKCB FPR1 HDAC2 SRC MTOR ELANE
8.22E-06	18	112	3.557895	Toxoplasmosis	http://www.genome.jp/kegg-bin/show_pathway?hsa05145	BAD NOS2 MAP2K3 MAPK9 TNFRSF1A JAK2 AKT2 TYK2 MAPK8 MAP2K6 MAPK10 MAPK14 TLR4 PDPK1 AKT1 JAK1 STAT3 ALOX5
8.38E-06	12	69	5.121212	Adipocytokine signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04920	MAPK9 PRKCQ TNFRSF1A JAK2 AKT2 MAPK8 MAPK10 CPT1A AKT1 STAT3 PPARA MTOR
8.97E-06	13	93	4.694444	GnRH signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04912	MAP2K3 MAPK9 MMP2 MAPK8 MAP2K6 GNRHR MAPK10 MAPK14 EGFR PRKCA PRKCD PRKCB SRC
9.31E-06	15	141	4.082126	Autophagy	http://www.genome.jp/kegg-bin/show_pathway?hsa04140	BAD MAPK9 PIK3CB PRKCQ AKT2 MAPK8 MAPK10 CTSD PIK3CA IGF1R PDPK1 AKT1 PRKCD ERN1 MTOR
9.31E-06	19	135	3.365828	Apoptosis	http://www.genome.jp/kegg-bin/show_pathway?hsa04210	BAD CAPN1 MAPK9 PIK3CB TNFRSF1A AKT2 MAPK8 MAPK10 CTSD PIK3CA CTSV PDPK1 AKT1 CTSK PARP1 CAPN2 CTSS ERN1 MAP3K5
9.31E-06	17	103	3.669221	T cell receptor signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04660	FYN MAPK9 PIK3CB PRKCQ GSK3B AKT2 MAPK8 MAP3K8 MAPK10 MAPK14 ITK PIK3CA CDK4 PDPK1 AKT1 PAK1 LCK
9.31E-06	15	121	4.082126	Thyroid hormone signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04919	BAD PIK3CB GSK3B ESR1 AKT2 HDAC1 PIK3CA MDM2 PDPK1 AKT1 PRKCA PRKCB HDAC2 SRC MTOR
9.86E-06	12	71	5.007407	Adherens junction	http://www.genome.jp/kegg-bin/show_pathway?hsa04520	FYN FGFR1 CSNK2A1 MET TGFBR1 IGF1R ERBB2 EGFR TGFBR2 INSR PTPN1 SRC
1.19E-05	19	156	3.303498	Cellular senescence	http://www.genome.jp/kegg-bin/show_pathway?hsa04218	CAPN1 MAP2K3 PIK3CB AKT2 TGFBR1 MAP2K6 MAPK14 PIK3CA CDK2 CDK4 MDM2 AKT1 MAPKAPK2 CAPN2 TGFBR2 CDK1 ATR CHEK2 MTOR
1.32E-05	18	108	3.414141	Th17 cell differentiation	http://www.genome.jp/kegg-bin/show_pathway?hsa04659	MAPK9 PRKCQ HSP90AA1 HSP90AB1 JAK2 TYK2 JAK3 TGFBR1 MAPK8 MAPK10 MAPK14 IL6ST RORC JAK1 TGFBR2 STAT3 LCK MTOR
1.76E-05	14	120	4.107639	AMPK signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04152	CFTR PIK3CB SCD AKT2 CPT1A ADRA1A PIK3CA PPARG IGF1R PDPK1 AKT1 PFKFB3 INSR MTOR
2.08E-05	16	104	3.619813	C-type lectin receptor signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04625	MAPK9 PIK3CB PTGS2 AKT2 MAPK8 MAPK10 MAPK14 PIK3CA MDM2 CASP1 AKT1 PAK1 MAPKAPK2 PRKCD SYK SRC
2.64E-05	27	475	2.497537	Pathways of neurodegeneration	http://www.genome.jp/kegg-bin/show_pathway?hsa05022	BAD NOS2 CAPN1 MAP2K3 MAPK9 TNFRSF1A PTGS2 PSEN1 GSK3B NOX4 NOS1 CSNK2A1 MAPK8 MAP2K6 MAPK10 MAPK14 CHRM3 PRKCA BRAF CAPN2 PRKCB GRM5 ERN1 LRRK2 MAP3K5 MTOR MAPT
2.81E-05	13	97	4.208812	Fc gamma R-mediated phagocytosis	http://www.genome.jp/kegg-bin/show_pathway?hsa04666	PIK3CB SPHK2 HCK AKT2 PIK3CA AKT1 PAK1 PRKCA PRKCD SYK PRKCB SPHK1 LYN
2.91E-05	17	167	3.360234	Hepatocellular carcinoma	http://www.genome.jp/kegg-bin/show_pathway?hsa05225	BAD PIK3CB GSK3B AKT2 MET TGFBR1 PIK3CA CDK4 IGF1R AKT1 EGFR PRKCA BRAF TGFBR2 PRKCB NQO1 MTOR
3.18E-05	16	181	3.49354	Axon guidance	http://www.genome.jp/kegg-bin/show_pathway?hsa04360	FYN EPHA3 PIK3CB PRKCZ GSK3B ABL1 MET PIK3CA SMO PDPK1 EPHA2 PAK1 PRKCA ILK PTK2 SRC
3.29E-05	13	67	4.137476	Acute myeloid leukemia	http://www.genome.jp/kegg-bin/show_pathway?hsa05221	BAD PIK3CB PIM2 AKT2 PIK3CA FLT3 PER2 PIM1 AKT1 BRAF STAT3 CSF1R MTOR
3.39E-05	14	86	3.866013	Colorectal cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05210	BAD MAPK9 PIK3CB GSK3B AKT2 TGFBR1 MAPK8 MAPK10 PIK3CA AKT1 EGFR BRAF TGFBR2 MTOR
3.48E-05	11	58	4.803618	Endometrial cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05213	BAD PIK3CB GSK3B AKT2 PIK3CA PDPK1 ERBB2 AKT1 EGFR BRAF ILK
5.50E-05	11	113	4.590123	Cholinergic synapse	http://www.genome.jp/kegg-bin/show_pathway?hsa04725	FYN PIK3CB ACHE JAK2 AKT2 PIK3CA CHRM3 AKT1 PRKCA PRKCB CHRM2
5.55E-05	13	76	3.937276	Chronic myeloid leukemia	http://www.genome.jp/kegg-bin/show_pathway?hsa05220	BAD PIK3CB ABL1 AKT2 TGFBR1 HDAC1 PIK3CA CDK4 MDM2 AKT1 BRAF TGFBR2 HDAC2
6.21E-05	16	147	3.301587	Breast cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05224	FLT4 PIK3CB FGFR1 PGR GSK3B ESR1 AKT2 PIK3CA CDK4 ESR2 IGF1R ERBB2 AKT1 EGFR BRAF MTOR
6.35E-05	14	154	3.651235	MTOR signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04150	PIK3CB TNFRSF1A GSK3B AKT2 PIK3CA IGF1R PDPK1 AKT1 PRKCA BRAF PRKCB INSR RPS6KA3 MTOR
6.55E-05	11	70	4.490338	Epithelial cell signaling in Helicobacter pylori infection	http://www.genome.jp/kegg-bin/show_pathway?hsa05120	MAPK9 MET MAPK8 MAPK10 MAPK14 EGFR PAK1 CXCR1 CXCR2 SRC LYN
6.64E-05	22	202	2.648148	Epstein-Barr virus infection	http://www.genome.jp/kegg-bin/show_pathway?hsa05169	BTK MAP2K3 MAPK9 PIK3CB AKT2 TYK2 JAK3 MAPK8 MAP2K6 MAPK10 MAPK14 HDAC1 PIK3CA CDK2 CDK4 MDM2 AKT1 JAK1 SYK STAT3 HDAC2 LYN

