

The number of 4,245 cancer-related targets from TTD and OMIM databases

EGFR

FGFR1

PDF

PLPRO

JAK1

JAK2

ACHE

AKR1B1

5LOX

CA1

CA2

CA4

HER2

ERBB4

ESR

FGFR2

FLT3

HDAC1

INSR

LCK

MMP1

MMP2

MAOA

PDE5A

PDGFRA

RET

SRC

BRAF

MTOR

TRKA

ABL

ATK

KIT

KDR

ALK

AR

CYP19A1

CB2

CA6

CA14

PRSS1

F2

F7  
F10  
CDK4  
CDK6  
AKR1C3  
ESR2  
FSHR  
FYN  
CCKBR  
NR3C1  
GCP2  
GSK3A  
HSP90A  
IGF1R  
MMP7  
MC4R  
MAOB  
ABCB1  
TRKC  
OPRS1  
ODC1  
PIK3CA  
PIK3CD  
PIK3CG  
PLG  
PDGFRB  
PARP1  
COX1  
PRKCG  
MET  
ROS1  
RRM2  
AMD1  
SMO  
S1PR1  
CYP11B1  
S17AH  
STS  
TK1  
STYK  
PLAU  
VDR  
HTR2A

ACACB  
ADORA2A  
ADRB2  
AOX1  
ALPL  
APP  
BCL2  
ABCG2  
CD22  
CD19  
TRKB  
CXCR2  
CXCR4  
CB1  
CD38  
CTLA4  
DHFR  
TOP1  
TOP2B  
D2R  
D3R  
D4R  
EPOR  
FXR  
FASN  
ATP4A  
NMDAR2B  
GCSFR  
IDO1  
IFNG  
IL4R  
IL1B  
CD20  
NGFR  
MR  
CHRM1  
MOP  
ODF  
PGR  
PRKCA  
F2R  
NQO2  
RXRG

SERT  
STAT3  
ATPA1  
TACR1  
CD4  
TERT  
TSPO  
TNF  
TYR  
AXL  
KCNH2  
SCN5A  
XDH  
CD80  
ADORA2B  
ADRA1A  
AT3  
BDKRB2  
TXNRD1  
D5R  
EDNRA  
EDNRB  
EEF2K  
FGF2  
FOLR1  
GABBR  
FDPS  
CSF2RA  
GNRHR  
CSF3  
CSF2  
GHSR  
GUCY2C  
HB  
IMPDH1  
ICAM1  
IFNGR2  
IFNA2  
IFNB1  
IL12B  
IL2  
LEPR  
LDLR

LHCGR  
CD33  
CHRNA7  
NET  
NFKB  
IDH1  
CELA1  
PIGF  
PDL1  
PD1  
PTGER2  
COX2  
SSTR1  
SSTR2  
SSTR3  
SSTR5  
CD3E  
TSHR  
TLR7  
TGFB1  
TRPV1  
VEGFA  
VEGFB  
CACNA1G  
CACNA1H  
CACNA2D1  
SCN10A  
MEK1  
MEK2  
IMPDH2  
EIF4A  
BCRABL  
ADRA1D  
CTNNB1  
DPYD  
TOP2  
GPR119  
IL11RA  
GNRH1  
MRM2  
SRD5A  
SPTATPASE  
CD28

PRDX5  
TYMS  
CGM1  
UL30  
TNFRSF8  
MCL1  
RIR  
CS1  
ANO  
GCS  
SLC19A1  
ESRR  
TUBB1  
PLAUR  
MAP  
SLC46A1  
ROCK1  
SLC47A1  
HDNA  
HA  
SAM  
HDAC6  
CYP3A4  
CA9  
FGFR3  
GSK3B  
HDAC2  
MMP13  
MMP9  
AKT1  
ADAM17  
FLT1  
VEGF  
ACAT1  
ADORA3  
TEK  
AURKB  
AURKC  
CSNK2A1  
CTSK  
CHK1  
CCKAR  
CDK1

CDK2  
CDK9  
EPHB4  
ERK2  
HDAC4  
MMP12  
MAPK3  
SIRT1  
NOS2  
PLK1  
PREP  
NQO1  
AKT3  
RARA  
S6K1  
P38A  
TGFBR1  
MDM2  
FLT4  
SCN9A  
WEE1  
YES  
ANGPT1  
ANGPT2  
BIRC5  
BCLW  
BCLXL  
ATM  
CCR2  
CASP3  
CTSL  
CTSS  
CD40  
TP53  
CDK7  
DNMT1  
DNMT3B  
PRKDC  
DUSP1  
SERPINE1  
EZH2  
EPHB2  
ERBB3

FGFR4  
FN1  
FAK  
GCR  
HGF  
ITGAV  
ITGB1  
IL2RB  
IL18  
KIF11  
LSD  
MPIP2  
RON  
ADAM10  
MME  
P2RY2  
PIK3CB  
FAP  
PTGER4  
KLK3  
PRKCB  
PTP1B  
ROCK2  
PIN1  
RAD53  
PIM1  
SGK1  
SPHK1  
TLR3  
TLR4  
TRAILR1  
TRAILR2  
TGFB2  
JTK8  
XIAP  
ACVRL1  
APEX1  
LPA  
FAS  
BSG  
BRDT  
BRD2  
BRD3



BRD4  
S100A9  
CD66E  
CASP9  
BIRC2  
BIRC3  
CNTF  
CLUSTERIN  
MPS1  
UBE2T  
EFGR  
HSP90B1  
EPHA2  
EPHA3  
XPO1  
ERK1  
FTASE  
CCND1  
GAST  
GRPR  
GLIPR1  
GART  
NRAS  
HIF1A  
IL13RA2  
IL1A  
IL10  
IL21  
LTF  
LTB4R  
LTBR  
CSF1R  
MKNK2  
MKNK1  
MAPKAPK2  
MAGEA1  
STEAP1  
MYC  
NGF  
NRF2  
CD134  
SELP  
P2RX7