7.62E-05	20	210	2.781893	Human immunodeficiency virus 1 infection	http://www.genome.jp/kegg-bin/show_pathway?hsa05170	BAD MAP2K3 MAPK9 PIK3CB TNFRSF1A AKT2 MAPK8 MAP2K6 MAPK10 MAPK14 PIK3CA TLR4 AKT1 PAK1 PRKCA PRKCB PTK2 CDK1 ATR MTOR
7.63E-05	15	155	3.393574	Non-alcoholic fatty liver disease	http://www.genome.jp/kegg-bin/show_pathway?hsa04932	MAPK9 PIK3CB TNFRSF1A GSK3B AKT2 MAPK8 MAPK10 MAPK14 PIK3CA PPARG AKT1 INSR ERN1 PPARA MAP3K5
8.51E-05	17	137	3.069444	Yersinia infection	http://www.genome.jp/kegg-bin/show_pathway?hsa05135	MAP2K3 MAPK9 PIK3CB GSK3B AKT2 MAPK8 MAP2K6 MAPK10 MAPK14 PIK3CA TLR4 CASP1 AKT1 PTK2 RPS6KA3 LCK SRC
9.77E-05	10	148	4.694444	Retrograde endocannabinoid signaling	http://www.genome.jp/kegg-bin/show_pathway?hsa04723	MAPK9 PTGS2 MAPK8 MAPK10 MAPK14 FAAH CNR1 PRKCA PRKCB GRM5
0.000101	12	132	3.953216	Dopaminergic synapse	http://www.genome.jp/kegg-bin/show_pathway?hsa04728	MAPK9 GSK3B AKT2 MAPK8 MAPK10 MAPK14 AKT1 DRD3 PRKCA PRKCB DRD1 DRD4
0.000125	18	219	2.864407	CAMP signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04024	CFTR BAD MAPK9 PIK3CB AKT2 MAPK8 MAPK10 PIK3CA ADORA2A AKT1 PAK1 BRAF ADORA1 PDE3A CHRM2 F2R DRD1 PPARA
0.000137	19	179	2.744444	Tuberculosis	http://www.genome.jp/kegg-bin/show_pathway?hsa05152	BAD NOS2 MAPK9 SPHK2 TNFRSF1A JAK2 RIPK2 AKT2 MAPK8 MAPK10 MAPK14 CTSD TLR4 AKT1 JAK1 CTSS SYK SPHK1 SRC
0.000137	24	331	2.397163	Human papillomavirus infection	http://www.genome.jp/kegg-bin/show_pathway?hsa05165	BAD PIK3CB TNFRSF1A PKM PRKCZ PTGS2 PSEN1 GSK3B AKT2 TYK2 PDGFRB HDAC1 PIK3CA CDK2 CDK4 MDM2 AKT1 EGFR JAK1 PTK2 PTGER4 ATR HDAC2 MTOR
0.000153	44	1527	1.807926	Metabolic pathways	http://www.genome.jp/kegg-bin/show_pathway?hsa01100	CD38 NOS2 PIK3CB SPHK2 PKM PTGS2 AKR1B1 NOS1 PTGS1 SCD STS DHODH CA2 CYP3A5 GCK LTA4H LDHB HSD11B1 PIK3CA AOC3 CA1 ENPP2 CYP2C9 PDE5A CYP1A1 CYP1A2 PLA2G7 PTGES CYP3A4 ALOX15 ALPL NOS3 CYP2C19 PFKFB3 PDE3A SPHK1 TYMS NQO1 PDE2A ADA CYP2B6 PDE7A ALOX5 MIF
0.000157	16	141	3.034792	Alcoholic liver disease	http://www.genome.jp/kegg-bin/show_pathway?hsa04936	MAP2K3 MAPK9 TNFRSF1A GSK3B NOX4 SCD AKT2 MAPK8 MAP2K6 MAPK10 CPT1A MAPK14 TLR4 AKT1 PPARA MAP3K5
0.00016	11	112	4.050109	Serotonergic synapse	http://www.genome.jp/kegg-bin/show_pathway?hsa04726	PTGS2 PTGS1 HTR2A CYP2C9 PRKCA BRAF ALOX15 CYP2C19 PRKCB HTR3A ALOX5
0.000179	13	143	3.487302	Signaling pathways regulating pluripotency of stem cells	http://www.genome.jp/kegg-bin/show_pathway?hsa04550	PIK3CB FGFR1 GSK3B JAK2 AKT2 JAK3 MAPK14 PIK3CA IL6ST IGF1R AKT1 JAK1 STAT3
0.000199	8	56	5.365079	Regulation of lipolysis in adipocytes	http://www.genome.jp/kegg-bin/show_pathway?hsa04923	PIK3CB PTGS2 PTGS1 AKT2 PIK3CA AKT1 ADORA1 INSR
0.0002	17	139	2.850198	Measles	http://www.genome.jp/kegg-bin/show_pathway?hsa05162	BAD MAPK9 PIK3CB GSK3B CSNK2A1 AKT2 TYK2 JAK3 MAPK8 MAPK10 PIK3CA CDK2 CDK4 TLR4 AKT1 JAK1 STAT3
0.000206	20	232	2.572298	Coronavirus disease	http://www.genome.jp/kegg-bin/show_pathway?hsa05171	MAPK9 PIK3CB TNFRSF1A TYK2 MAPK8 MAPK10 MAPK14 PIK3CA IL6ST TLR4 CASP1 AGTR1 EGFR MMP3 PRKCA JAK1 SYK PRKCB STAT3 MMP1
0.000215	9	62	4.694444	Longevity regulating pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04213	PIK3CB AKT2 HDAC1 PIK3CA IGF1R AKT1 INSR HDAC2 MTOR
0.000239	16	112	2.916936	TNF signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04668	MAP2K3 MAPK9 PIK3CB TNFRSF1A PTGS2 MMP9 AKT2 MAPK8 MAP3K8 MAP2K6 MAPK10 MAPK14 PIK3CA AKT1 MMP3 MAP3K5
0.000292	12	126	3.520833	Cell cycle	http://www.genome.jp/kegg-bin/show_pathway?hsa04110	GSK3B ABL1 CDC25B HDAC1 CDK4 MDM2 PLK1 CDK1 ATR CHEK2 HDAC2 PRKDC
0.000343	7	37	5.714976	Aldosterone-regulated sodium reabsorption	http://www.genome.jp/kegg-bin/show_pathway?hsa04960	PIK3CB PIK3CA PDPK1 NR3C2 PRKCA PRKCB INSR
0.000387	12	134	3.414141	Vascular smooth muscle contraction	http://www.genome.jp/kegg-bin/show_pathway?hsa04270	PRKCH PRKCQ ADRA1A ADORA2A AGTR1 PRKCA KCNMA1 BRAF PTGIR PRKCD PRKCB ADORA2B
0.000401	8	61	4.845878	Arachidonic acid metabolism	http://www.genome.jp/kegg-bin/show_pathway?hsa00590	PTGS2 PTGS1 LTA4H CYP2C9 ALOX15 CYP2C19 CYP2B6 ALOX5
0.000505	8	91	4.694444	Morphine addiction	http://www.genome.jp/kegg-bin/show_pathway?hsa05032	OPRM1 PRKCA ADORA1 PRKCB PDE3A DRD1 PDE2A PDE7A
0.000539	14	148	2.953808	Gastric cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05226	PIK3CB GSK3B ABCB1 AKT2 MET TGFBF1 PIK3CA CDK2 ERBB2 AKT1 EGFR BRAF TGFBF2 MTOR
0.000665	12	142	3.219048	Spinocerebellar ataxia	http://www.genome.jp/kegg-bin/show_pathway?hsa05017	MAPK9 PIK3CB AKT2 MAPK8 MAPK10 PIK3CA AKT1 PRKCA PRKCB ERN1 MAP3K5 MTOR
0.000696	9	101	4.02381	Pancreatic secretion	http://www.genome.jp/kegg-bin/show_pathway?hsa04972	CFTR CD38 CA2 CHRM3 CPB1 PRKCA KCNMA1 CCKAR PRKCB

0.00076 5	8	41	4.418301	Bladder cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05219	MMP2 MMP9 MDM2 ERBB2 EGFR BRAF MMP1 SRC
0.00090 2	5	47	7.222222	Carbohydrate digestion and absorption	http://www.genome.jp/kegg-bin/show_pathway?hsa04973	PIK3CB AKT2 PIK3CA AKT1 PRKCB
0.00090 3	13	101	2.941098	Chagas disease	http://www.genome.jp/kegg-bin/show_pathway?hsa05142	NOS2 MAPK9 PIK3CB TNFRSF1A AKT2 TGFBR1 MAPK8 MAPK10 MAPK14 PIK3CA TLR4 AKT1 TGFBR2
0.00096 3	11	138	3.27866	Apelin signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04371	NOS2 SPHK2 HDAC4 NOS1 AKT2 TGFBR1 AKT1 AGTR1 NOS3 SPHK1 MTOR
0.00096 3	9	88	3.840909	Gap junction	http://www.genome.jp/kegg-bin/show_pathway?hsa04540	HTR2A PDGFRB PDGFRA EGFR PRKCA PRKCB GRM5 DRD1 SRC
0.00109 5	15	192	2.632399	Transcriptional misregulation in cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05202	MMP9 FLT1 MET HDAC1 FLT3 PPARG PER2 MDM2 IGF1R MMP3 TGFBR2 PTK2 CSF1R HDAC2 ELANE
0.00116 6	7	74	4.694444	Metabolism of xenobiotics by cytochrome P450	http://www.genome.jp/kegg-bin/show_pathway?hsa00980	CYP3A5 HSD11B1 CYP2C9 CYP1A1 CYP1A2 CYP3A4 CYP2B6
0.00119 1	15	157	2.608025	Hepatitis C	http://www.genome.jp/kegg-bin/show_pathway?hsa05160	BAD PIK3CB TNFRSF1A GSK3B AKT2 TYK2 PIK3CA CDK2 CDK4 AKT1 EGFR BRAF JAK1 STAT3 PPARG
0.00144 3	7	75	4.532567	PPAR signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa03320	SCD CPT1A PPARG PDPK1 ILK PPARG MMP1
0.00171 8	18	222	2.283784	Human T-cell leukemia virus 1 infection	http://www.genome.jp/kegg-bin/show_pathway?hsa05166	MAPK9 PIK3CB TNFRSF1A TSPO AKT2 JAK3 TGFBR1 MAPK8 MAPK10 PIK3CA CDK2 CDK4 AKT1 JAK1 TGFBR2 ATR LCK CHEK2
0.00174	6	68	5.121212	Retinol metabolism	http://www.genome.jp/kegg-bin/show_pathway?hsa00830	CYP3A5 CYP2C9 CYP1A1 CYP1A2 CYP3A4 CYP2B6
0.00185 7	13	103	2.712346	Toll-like receptor signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04620	MAP2K3 MAPK9 PIK3CB AKT2 MAPK8 MAP3K8 MAP2K6 MAPK10 MAPK14 PIK3CA TLR4 AKT1 CTSK
0.00206 1	9	68	3.44898	Renal cell carcinoma	http://www.genome.jp/kegg-bin/show_pathway?hsa05211	BAD PIK3CB AKT2 MET PIK3CA EGLN1 AKT1 PAK1 BRAF
0.00218	17	249	2.296563	Salmonella infection	http://www.genome.jp/kegg-bin/show_pathway?hsa05132	MAP2K3 MAPK9 PIK3CB TNFRSF1A HSP90AA1 HSP90AB1 RIPK2 AKT2 MAPK8 MAP2K6 MAPK10 MAPK14 PIK3CA TLR4 CASP1 AKT1 PAK1
0.00239 5	5	29	5.868056	Linoleic acid metabolism	http://www.genome.jp/kegg-bin/show_pathway?hsa00591	CYP2C9 CYP1A2 CYP3A4 ALOX15 CYP2C19
0.00269	9	73	3.313725	Platinum drug resistance	http://www.genome.jp/kegg-bin/show_pathway?hsa01524	BAD PIK3CB AKT2 PIK3CA MDM2 PDPK1 ERBB2 AKT1 MAP3K5
0.00269	9	129	3.313725	Oocyte meiosis	http://www.genome.jp/kegg-bin/show_pathway?hsa04114	PGR AURKA MAPK14 CDK2 IGF1R PLK1 AR CDK1 RPS6KA3
0.00276 4	12	93	2.714859	IL-17 signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04657	MAPK9 PTGS2 HSP90AA1 GSK3B HSP90AB1 MMP9 MAPK8 MAPK10 MAPK14 MMP13 MMP3 MMP1
0.00402 8	8	107	3.414141	Glucagon signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04922	PKM AKT2 GSK3B CPT1A LDHB AKT1 PPARG GCGR
0.00512 2	6	69	4.17284	Drug metabolism	http://www.genome.jp/kegg-bin/show_pathway?hsa00982	CYP3A5 CYP2C9 CYP1A2 CYP3A4 CYP2C19 CYP2B6
0.00745 8	6	86	3.885057	Insulin secretion	http://www.genome.jp/kegg-bin/show_pathway?hsa04911	GSK3B CHRM3 PRKCA KCNA1 CCKAR PRKCB
0.00770 3	15	162	2.150127	JAK-STAT signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04630	PIK3CB JAK2 AKT2 TYK2 JAK3 PDGFRB PIK3CA IL6ST PDGFRA PIM1 AKT1 EGFR JAK1 STAT3 MTOR
0.00803 8	7	64	3.37037	GnRH secretion	http://www.genome.jp/kegg-bin/show_pathway?hsa04929	PIK3CB AKT2 PIK3CA ESR2 AKT1 PRKCA PRKCB
0.00834 3	5	51	4.470899	Ovarian steroidogenesis	http://www.genome.jp/kegg-bin/show_pathway?hsa04913	PTGS2 IGF1R CYP1A1 INSR ALOX5
0.00904 8	9	81	2.770492	B cell receptor signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04662	BTK PIK3CB GSK3B AKT2 PIK3CA AKT1 SYK PRKCB LYN
0.00994 6	6	61	3.634409	Steroid hormone biosynthesis	http://www.genome.jp/kegg-bin/show_pathway?hsa00140	STS CYP3A5 HSD11B1 CYP1A1 CYP1A2 CYP3A4
0.00994 6	9	169	2.725806	Protein processing in endoplasmic reticulum	http://www.genome.jp/kegg-bin/show_pathway?hsa04141	CAPN1 MAPK9 HSP90AA1 HSP90AB1 MAPK8 MAPK10 CAPN2 ERN1 MAP3K5
0.00994 6	6	69	3.634409	Renin secretion	http://www.genome.jp/kegg-bin/show_pathway?hsa04924	REN AGTR1 KCNA1 ADORA1 PTGER4 PDE3A
0.01151 1	11	104	2.374202	NF-kappa B signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04064	BTK PRKCB TNFRSF1A PTGS2 CSNK2A1 TLR4 PARP1 SYK PRKCB LCK LYN
0.01153 7	6	60	3.520833	Long-term depression	http://www.genome.jp/kegg-bin/show_pathway?hsa04730	NOS1 IGF1R PRKCA BRAF PRKCB LYN
0.01191 1	5	85	4.082126	Taste transduction	http://www.genome.jp/kegg-bin/show_pathway?hsa04742	P2RX3 CHRM3 HTR3A SCN9A P2RY1