P2RY6  
PAK4  
PI4KA  
PDPK1  
HBEGF  
RAF  
PPP2CA  
FRP1  
SSTR4  
SPHK2  
OX40  
TGFB2  
CD40LG  
TNFSF10  
TLR2  
TLR9  
TRPV6  
TNFR1  
VWF  
WT1  
OGDH  
CD276  
BS  
CD27L  
SLC44A4  
CGB  
IGF2R  
CD55  
CTGF  
P105  
DUT  
ELF4EBP  
EGFR8  
EGFL7  
GS  
HSP70  
HSP90B  
EPAS1  
ITGA2  
ITGA5  
ITGB3  
IFNAR1  
IL15RA

IL23R  
MELK  
MSLN  
MUC1  
MYCBP  
ROR1  
NOTCH2  
NOTCH3  
NCL  
MDM4  
CDH3  
PRLR  
ACPP  
RNF43  
SEMA4D  
CD27  
TNC  
TXN  
F3  
TLR5  
TLR6  
TF  
DDX5  
MSMB  
MAGEC1  
GPA33  
CLDN18  
DLL4  
DKK3  
ENG  
CD44  
FACT  
FUT3  
GGTASE1  
GLS  
GPC3  
HSP27  
HIF2A  
CD37  
CD47  
LOXL2  
MAGEA3  
MAGEA4

MAGEC2  
L1CAM  
NKG2A  
RORG  
NPM1  
TPBG  
MUC16  
PDDX5  
PDGFA  
PTEFB  
PORCN  
RSPO3  
SLC5A5  
SLC39A6  
SPTBN1  
CD3G  
TFF1  
TUSC2  
EPCAM  
NEDD8  
GLA  
NYESO1  
DLL3  
CD248  
IGF1  
IGF2  
JNK  
LAG3  
KISS1  
MKRAS  
KLRK1  
OGFR  
PAKT  
PD2  
PROM1  
CRBN  
TMEM97  
SLITRK6  
CD8  
MTORC2  
ACT  
ARG  
DPOL

RNAP2  
FGFR3-TACC3  
GNEF  
HIAP  
MTORC1  
NAE  
PSCA  
SOAT  
GD2  
MIR34  
FRD  
HDNAMIN  
PG  
HDAC8  
CASP8  
CTSB  
CTSF  
HDAC10  
CTSV  
ENPP2  
PDHK1  
PAR2  
BCRABL T315I  
P450  
HSPB1  
KISS1R  
ABCB4  
MAN2A1  
HRAS  
ACKR3  
CYP46A1  
P2RY11  
P2RY4  
MSI2  
PLA  
FNTB  
MAP3K8  
JNK2  
MPIP1  
MPIP3  
NCOA3  
PRKCZ  
ACK1

BMPR2  
HPH2  
IKKA  
ILK  
PLK2  
PRKCI  
RHO  
ATAD2  
CCNA2  
CCNE1  
CARM1  
KRAS  
LGR5  
KDM5B  
PBK  
ATIC  
PRKD1  
RACK1  
RCVRN  
S100A4  
BRCA2  
GCLM  
IL13RA1  
MLTK  
COT  
S1PR3  
CTCFL  
DDEFL1  
SNCG  
CX50  
RHBDF2  
MPHOSPH1  
LAMC2  
SGO1  
BAGE  
MAGEA2  
NGEP  
PAGE5  
LSM1  
MIR191  
IL2R  
NAC  
PDE1

5HTR  
ADRA2  
CA  
DNMT  
HDAC  
IFNA  
MAP3K  
PDGFR  
CAC  
MEK  
MDR  
CHRM  
NMDAR  
OPR  
RAR  
PTK  
VEGFR  
HYAL  
MAO  
PARP  
ROCK  
SP  
V1R  
NAV  
ACH  
AMCG  
CIC  
EMBP  
HS  
NKA  
PAM  
PTGR  
TAG72  
KCNQ  
BET  
CASP  
NCAM  
PRKC  
S6K  
P38  
TNKS  
CTR  
CDK

TOP  
DR  
FGFR  
HLAA02/AFP  
IFNR  
MMP  
PLC  
PK  
RXR  
PP2A  
TLR  
NGCGM3  
AHR  
CSK  
CSNK2  
CC  
CRF  
FGF  
FKBP  
GALT  
ICH  
JAK  
STAT  
LYA  
NA  
PCC  
REC  
RNASE  
STK  
ST  
SBC  
TCR  
THR  
TUBP  
WNT  
CDE  
MGT  
PGP  
PMH  
POL  
ADCY  
TMET  
FAPP



PPTF  
CA12  
TNFSF13B  
IL12  
FGF23  
AURKA  
HAMP  
LTA  
TNFRSF12A  
PTK6  
APRIL  
TNFRSF18  
TNFRSF13C  
CD137  
PKM  
TSG101  
TWEAK  
TNFRSF17  
TNFRSF13B  
VHL  
TPT1  
ST14  
LATS2  
ERAP1  
FASLG  
KLK8  
NM23H1  
RANK  
TNFAIP3  
CD178  
CD258  
CD270  
IL32  
LTB  
TNFSF15  
RHCG  
PLXDC1  
TRIM59  
TNFR2  
TP53BP1  
PINX1  
FAT1  
PRAME

TNOX  
TNFA  
TUSC  
KH1  
TAP  
IFNAR2  
PTGFR  
LTB4R2  
ROR2  
IRAK4  
EFGR8  
HSP90B  
ENPP3  
PFKFB3  
PTK7  
TACC3  
KDM4C  
LRP  
LR  
DDR1  
LDHA  
UBE3A  
TPX2  
NEK1  
NEDD9  
LDH  
RBPJ  
SCCA1  
TORC1  
HCAP  
CD24  
MG7  
HLAA2  
AFP  
S1PR  
SSTR  
HDGC  
TOC  
BROVCA1  
CRCS1  
BROVCA2  
BROVCA3  
SLC45A3

PRNCR1  
LUCAT1  
CRC  
HLRCC  
NMTC1  
HMPS1  
MMRCS1  
HNPCC2  
CRCS3  
CRCS10  
ODCRCS  
HNPCC6  
FCTCS  
CRCS12  
HPCX1  
NMTC3  
HPC8  
HPC7  
CRCS2  
CRCS5  
CRCS6  
CRCS7  
CRCS8  
CRCS9  
CRCS11  
CT45A2  
CT45A3  
CT45A4  
CT45A5  
CT45A6  
CTAG1B  
CT45A1  
BRINP1  
CTAG3  
BLCAP  
SDCCAG8  
BLACAT1  
SCHLAP1  
PCAT2  
CASC8  
CASC21  
CASC19  
CASC11