0.01247 5	14	180	2.08642	NOD-like receptor signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04621	CASR MAPK9 HSP90AA1 P2RX7 HSP90AB1 RIPK2 TYK2 MAPK8 MAPK10 MAPK14 TLR4 CASP1 JAK1 PRKCD
0.01413 7	9	169	2.560606	Tight junction	http://www.genome.jp/kegg-bin/show_pathway?hsa04530	CFTR MAPK9 PRKCZ MAPK8 MAPK10 CDK4 ERBB2 SRC MAP3K5
0.01413 7	9	114	2.560606	Leukocyte transendothelial migration	http://www.genome.jp/kegg-bin/show_pathway?hsa04670	PIK3CB MMP2 MMP9 MAPK14 ITK PIK3CA PRKCA PRKCB PTK2
0.01413 7	9	232	2.560606	Thermogenesis	http://www.genome.jp/kegg-bin/show_pathway?hsa04714	MAP2K3 FGFR1 CPT1A MAPK14 CNR1 PPARG RPS6KA3 MAP3K5 MTOR
0.01707 5	10	92	2.347222	Th1 and Th2 cell differentiation	http://www.genome.jp/kegg-bin/show_pathway?hsa04658	MAPK9 PRKCQ JAK2 TYK2 JAK3 MAPK8 MAPK10 MAPK14 JAK1 LCK
0.01708 7	6	97	3.219048	Circadian entrainment	http://www.genome.jp/kegg-bin/show_pathway?hsa04713	NOS1 PER2 MTNR1B PRKCA PRKCB MTNR1A
0.01708 7	6	92	3.219048	Salivary secretion	http://www.genome.jp/kegg-bin/show_pathway?hsa04970	NOS1 ADRA1A CHRM3 PRKCA KCNMA1 PRKCB
0.01769 9	3	22	6.259259	Arginine biosynthesis	http://www.genome.jp/kegg-bin/show_pathway?hsa00220	NOS2 NOS1 NOS3
0.02181 8	9	92	2.380282	Small cell lung cancer	http://www.genome.jp/kegg-bin/show_pathway?hsa05222	NOS2 PIK3CB PTGS2 AKT2 PIK3CA CDK2 CDK4 AKT1 PTK2
0.02315 2	13	171	1.984643	Influenza A	http://www.genome.jp/kegg-bin/show_pathway?hsa05164	PIK3CB TNFRSF1A JAK2 AKT2 TYK2 PIK3CA CDK4 TLR4 CASP1 AKT1 PRKCA JAK1 PRKCB
0.02337 9	12	197	2.048485	Pathogenic Escherichia coli infection	http://www.genome.jp/kegg-bin/show_pathway?hsa05130	FYN MAPK9 TNFRSF1A ABL1 MAPK8 MAPK10 MAPK14 TLR4 CASP1 PAK1 F2R SRC
0.02757 1	13	217	1.93739	Regulation of actin cytoskeleton	http://www.genome.jp/kegg-bin/show_pathway?hsa04810	PIK3CB FGFR1 PDGFRB PIK3CA CHRM3 PDGFRA EGFR PAK1 BRAF PTK2 CHRM2 F2R SRC
0.02962 3	5	76	3.237548	Gastric acid secretion	http://www.genome.jp/kegg-bin/show_pathway?hsa04971	CFTR CA2 CHRM3 PRKCA PRKCB
0.03865 9	6	77	2.68254	Bacterial invasion of epithelial cells	http://www.genome.jp/kegg-bin/show_pathway?hsa05100	PIK3CB MET PIK3CA ILK PTK2 SRC
0.03899 2	8	166	2.276094	Wnt signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04310	MAPK9 PSEN1 GSK3B CSNK2A1 MAPK8 MAPK10 PRKCA PRKCB
0.03981 9	10	252	2.041063	Endocytosis	http://www.genome.jp/kegg-bin/show_pathway?hsa04144	PRKCZ TGFBR1 PDGFRA MDM2 IGF1R EGFR CXCR1 TGFBR2 CXCR2 SRC
0.05454 6	5	69	2.761438	Amphetamine addiction	http://www.genome.jp/kegg-bin/show_pathway?hsa05031	HDAC1 PRKCA PRKCB DRD1 HDAC2
0.06036 4	5	89	2.68254	Bile secretion	http://www.genome.jp/kegg-bin/show_pathway?hsa04976	CFTR ABCB1 CA2 ABCG2 CYP3A4
0.06036 4	8	187	2.08642	Alcoholism	http://www.genome.jp/kegg-bin/show_pathway?hsa05034	HDAC9 HDAC10 HDAC1 ADORA2A BRAF ADORA2B DRD1 HDAC2
0.06055 3	2	17	6.259259	Nitrogen metabolism	http://www.genome.jp/kegg-bin/show_pathway?hsa00910	CA2 CA1
0.06055 3	12	363	1.774278	Amyotrophic lateral sclerosis	http://www.genome.jp/kegg-bin/show_pathway?hsa05014	BAD NOS2 MAP2K3 TNFRSF1A NOS1 HDAC6 MAP2K6 MAPK14 CASP1 ERN1 MAP3K5 MTOR
0.06572 7	5	67	2.608025	Long-term potentiation	http://www.genome.jp/kegg-bin/show_pathway?hsa04720	PRKCA BRAF PRKCB GRM5 RPS6KA3
0.06823 5	3	23	3.755556	Renin-angiotensin system	http://www.genome.jp/kegg-bin/show_pathway?hsa04614	PRCP REN AGTR1
0.07242 1	7	106	2.120072	Parathyroid hormone synthesis, secretion and action	http://www.genome.jp/kegg-bin/show_pathway?hsa04928	CASR FGFR1 MMP13 EGFR PRKCA BRAF PRKCB
0.07373 8	10	306	1.823085	Huntington disease	http://www.genome.jp/kegg-bin/show_pathway?hsa05016	MAPK9 MAPK8 MAPK10 HDAC1 PPARG GRM5 ERN1 HDAC2 MAP3K5 MTOR
0.07793	5	72	2.47076	Mitophagy	http://www.genome.jp/kegg-bin/show_pathway?hsa04137	MAPK9 CSNK2A1 MAPK8 MAPK10 SRC
0.08367 9	1	5	18.77778	Caffeine metabolism	http://www.genome.jp/kegg-bin/show_pathway?hsa00232	CYP1A2
0.08367 9	11	272	1.721296	Prion disease	http://www.genome.jp/kegg-bin/show_pathway?hsa05020	BAD FYN MAPK9 PIK3CB GSK3B CSNK2A1 MAPK8 MAPK10 MAPK14 PIK3CA PRKCD
0.09265 5	7	76	1.991582	Pertussis	http://www.genome.jp/kegg-bin/show_pathway?hsa05133	NOS2 MAPK9 MAPK8 MAPK10 MAPK14 TLR4 CASP1
0.09265 5	7	102	1.991582	Amoebiasis	http://www.genome.jp/kegg-bin/show_pathway?hsa05146	NOS2 PIK3CB PIK3CA TLR4 PRKCA PRKCB PTK2
0.10492 8	9	130	1.760417	Natural killer cell mediated cytotoxicity	http://www.genome.jp/kegg-bin/show_pathway?hsa04650	FYN PIK3CB PIK3CA PAK1 PRKCA BRAF SYK PRKCB LCK
0.11748 1	3	53	2.964912	Endocrine and other factor-regulated calcium reabsorption	http://www.genome.jp/kegg-bin/show_pathway?hsa04961	ESR1 PRKCA PRKCB

0.11748 1	7	76	1.877778	Leishmaniasis	http://www.genome.jp/kegg-bin/show_pathway?hsa05140	NOS2 PTGS2 JAK2 MAPK14 TLR4 JAK1 PRKCB
0.11954 6	2	33	4.17284	Fructose and mannose metabolism	http://www.genome.jp/kegg-bin/show_pathway?hsa00051	AKR1B1 PFKFB3
0.11954 6	9	266	1.707071	Parkinson disease	http://www.genome.jp/kegg-bin/show_pathway?hsa05012	MAPK9 MAPK8 MAPK10 ADORA2A ERN1 DRD1 LRRK2 MAP3K5 MAPT
0.11965 9	4	97	2.422939	Phosphatidylinositol signaling system	http://www.genome.jp/kegg-bin/show_pathway?hsa04070	PIK3CB PIK3CA PRKCA PRKCB
0.12831 2	6	150	1.942529	Adrenergic signaling in cardiomyocytes	http://www.genome.jp/kegg-bin/show_pathway?hsa04261	AKT2 MAPK14 ADRA1A AKT1 AGTR1 PRKCA
0.14478 2	3	67	2.68254	Glycolysis / Gluconeogenesis	http://www.genome.jp/kegg-bin/show_pathway?hsa00010	PKM GCK LDHB
0.15298 8	6	154	1.846995	Oxytocin signaling pathway	http://www.genome.jp/kegg-bin/show_pathway?hsa04921	PTGS2 EGFR PRKCA NOS3 PRKCB SRC
0.16382 8	4	126	2.146032	Purine metabolism	http://www.genome.jp/kegg-bin/show_pathway?hsa00230	PDE5A PDE3A PDE2A PDE7A
0.16382 8	2	49	3.414141	Sphingolipid metabolism	http://www.genome.jp/kegg-bin/show_pathway?hsa00600	SPHK2 SPHK1
0.16382 8	12	495	1.472767	Herpes simplex virus 1 infection	http://www.genome.jp/kegg-bin/show_pathway?hsa05168	BAD PIK3CB TNFRSF1A JAK2 AKT2 TYK2 PIK3CA AKT1 JAK1 SYK SRC MTOR
0.17372	3	89	2.449275	GABAergic synapse	http://www.genome.jp/kegg-bin/show_pathway?hsa04727	PRKCA PRKCB SRC
0.18787 6	2	47	3.12963	Pyruvate metabolism	http://www.genome.jp/kegg-bin/show_pathway?hsa00620	PKM LDHB
0.18906 5	3	51	2.347222	Arginine and proline metabolism	http://www.genome.jp/kegg-bin/show_pathway?hsa00330	NOS2 NOS1 NOS3