CCAT1  
ALDH2  
CHEK2  
NMTC2  
PAIS  
HPC1  
HPC9  
HPC12  
HPC13  
SQT3  
HNPCC8  
BROVCA4  
PNCA4  
HNPCC4  
HNPCC5  
HNPCC7  
HPC2  
NMTC4  
NMTC5  
SSPCS  
CAPOK  
PNCA5  
MMRCS2  
MMRCS3  
MMRCS4  
HPCX2  
OVCA51  
LNCR1  
HPC5  
HPC10  
HPC11  
HPC14  
HPC15  
LNCR3  
LNCR4  
LNCR5  
BRCA1  
DCC  
STEAP2  
ANO7  
TFDP3  
CT47A1  
CT47A2

CT47A3  
CT47A4  
CT47A5  
CT47A6  
CT47A7  
CT47A8  
CT47A9  
CT47A10  
CT47B1  
EEF1A1  
MCC  
MYCL  
FGF4  
LCO  
SEMG1  
PASD1  
FUNDG2  
CD82  
PTPRJ  
DAB2  
TUSC3  
GPR68  
PTEN  
ARMCX1  
ARMCX2  
ARMCX3  
CTAG2  
LDOC1  
CT47A11  
CTAG1A  
STARD8  
DPH1  
SLC43A1  
HIC1  
ITGA9  
DLEC1  
SYT7  
DLC1  
INTS6  
AKAP13  
BCAR3  
01-Dec  
PCA3

NCOA6  
PBOV1  
CADM1  
HID1  
MBOAT7  
BRMS1  
CASC3  
DCD  
CDK2AP1  
VWA5A  
BCAR1  
BCAS1  
RNF139  
ORAOV1  
NDC80  
RHOBTB2  
CCAR2  
TCIM  
HIC2  
IGF2BP3  
NEMF  
BLID  
AKIP1  
AGR3  
FAM84B  
ARID4B  
PCAT4  
STARD13  
TBC1D3B  
PDZD2  
ANKRD30A  
AGPAT9  
CENPW  
HEPN1  
TMPRSS11A  
ECRG4  
USHBP1  
VOPP1  
GAEC1  
MSMP  
HULC  
MED19  
MACC1

CASC2  
GLDN  
ALKBH3  
CHD1L  
LRRC26  
BCAR4  
KCMF1  
COLCA1  
COLCA2  
PCAT1  
FALEC  
GACAT2  
GACAT3  
SLC38A9  
NBAT1  
C4ORF46  
PCAT29  
FAM168A  
ANKRD30B  
ASAP3  
CASC15  
MYCT1  
TMEM8B  
CASC1  
ERGIC3  
CWC27  
SPINK7  
UCA1  
PCAT18  
LINC01488  
COX6B2  
PCAT19  
VWA2  
ENTR1  
KIAA1211  
LINC00958  
BRMS1L  
CCDC33  
LETMD1  
MLH1  
CDH1  
MSH2  
APC

CDKN2A  
LFS  
LFL  
AT  
ATA  
KRAS1P  
PMS2  
MSH6  
PALB2  
ESR1  
TGCT  
ERBB2  
FAP1  
RCC  
NRC1  
RAD51C  
MLH3  
ELAC2  
CMM1  
GLM1  
GLM  
CWS1  
LDD  
SMAD4  
FH  
FH1  
STK11  
MSR1  
RAD51  
RB1  
PJS  
CD274  
MRTES  
PPARG  
MUTYH  
NFKB1  
FHIT  
FRA3B  
MTORC  
HOXB13  
RAD51D  
KGFR  
BUB1



SPOP  
FANCS  
FANCA  
RASSF1  
FBXW7  
FOXA1  
PARK2  
NBN  
BAP1  
PKM1  
CDKN1B  
HABP2  
PTGS2  
AXIN2  
DAB2IP  
NBLST1  
RUNX1  
SOX4  
SEC23B  
VHLS  
BWS  
BWCR  
GSTM1  
KMT2A  
ERG  
POLD1  
RNASEL  
BARD1  
SFRP1  
BRIP1  
YAP1  
FAP3  
WWOX  
FRA16D  
KLF6  
TNFSF11  
SRD5A2  
ARL11  
CLL  
XPA  
BLM  
CWS7  
PPM1D

LCN2  
RUNX3  
CDH13  
SMAD2  
TCF7L2  
SDHD  
XBP1  
MIR21  
JPS  
ADH1B  
NAT1  
RBM5  
PI5  
MXI1  
DICER1  
POT1  
TMPRSS2  
FLCN  
MIR34A  
MEN2A  
WRN  
PHB  
NOTCH1  
BAX  
SHH  
TNFRSF11A  
CLDN1  
MIRLET7A1  
EP300  
XPC  
RABL3  
CYP2A6  
CHL  
CML  
ES  
PNE  
TPDS  
CYP1A1  
PLA2G2A  
EWSR1  
PTHLH  
POLE  
LZTS1

SLC5A8  
TOX3  
MIR126  
MIR126\*  
CHH  
ETV1  
BCR  
MC1R  
SEMA3B  
ING1  
MTA1  
LMO4  
CDK8  
TP63  
FANCM  
MIR16-1  
GALNT12  
BHD  
MESOM  
PHGDH  
MTAP  
TUBB  
ID1  
GPC1  
HMGA2  
MSH3  
CAV1  
ATR  
HYAL2  
SNAI1  
MUS81  
NRP1  
BUB1B  
ARID1A  
PALLD  
CYP4Z1  
HNSCC  
FANCN  
H19  
CDKN1A  
CHRNA5  
HSP90AA1  
LGALS3