Table S8. Molecular docking results of cannabinoids based on their docking scores

Cannabinoids	PIK3CA (PDB ID: 4L23) (Kcal/m ol)	Akt1 (AlphaF old- predicte d protein) (Kcal/m ol)	MAPK 9 (Alpha Fold- predict ed protein) (Kcal/ mol)	PRKC D (Alpha Fold- predict ed protein) (Kcal/ mol)	BRAF (PDB ID: 6P3D) (Kcal/m ol)	IGF1R (PDB ID: 5FXS) (Kcal/ mol)	NOS3 (PDB ID: 6NH5) (Kcal/ mol)
Δ^9 - tetrahydrocanna binol	-6.600	-2.975	-5.769	-5.123	-4.126	-8.569	-7.966
Cannabinol	-6.797	-4.304	-5.742	-4.754	-4.259	-7.663	-8.888
Cannabidiol	-5.393	-4.090	-4.761	-3.018	-4.662	-5.455	-6.703
Δ^8 - tetrahydrocanna binol	-5.616	-3.034	-6.751	-3.274	-5.464	-4.788	-6.380
Cannabigerol	-8.307	-0.183	-4.407	-4.636	-9.484	-8.190	-8.080
Cannabichrome ne	-7.314	-4.599	-7.663	-4.399	-7.522	-7.230	-8.152
Δ^9 - tetrahydrocanna bivarin	-7.334	-3.396	-5.550	-5.121	-4.205	-8.402	-7.744
Cannabivarin	-4.819	-4.353	-5.486	-3.939	-4.455	-8.029	-8.015
Cannabidivarin	-5.412	-3.540	-4.802	-2.344	-3.706	-5.832	-5.544

Cannadinodiol	-5.927	-4.175	-7.664	-3.310	-8.076	-7.700	-8.068
Cannabielsoin	-4.945	-4.466	-6.453	-2.998	-4.916	-7.160	-7.534
Cannabicyclol	-5.741	-4.011	-6.167	-3.156	-5.040	-6.793	-7.546
Cannabitriol	-6.423	-6.035	-4.605	-7.308	-4.899	-7.639	-7.943

Table S9. Molecular docking results of cannabinoids based on their interactions

Protein name	Compound Name	H-bond forming residues	Hydrophobic interaction forming residues	Polar interaction forming residues
PIK3CA (PDB ID: 7JIU)	Cannabigerol	Val 851	Met 772, Pro 778, Trp 780, Ile 800, Tyr 836, Ile 848, Val 850, Val 851, Met 922, Phe 930, Ile 932	Ser 774, Asn 853, Ser 854, Hie 855, Phr 856, Gln 859
	Δ^9 -Tetrahydrocannabivarin	-	Leu 807, Leu 814, Val Tyr 836, Cys 838, Ile 848, 850, Val 851, Met 922, Phe 930, Ile 932, Phe 934	Ser 854, Phr 856, Gln 859
	Cannabichromene	Tyr 836	Met 772, Pro 778, Trp 780, Ile 800, Tyr 836, Ile 848, Val 851, val 850, Met 922, Phe 930, Ile 932	Ser 774, Ser 854, Thr 856, Ser 919
Akt1	Cannabitriol	Lys 276, Asn 279, Asp 292	Val 164, Ala177, Leu 156, Met 227, Ala 230, Tyr 229, Met 281, Phe 438, Phe 442	Thr 211, Asn 279

	Cannabichromene	Asn 279	Leu 156, Phe 161, Val 164, Ala 177, Leu 181, Met 227, Tyr 229, Ala 230, Met 281, Phe 438	Thr 160, Thr 211, Asn 279, Phr 291
	Cannabielsoin	Lys 158, Glu 278	Leu 156, Val 164, Ala 177, Met 227, Tyr 229, Ala 230, Met 281, Phe 442, Phe 438	Asn 231, Asn 279, Thr 291
MAPK9	Cannabinodiol	Ile 32, Ser 155	Ile 32, Ile 39, Val 40, Ala 53, Ile 86, Met 109, Leu 110, Met 111, Ala 113, Val 158, Leu 168	Ser 34, Asn 114, Gln 117, Ser 155, Asn 156
	Cannabichromene	Glu 109, Met 111	Ile 32, Val 40, Ala 53, Ile 86, Leu 77, Leu 106, Met 108, Leu 110, Met 111, Ala 113, Val 158, Leu 168, Phe 170	Ser 34, Asn 114, Ser 155
	Δ^8 -Tetrahydrocannabinol	Lys 55	Ile 32, Ala 36, Ile 39, Val 40, Ala 53, Ile 86, Met 108, Leu 110, Met 111, Val 158, Leu 168	Ser 34, Gln 37, Asn 114, Ser 155, Asn 156
PRKCD	Cannabitriol	Val 174, Leu 279, Gln 284	Val 174, Cys 175, Cys 264, Met 266, Leu 279, Cys 280, Ile 282, Leu 286	Ser 173, Hie 231, Asn 283, Gln 284
	Δ^9 -tetrahydrocannabinol	Val 174, Gln 284	Val 174, Cys 175, Cys 264, Met 266, Leu 279,	Ser 173, Hie 231, Asn 283, Gln 284

			Cys 280, Ile 282, Leu 286,	
	Δ^9 -Tetrahydrocannabinol	Val 174, Gln 284	Val 174, Cys 175, Cys 264, Met 266, Leu 279, Cys 280, ile 282, Leu 286	Ser 173, Hie 231, Asn 283, Gln 284
BRAF	Cannabigerol	Cys 532	Ile 463, Val 471, Ala 481, Val 482, Leu 514, Trp 531, Cys 532, Phe 583, Phe 595, Leu 597, Ala 598	Thr 529, Gln 530, Ser 535, Ser 536, His 539, Asn 580, Thr 599
	Cannabinodiol	Cys 532	Ile 463, Val 471, Ala 481, Val 482, Leu 514, Trp 531, Cys 532, Phe 583, Phe 595, Leu 597	Thr 529, Gln 530, Ser 536, Asn 580
	Cannabichromene	-	Ile 463, Val 471, Ala 481, Val 482, Leu 505, Ile 513, Leu 514, Ile 527, Val 528, Trp 531, Cys 532, Leu 567, Phe 583, Ile 592, Phe 595, Leu 597	Thr 508, Thr 529, Gln 530, Hie 574
IGF1R	Δ^9 -tetrahydrocannabinol	Met 1082	Leu 1005, Phe 1010, val 1013, Ala 1031, Met 1142, Met 1156, Ile 1160, Leu 1081, Met 1082	Gln 1007, Ser 1009, Thr 1083