GALIG  
XRCC2  
BAG4  
MED1  
RECQL3  
RECQL2  
RB1CC1  
KMT2D  
SMARCA4  
STARD3  
SNORD50A  
NF1  
PGL1  
AML  
IBD1  
XPF  
XPF/CS  
HFE1  
CHRNA3  
GHRH  
PTN  
BMI1  
CEBPB  
ABL1  
STAG2  
OPCML  
SMARCB1  
MIR221  
MIR222  
TARBP2  
DIRAS3  
ZBTB7A  
PER1  
DNMT3A  
CLN3  
NF2  
POSTN  
NAT2  
TRIM62  
RCCP1  
FERLK  
RTPS1  
SPS

PERM  
ST3  
ALL  
CYP4Z2P  
ZFHX3  
FGF8  
NFE2L2  
EIF4G1  
GPX4  
INHA  
IDH2  
NME1  
RAF1  
SDHB  
APOBEC1  
PDCD1  
FEN1  
ETV6  
XRCC3  
TERF1  
SFN  
CSE1L  
CASP10  
CASP10B  
BEX2  
MBD4  
TNFRSF10B  
RAD54L  
CTCF  
CHFR  
NOL3  
ARC  
BBC3  
GNMT  
PKHD1  
TERC  
ROBO1  
DUTT1  
SLC22A18  
FOXO3A  
LASP1  
PPP2R1B  
MTHFR

APOBEC3B  
MIR27B  
OR51E1  
DEPDC1  
MIR200A  
ATG2B  
HMGCR  
LDLCQ3  
BCNS  
EPPK  
MDB  
PCTT  
MVA1  
FANCD1  
GLM9  
PML  
SLPI  
CTNNA1  
NR4A3  
GRN  
IL6  
LRE1  
PTPN11  
ANXA7  
ZEB1  
MTCYB  
MTCO1  
SYK  
STAT1  
CXCL12  
ACVR1B  
HIP1  
VSIG1  
BEX1  
RECQL4  
PRMT5  
IL24  
RAD54B  
BECN1  
MERTK  
ABCC5  
PCGEM1  
KLK9

TMEFF2  
EIF5A2  
NKX3-1  
CHD1  
BLMH  
MAD1L1  
SMAD7  
SMAD3  
SMARCA3  
MPO  
NPRL2  
S100A14  
SMYD3  
FBXO31  
CYP17A1  
CIP2A  
OR51E2  
RPRM  
ZKSCAN3  
TRIM68  
VTRNA2-1  
MIR31HG  
ARFGEF3  
RNF208  
SCS  
ACNINV1  
UL  
MTC  
MEN2B  
RTS2  
TDH3  
CF  
EV1  
PARK8  
FAP2  
LFS2  
BCC3  
BCL6  
CEBPA  
CBFB  
CYP2D6  
TRIM24  
RBM6

ERCC2  
CD34  
IRF1  
LOX  
IL12A  
ETS1  
PTPRF  
ARID4A  
POLR2A  
MYB  
THRA  
THRA2  
THRB  
TNFRSF1A  
TMSB15B  
EMX2  
LGALS3BP  
DAPK1  
MAP3K1  
BIN1  
VEGFC  
CYP1B1  
STK26  
BCL10  
RGS6  
ERN1  
SOCS3  
ATG5  
PDGFRL  
TCF7L1  
TSC1  
FGF20  
PI14  
AGO2  
PTP4A3  
TMPRSS4  
FRK  
NEO1  
TP73  
SPRY1  
HIST1H4A  
SAFB  
ZNF217



PTPN14  
ABCC6  
SEZ6L  
CREB3L4  
CPA4  
DOCK4  
SASH1  
TNS4  
CABLES1  
NECTIN4  
ST6GALNAC5  
ST6GALNAC1  
MTDH  
MIR29B1  
HOTAIR  
MIR200C  
ATG9B  
STING1  
RFX6  
ING4  
PIM3  
NOP16  
MIR449A  
PRDM5  
ELOVL7  
RNF126  
C1QTNF9BAS1  
CAVIN3  
RALGAPA2  
AL  
JPHT  
IPF  
HRZ  
THCYT1  
IMF1  
M7MLS1  
RTPS2  
ACTFS  
BMFS6  
TGCT1  
B4GALNT2  
CEACAM5  
CDA

PIK3R1  
JUP  
TNFRSF25  
GDF2  
PATE  
MAGED4  
F9  
EGR1  
SELE  
GAL  
FUS  
GNAT1  
HPN  
MGMT  
MUC6  
PVT1  
CBL  
ODCP  
PTPN3  
PRKCE  
RPA1  
PCDH11Y  
TFPI2  
PTPN12  
PMS1  
PTPN13  
GABPA  
SLC16A1  
NUP98  
SEMA3F  
MAP2K4  
KAT6A  
FOXP3  
PDLIM4  
MBD2  
RPS20  
KLK4  
POLH  
PNMA2  
RBBP8  
SLC38A3  
GADD45G  
BIRC6

KEAP1  
EXO1  
SUZ12  
XAF1  
PYCARD  
PLCD1  
PTPRH  
EIF4A1  
DUSP6  
ADGRL2  
CYB561D2  
ZMYND10  
CACNA2D2  
EML4  
KRT9  
NFKBIZ  
SOX9  
EXT1  
IGF2BP1  
ABTB1  
LRP1B  
FRA10AC1  
FRA10A  
RAET1E  
MIR155  
BIC  
ERCC6  
PGBD3  
MDGA1  
EHBP1  
MIR125B2  
MIR29A  
MIR29C  
MEX3C  
ZC3H12D  
GSDMA  
SLC22A17  
NOL8  
SART3  
PRDM14  
PGAP3  
MIEN1  
RIOX1

KLLN  
MUC13  
MIRN101-1  
HJURP  
EMSY  
TET2  
MIR93  
NCEH1  
UQCRH  
FAM72A  
TSPYL5  
MIR495  
MIR1260B  
CAHM  
TNFAIP8L3  
CUZD1  
GPATCH2  
SH3YL1  
STARD10  
PTCSC1  
DDIAS  
GKN2  
LASTR  
CCL2  
DESMD  
CMM2  
POROK1  
XLI  
RMS2  
XPD  
AIS  
GIST  
DFSP  
XFEPS  
A1ATD  
NPCA2  
GLM5  
APEH  
APOB  
ABO  
CDC25A  
LIG4  
IQGAP1

TRIM37  
AIFM2  
UTRN  
EDN1  
EIF4E  
GSTP1  
GSTPP  
FUCA2  
GPT  
HOXA5  
HOXA9  
IGFBP2  
IGFBP5  
IL1RN  
ALOX12  
LSP1  
CXCL1  
NME2  
MITF  
CEACAM6  
LEP  
MYCN  
PAX2  
SPINK1  
SULT1A1  
PTPRG  
SFTPA2  
RPN2  
CCL5  
THY1  
TFDP1  
TFE3  
NNMT  
CREBBP  
NUDT1  
PCGF2  
CHUK  
IHH  
TGFB3  
RTN1  
PLXNB1  
SIX1  
LIMK1

H2AFX  
MAGEA6  
PAGE4  
PAGE1  
XAGE1D  
INGX  
GAGE1  
GAGE7  
DAB1  
BUB3  
PNMA1  
GNG7  
CBLB  
DYRK1B  
MUC12  
ACTN4  
FRAT2  
PLK4  
PDS5B  
ZNF350  
AGAP2  
HOXC10  
SCGB2A2  
IL23A  
EBAG9  
PIGN  
RNF26  
KRT23  
AGR2  
CYP27A1  
TNS3  
OGG1  
NR1H3  
MAP3K7  
NTHL1  
NFATC4  
IFRD2  
RBBP9  
RAD51B  
PLAGL1  
S100A11  
IL17A  
NAA80

KMT5A  
CDC73  
BCAS3  
BCAS4  
STK33  
MALAT1  
MIR23A  
UNC93A  
RRAGD  
FAM107A  
UBR5  
PTPRT  
RNASEN  
CHD7  
CARD8  
MIR15A  
ST6GALNAC2  
AGK  
LZTS2  
PFKM  
HSPH1  
MIR23B  
HACE1  
NRG4  
SMG5  
STEAP4  
KLHL7  
ARMC3  
HMGN2P46  
MINDY3  
WDR77  
MIR335  
ABCB5  
MIR141  
MIR25  
GOLPH3  
TUSC5  
B4GALNT3  
ERGIC2  
FAM120A  
RNF11  
PYHIN1  
PIGU

RAB25  
MIR106B  
MIR100  
FEZF1  
MIR661  
TMEM184C  
CGAS  
POLR3A  
G0S2  
MIR616  
MIR99A  
MIR570  
NUPR1  
ZNF516  
RHBDD2  
MIR149  
MIR149\*  
TMEM79  
MMS22L  
MIR301A  
RNF180  
PPM1H  
SUSD3  
PHF21B  
TMEM9  
TMEM45A  
C8ORF17  
TMEM243  
ZNF703  
ZNF668  
DEUP1  
SOCS2AS1  
PARM1  
UBE2F  
CEACAM21  
DUSP23  
TEKT5  
SLC39A9  
IRS1  
LEF1  
DMSMFH  
BL  
XLA



MEN1  
MNG1  
HRPT2  
MCD  
DKCX  
HHS  
XLP1  
PPB  
CPP  
CPC  
PV  
SHEP2  
TYRSN1  
XPG  
XPG/CS  
FMRD  
MEN4  
CMM9  
CMM10  
DKCA6  
DKCB7  
FAP4  
EDSPD2  
EV2  
DIJOS  
HSR  
WM1  
FHL1  
BCC1  
ASCL1  
ACY1  
ACLY  
CALR  
NUP214  
ATF1  
VIM  
PFKP  
ENO1  
CDKN2C  
SPAG1  
MVP  
SPINT2  
GADD45GIP1

RRAGB  
XAGE1B  
TOP2A  
EGR2  
ENO2  
FABP3  
FOXO1A  
GLUD1  
SHMT2  
HSPA1A  
HSPA2  
HOXA7  
HOXA10  
HOXA11  
HOXB9  
ITPR3  
WNT2  
LIF  
AKT2  
ETS2  
YES1  
WNT5A  
SPP1  
REG3A  
SPARC  
TPMT  
E2F1  
TSC2  
UBE7  
PRAF2  
PSMD10  
FAM46D  
YY1  
CDX2  
AQP5  
S100P  
NKX2-1  
HMGA1  
HMGA1B  
ETV4  
FOLH1  
HMMR  
BCL2A1

ABCC2  
YWHAZ  
SKP2  
GGH  
EVPL  
NTN1  
HAS2  
TMSB4X  
SSX4  
ZBTB33  
FGD1  
GAGE12I  
SPANXB1  
BUD31  
BTRC  
MADD  
SOCS1  
AXIN1  
BCL2L11  
BAG3  
HYAL3  
B3GALT5  
MAD2L2  
ARPC1A  
ARPC1B  
PPP1R1B  
TM4SF5  
HPSE  
ARHGEF12  
CTNNAL1  
TBK1  
GDF15  
HDAC5  
WFDC1  
CYP3A7  
ADAMTS9  
KLK13  
SF3B1  
BIRC7  
BCAS2  
RALBP1  
STRAP  
GAB2

SIRT7  
CAPN9  
GKN1  
DIRC1  
AXUD1  
SCGB3A1  
AHRR  
SRGAP1  
NLRP1  
FTCD  
TIMP4  
ARMET  
THRSP  
NCOA4  
TERF2  
SH3BP2  
HTRA1  
WWP1  
KLK6  
MNAT1  
HIST1H3A  
NR1I2  
CUL4A  
ATF3  
IKBKB  
ERBIN  
IHPK2  
HYAL1  
TGIF2  
POTED  
C15ORF48  
MTSS1  
PSMC3IP  
MIR17  
MIR17\*  
HAL  
PDLIM2  
PHF19  
KDM4B  
PRAP1  
SULF1  
LZIC  
PRR13

WASHC5  
PDRG1  
SLC43A2  
TMEM189  
NT5DC3  
FAM84A  
BNIPL  
OCA2  
STYK1  
SRD5A3  
BCCIP  
S100PBP  
CCDC136  
MIR373  
MIRN200B  
MIR143  
PREX2  
MIR31  
RRAGA  
MRC2  
RAB21  
ARRDC3  
CCAR1  
RASSF6  
SPA17  
KLK15  
SMARCAD1  
RAB6C  
PDS5A  
LAPTM4B  
ALKBH8  
DSCR8  
PTENP1  
MIR148A  
RHNO1  
CUEDC2  
MIR99B  
MIR489  
SCUBE3  
MIR193B  
DENND2D  
DNAJC15  
LSINCT5