	Δ^9 - Tetrahydrocannabi varin	Met 1082	Leu 1005, Phe 1010, Val 1013, Ala 1031, Val 1063, Met 1079, Leu 1081, Met 1082, Met 1142, Met 1156, Ile 1160	Thr 1083, Thr 1157
	Cannabigerol	Met 1082	Leu 1005, Phe 1010, Val 1013, Ala 1031, Met 1079, Leu 1081, Met 1082, Met 1142, Met 1156, Ile 1160	Gln 1007, Thr 1083
NOS3	Cannabinol	-	Al 174, Ala 177, Trp 178, Ala 181, Pro 182, Cys 184, Leu 193, Ala 227, Ile 228, Pro 334, Val 336, Met 339, Phe 353, Trp 356, Trp 447, Phe 473, Tyr 475	Ser 226, ser 254
	Cannabichromene	Ser 354	Ala 177, Trp 178, Ala 181, Cys 184, Leu 193, Ala 227, Pro 334, Val 336, , Met 339, Phe 353, Trp 356, Tyr 357, Met 358, Phe 473	Gln 189, Ser 226, Ser 354
	Cannabigerol	Cys 184, Pro 334	Ala 174, Trp 178, Ala 181, Cys 184, Leu 193, Ala 227, Ile 228, Pro	Ser 226, Ser 354

			334, Ala 335, Val 336, Met 339, Phe 353, Trp 447, Phe 473	
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Table S10. Results of Induced Fit docking

Protein	Cannabinoids	Glidescore) (Kcal/mol)	IFDScore
PIK3CA	Cannabigerol	-7.702	-2125.814
Akt1	Cannabitriol	-7.109	-1019.941
MAPK9	Cannabinodiol	-8.825	-865.667
PRKCD	Cannabitriol	-7.728	-1400.602
BRAF	Cannabigerol	-9.950	-595.181
IGF1R	Δ^9 - tetrahydrocannabinol	-10.544	-451.272
NOS3	Cannabinol	-10.054	-842.164

Table S11. Binding free energies results of cannabinoids the based on MM-GBSA calculations

Protein	Cannabinoids	MM-GBSA ΔG_{bind}
PIK3CA	Cannabigerol	-2.445
	Δ^9 -Tetrahydrocannabivarin	-9.269
	Cannabichromene	-37.318
Akt1	Cannabitriol	-33.851
	Cannabichromene	-24.115
	Cannabielsoin	-33.147
MAPK9	Cannabinodiol	-51.893
	Cannabichromene	-38.202
	Δ^8 -Tetrahydrocannabinol	-38.375

PRKCD	Cannabitriol	-44.818
	Δ^9 -tetrahydrocannabinol	-43.322
	Δ^9 -Tetrahydrocannabivarin	-43.582
BRAF	Cannabigerol	-49.429
	Cannabinodiol	-25.703
	Cannabichromene	-38.882
IGF1R	Δ^9 -tetrahydrocannabinol	-36.616
	Δ^9 -Tetrahydrocannabivarin	-42.273
	Cannabigerol	-35.050
NOS3	Cannabinol	-57.754
	Cannabichromene	-44.761
	Cannabigerol	-54.273

Table S12. Physico-chemical properties and ADME/T profile of cannabinoids

Phy toco mpo und	m ol _ M W	S A S A	F O S A	F I S A	P I S A	v o l u m e	d o n o r H B	g l o b	Q P o l r z	Q P l o g P C 16	Q P l o g P o c t	Q P l o g P o / w	C I Q P l o g S	Q P P C a c o	Q P l o g B B	Q P P M D C K	Q P l o g K p	Q P l o g K h s a	P e r c e n t H u m a n O r a l A b s o r p t i o n	P S A	J m	C Y P 1 A 2 i n h i b i t o r	C Y P 2 C 1 9 i n h i b i t o r	C Y P 2 C 9 i n h i b i t o r	C Y P 2 D 6 i n h i b i t o r	C Y P 3 A 4 i n h i b i t o r
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Can nabi diol	314.467	649.509	495.853	64.232	88.923	115.9843	2	0.822585	36.617	10.522	14.971	5.336	-5.269	243.6615	-0.491	1295.451	-1.718	1.059	100	39.005	0.005	No	Yes	Yes	Yes	Yes
Δ-Tetrahydrocannabinol	314.467	640.761	513.941	30.372	86.448	11.795	1	0.832681	36.756	9.778	13.516	5.645	-5.482	510.3682	-0.033	2880.636	-1.2295	1.208	100	25.657	0.006	No	Yes	Yes	Yes	No
Can nabi gerol	316.483	682.022	541.523	72.26	74.423	12.25024	2	0.804537	36.519	11.109	14.693	5.681	-5.211	204.5034	-0.844	1071.965	-1.533	1.07	100	41.961	0.006	Yes	Yes	No	Yes	No
Can nabi chro mone	314.467	672.24	515.24	46.799	115.5679	12.237	1	0.806874	37.933	10.774	13.856	6.019	-5.501	356.9289	-0.337	1957.156	-1.2205	1.279	100	28.131	0.003	No	No	Yes	Yes	Yes
Δ-Tetrahydrocannabinol	286.413	585.928	462.88	37.8092	85.242	10.863	1	0.842288	33.989	8.875	12.727	4.942	-4.897	433.866	0.027	2416.877	-1.628	1.008	100	26.006	0.008	No	Yes	Yes	Yes	No
Can nabi vari n	282.382	576.07	384.12	38.8115	140.715	10.059	1	0.839426	33.41	9.033	12.552	4.869	-5.073	420.7455	0.019	2378.851	-1.417	0.924	100	26.446	0.02	Yes	Yes	No	Yes	No
Can nabi diva rin	286.413	569.122	410.05	64.194	94.88	10.0722	2	0.866818	37.73	9.422	14.043	4.518	-4.689	243.8625	-0.307	1296.606	-1.888	0.787	100	39.048	0.04	No	Yes	Yes	No	Yes
Can nabi nodi ol	310.435	646.4	412.0	68.146	166.2	11.426	2	0.81776	36.026	10.931	14.796	5.288	-5.444	223.703	-0.598	1181.147	-1.422	0.967	100	41.108	0.015	Yes	Yes	No	Yes	No