SUSD2  
CREB3L1  
ZNF695  
DRAIC  
GPAT2  
NRBF2  
MFAP3L  
MORC2  
RPL34  
MARVELD1  
ARHGEF26  
ST7L  
SRMS  
ARLNC1  
MINAR1  
ATP5PD  
C2ORF68  
CKAP4  
SMYD5  
PPARA  
MN  
PGL4  
MMM  
PWS  
PWCR  
PCS  
DCR  
RCCX1  
WT5  
TTD1  
XPV  
BOCA  
CELIAC1  
CHDM  
CSA  
CSTLO  
CMEMS  
FANCD2  
HYDM1  
GSD1A  
ICF1  
ANXD1  
FANCI

XPB  
LGSS  
WABS  
CMM8  
BCC7  
PFBMFT1  
DBA13  
THC5  
BMFS3  
SEMDK  
PGL6  
LE  
DPP4  
VCAN  
CKB  
CCND3  
DEK  
NFATC1  
CLOCK  
NAE1  
DHX15  
PLAAT4  
TAB2  
LPAR3  
PSME3  
WFDC5  
ANP32C  
MIR224  
TCEAL7  
DDIT3  
LIG1  
EPO  
ERCC3  
ERCC4  
ERCC5  
FPR1  
CSF3R  
RASA1  
GHRHR  
GNAO1  
HPR  
HSF1  
HOXC6

SOD1  
ITGB4  
IFNA17  
RPSA  
LIPE  
SAI1  
ADAM11  
RMRP  
CCL7  
MUC2  
AFDN  
NOP2  
POU5F1  
REL  
JUN  
AP1  
PAX5  
TAP1  
PTPN1  
SERPINE2  
RPS15  
RNU1A  
SOX2  
CLU  
THBS1  
TG  
PRKAR1A  
HNF1B  
UGT1A1  
UGT1A  
MIR502  
MIR718  
HDX  
MTND1  
MC1DM3  
MTND4L  
MTCO2  
MHC2TA  
MATK  
BCL2L1  
HNRNPA2B1  
HNRPA2  
SEC13



MICA  
TLE1  
SS18  
CCR7  
MAPK14  
CSBP2  
PCM1  
DDX6  
TYRO3  
AMPH  
TRIM25  
PTPRO  
MCM7  
EPHB1  
TBX2  
DYRK1A  
CDKN1C  
SIM2  
NPRL3  
PRDM2  
SEM1  
BMPR1A  
PPP3R1  
PTCH1  
MYBL2  
PEG3  
ZIM2  
ETV5  
TFAP2C  
TWIST1  
CASP7  
ATRX  
FOXO4  
DCX  
DKC1  
KDM6A  
MED12  
ENOX2  
SPANXC  
SAGE1  
ZNF185  
XAGE2  
SPANXA2

UTP14A  
SSX6  
TSPYL2  
GAGE2C  
AMER1  
FAAH2  
MIR424  
MIR322  
PER2  
CDK10  
ASS1  
WNT4  
UNC5C  
RPL5  
NUMB  
DACH1  
SLC16A4  
RFX4  
RAD50  
TPD52  
KCNQ1OT1  
GPRC5A  
SLC25A11  
RPL15  
SCO2  
ABCC3  
TRPS1  
POLQ  
PI13  
WNT6  
PART1  
IKBKE  
DIABLO  
ABCC4  
TACC2  
EPB41L3  
BNIP3L  
ITGB3BP  
FOXP1  
SMURF2  
KLK12  
FSTL1  
MIR198

KLK5  
FBXL2  
BACE2  
SCRT1  
ANGPTL4  
BASP1  
NDOR1  
TES  
BHLHE41  
ASPSCR1  
JAZF1  
SELENOF  
GLS2  
FXVD5  
TRPM8  
TTC4  
ST13  
JAG1  
PAWR  
NCOA2  
EREG  
SIPA1  
APAF1  
KLF4  
GAL3ST1  
FOXO1  
CYR61  
FOXC2  
GPC5  
ARNTL  
KLK10  
BACH1  
NSD2  
PCDH7  
IKZF1  
CUL2  
CUL3  
RAD17  
UBE1C  
LSAMP  
AMFR  
ZNF35  
COQ8A

RASSF3  
RASSF5  
RAPL  
SLC39A4  
APOBEC3A  
SAV1  
CARD11  
MYO18B  
APCDD1  
RPL39L  
RNF20  
DDIT4  
UNC5A  
UNC5B  
KCNRG  
HECA  
GNL3  
SAFB2  
RFWD2  
PPHLN1  
VTCN1  
SNIP1  
DIRC3  
HSPBAP1  
RNF34  
PINK1  
IGSF11  
LIMA1  
DNAJA3  
CSMD1  
LACTB  
AGGF1  
CYGB  
NAMPT  
OSR1  
PNPLA2  
FBXO45  
KNL1  
IQCB1  
SEH1L  
SH3GLB1  
KDM3B  
LUC7L3

RASSF2  
ARID2  
MGLL  
DUS2L  
XRRRA1  
TBC1D2  
CASZ1  
MIR125B1  
TTC9  
ADRM1  
NACC1  
TTC12  
SLC35B3  
LMTK2  
EPC1  
LIN28A  
LIN28B  
MIR9-3  
MIRLET7B  
KIF14  
CRNN  
C3ORF35  
NOL7  
NALCN  
NAPRT  
MIR10B  
DHRS4  
PLA2G3  
RNF8  
ERF  
KDM8  
RPS27L  
SAPCD2  
MIR22  
MIRN429  
GLCE  
GGNBP2  
ICK  
ABCF2  
PDCD4  
STRADA  
WWC1  
RSPO2

BOP1  
PISD  
BCAM  
RNASET2  
FILIP1L  
MIR205  
KMT5C  
SAE1  
UBA2  
CLEC3A  
EIF2AK1  
PLAAT2  
DEPDC5  
PSD3  
MIR1258  
HIF1AAS2  
MIR520H  
STRN3  
SIK3  
C1ORF109  
NPTNIT1  
MIR7-1  
B3GNT8  
MIOS  
MIR650  
MIR574  
MIR574-3p  
RGS22  
POU5F1B  
GPX7  
MIR190A  
DEPDC1B  
CDK15  
NWD1  
FRMD5  
ARMT1  
PARTICL  
DCUN1D5  
SRPRB  
GSE1  
PTCHD4  
GSDMD  
FKBPL

ST18  
SCAF1  
WFDC2  
USF3  
C10ORF99  
ZNF664  
STRIP2  
EEF1AKNMT  
RCCD1  
ZNF768  
NXPE4  
SEC11A  
NHLRC2  
PRR15  
BRD9  
HECTD3  
C19ORF48  
ANKRD18B  
CYP1A2  
PITA1  
PAP  
DBA1  
T2D  
DUH1  
HRPT1  
CSCF  
PD  
MAS  
PFD  
CPPB1  
PTRPLS  
PKU  
ECYT2  
PRLMNS  
WND  
BRSS  
ASPS  
ADCC  
HFS  
NBS  
BBS  
GDMN  
JMML

CMMML  
IMD54  
B12QTL1  
NBLST3  
FANCO  
CMM6  
MDS  
MBLD  
PFBMFT2  
CWS4  
MSPC  
CPPB2  
DUH3  
ALL3  
POF8  
MPLPF  
HRPT4  
CHTD5  
LPFS3  
EV3  
RTS1  
BPH  
IH  
SXGQTL1  
EBVS1  
HPV18I2  
GBY  
ST12  
PPBL  
GNRHR2  
SERPINC1  
IFNGR1  
TRIM21  
BCAT1  
CALCA  
CGRP  
CDC25B  
MORF4  
CHRNA4  
MMP8  
CRYAB  
CREB1  
CDK3



VCAM1  
AVP  
NPII  
TCF12  
SERPINB3  
SERPINB4  
GPER  
PFKL  
PGAM1  
WISP1  
EPR1  
RABIF  
SOCS2  
PXDN  
ELF5  
EI24  
TP53I3  
PTGES  
GAS8  
GAS8AS1  
ANP32D  
GOLGA5  
XAGE1A  
XAGE1C  
XAGE1E  
RPS14  
FURIN  
GGT5  
SLC2A1  
NR4A1  
HOXD10  
CD9  
ITIH2  
ITIH3  
IGFBP3  
IGFBP4  
ITIH1  
CXCL10  
CASP1  
IL4  
TTIM1  
CD5  
MAX

MTR  
CDC25C  
ABCC1  
MCL1L  
NFE2L1  
RELA  
HNRNPA1  
FGF3  
FGF5  
GLI1  
NBR1  
OXT  
PAX7  
CD36  
PIP  
MKI67  
ZBTB16  
EIF2AK2  
MAP2K1  
PPP1CA  
PYCR1  
RALA  
EPHA1  
PRCC  
RBL2  
SHBG  
TFF2  
TLX1  
CD8A  
LEU2  
FES  
TDO2  
BLK  
U2AF1  
TMSB15A  
BRAFP1  
ZMAT1  
MIR532  
CDR1  
FMR1  
FRAXA  
KDM5C  
UTY

TSPY1  
MXD1  
ABCA1  
MAP3K11  
RRAS2  
KCNMA1  
MST1R  
SLC7A5  
DUSP3  
RUNX2  
FOXA2  
RAPGEF1  
ID2  
PPARD  
E2F2  
E2F3  
CDKN2B  
AKR1C2  
GPR4  
ITIH4  
CLCN2  
TFF3  
TCTA  
PTBP1  
LPP  
HNRNPK  
TFEB  
MMP14  
ST7  
ARHGEF5  
DHPS  
CAV2  
PGF  
HK2  
CKR2A  
MIA  
AFF3  
FRA2A  
MAD2L1  
MAT2A  
GRB14  
PPP2R5C  
GTF2I

EFNB1  
TEX28  
VBP1  
MAGEA12  
USP26  
NXF2  
SSX3  
SSX5  
MAGEA5  
MAGEA8  
MAGEA9  
MAGEA10  
MAGEA11  
SH3KBP1  
BCAP31  
MAGEB5  
MAGEB6  
MAGEC3  
MAGED2  
WDR45  
BRWD3  
CXCR3  
SPACA5  
GAGE3  
GAGE4  
GAGE5  
GAGE6  
LUZP4  
GAGE8  
PNCK  
PEA15  
LATS1  
GALNT4  
TNFSF4  
TNFRSF10A  
RPS5  
RPS9  
RPS10  
RPS29  
RPL21  
RPL27A  
RPL28  
RPS16

RAD9A  
PHOX2B  
CBFA2T3  
GPHN  
HELLS  
SCD  
ATF4  
PTTG1  
CXCL14  
RNF6  
USP6  
HPV6A1  
SIRT2  
TRIP10  
TRIP12  
PPARGC1A  
LIMD1  
ERG28  
FZD4  
PEBP1  
LTBP4  
LTBP4S  
RRM2B  
USP25  
SLC39A1  
COPS5  
SRP68  
RPH3AL  
CYLD  
UBQLN1  
YWHAE  
RECK  
POLI  
AICDA  
TACC1  
APPBP2  
DHH  
ASPM  
PRDM16  
HTATIP2  
MEG3  
CPNE7  
ULBP1

HHAT  
COX7A2L  
ZEB2  
RIPK3  
TMC6  
KCNK9  
LAMP3  
DSE  
NOD1  
CPSF3  
ZNF331  
PBRM1  
LGALS8  
NUDCD1  
FZD3  
TP53INP1  
SIRT6  
WNK2  
WNT10A  
ANTXR1  
EGLN1  
UGT1A10  
PTPN23  
DAAM2  
CEACAM19  
TPO  
ADGRA2  
PLXDC2  
DMBT1  
SATB1  
NOVA1  
SIAH1  
ADAM8  
MMP17  
NR1D2  
TGFB111  
GML  
NR1D1  
PPIE  
MICB  
PTPNS1  
TRAF4  
PXN

USP7  
PTPRK  
LIMS1  
FUT8  
PAK1  
FOXE1  
CTBP2  
TSPAN4  
SEMA3C  
ADGRB1  
FSCN1  
SCARA3  
SPG7  
PLK3  
RCAN1  
EEF1A2  
IER3  
E4F1  
PLAG1  
SMAD5  
ENTPD5  
KIF22  
SLC27A2  
BMPR1B  
CST7  
CHD4  
TCF21  
XRCC5  
ZNF71  
GLDC  
TNK2  
SUFU  
ABCC11  
ABCC12  
ERC1  
TNKS2  
ST3GAL6  
ZMIZ1  
TSGA10  
RGS8  
PUM2  
FILIP1  
WWTR1

ING3  
KLF12  
PIBF1  
DIS3  
RDH11  
YY1AP1  
LIMS2  
OSGIN1  
UHRF1  
HSPB8  
TSKU  
COA4  
FAM162A  
P2RXL1  
WDR19  
GULP1  
CPS1  
EMCN  
ACRBP  
DPYSL5  
MMP21  
MUC17  
MRAS  
PCBP4  
ZMYND11  
BRAM1  
RAB3IP  
SSX2IP  
DCBLD2  
GIPC3  
SPECC1  
GSDME  
L3MBTL1  
ZFYVE16  
MTA3  
KDM1A  
HCAR2  
CLDN23  
WIP1  
WDR45B  
ODR4  
ACD  
DND1



ARHGAP8  
PIKFYVE  
MIR17HG  
MIR18A  
NDUFA13  
PELP1  
NLK  
LYPD3  
MAP3K2  
RSP01  
KLF17  
ATG12  
DDX58  
NDUFAF2  
NLRP7  
ITIH5  
REG4  
CEP55  
COL23A1  
ST6GALNAC6  
CEP290  
PTOV1  
MED25  
CRIPAK  
SLIRP  
EDEM3  
MTFP1  
ORAI1  
MED28  
MACROD1  
LEMD1  
PKN3  
WAPL  
TIGAR  
GMPR2  
PRAC2  
IL17RC  
SOX17  
MIR133B  
SMG7  
PPP1R15A  
MIR197  
CLDN12

MIRLET7E  
KIF12  
ADNP  
PRICKLE4  
NPL  
POLD3  
CIZ1  
YBX2  
FAM57A  
DDX54  
C1ORF76  
CDCP1  
NDUFAF4  
MIR145  
NLRX1  
MINA  
ZNRF3  
MIRNLET7G  
TNFAIP8  
USP22  
SERTAD3  
14-Sep  
EPB41L4A  
SLC39A2  
SLC39A3  
CLPTM1L  
TCHP  
HBXAP  
ING5  
PPIAL4E  
PHF17  
TUSC1  
MIR146B  
MARVELD2  
CPEB4  
MIR187  
ATP2C2  
NRIP3  
MIR449B  
CDKN2BAS  
KCTD3  
TMEM127  
PARPBP

SLC36A4  
ZNF652  
ARGLU1  
MCIDAS  
MARVELD3  
MIR519D  
MIR137  
VTI1A  
DHX33  
AFAP1L1  
SERINC2  
FAM32A  
PAQR3  
MIR302B  
CARMIL3  
PTCSC3  
ODAM  
C1QTNF4  
MIR298  
TRIAP1  
ATPIF1  
BATF2  
CAMKK2  
MIR139  
MIR139-3p  
EPG5  
LY6K  
MIR551A  
MIR30C1  
MISP  
B3GNT7  
CERS6  
SFMBT2  
TLNRD1  
NISCH  
MIR185  
MIR185\*  
CRNDE  
NLRC3  
C11ORF95  
ZMYND8  
SMOX  
PRR11

WSPAR  
SORBS2  
TP53TG1  
ADGRL4  
SPAG17  
ZBTB1  
TBC1D16  
A4GNT  
SUSD6  
SLC46A3  
CLUAP1  
CEP68  
TRIM40  
ENPP7  
SEMA4B  
LINC01194  
LINC00663  
C17ORF49  
TP53TG5  
SHKBP1  
RPL31  
UBE2Q1  
TP53TG3  
ZNF318  
OGDHL  
RALGPS2  
TRIT1  
DDX46  
STRIP1  
ZDHHC20  
NAA30  
LINC01565  
CREB5  
LLGL2  
TMEM33  
LINC00261  
CACTIN  
MAPK15  
ZDHHC2  
GMCL1  
CDV3  
ARHGEF16  
LACTB2

CCSER1  
MIR30B  
TENT5B  
CCDC25  
PRRT3AS1  
NOS3  
AN1  
CFC1  
SOTOS1  
ALGS1  
CDLS1  
PKS  
PFIC2  
ALPS  
ALPS1A  
SMA3  
DKCA1  
EDSPD1  
CSB  
FOP  
CMNS  
MYHRS  
AEXS  
HALP1  
FPHH  
HH2  
KIDAD  
PPKP1A  
PPKS1  
AFD1  
MASTC  
MASTSYS  
MEL  
ATXPC  
NPS  
CMC  
PDB3  
THIOT  
GISTPS  
RA  
SRS1  
XLANP  
CGDX

HIGM1  
CMTX4  
UVSS1  
FANCE  
FPDMM  
NETH  
PRIMS  
SDS1  
PPSH  
THC3  
TTP  
CHNG1  
USH3A  
WVS  
SCIDX1  
FANCB  
FANCF  
PN  
MCPH4  
HYPT7  
ARWH2  
HALD2  
WAGR  
NDNC4  
AIMAH1  
RDEB  
SHEP1  
FANCC  
HIES2  
SCA21  
CMM3  
FANCJ  
NS3  
HMPS2  
NFTC  
CRMCC1  
APL  
BMIQ14  
DBA7  
HDLQ12  
ECCL  
GLM2  
GLM3

FHL5  
BRGDA7  
ATFB16  
MCSZ  
D2HGA2  
C9D  
DKCB2  
DKCB3  
FANCG  
FANCL  
SCAR12  
JR  
THCYT3  
CSS2  
CMD2B  
AOVD2  
LPFS2  
D2L2AD  
VEL  
FANCQ  
CFC4  
BMND17  
IMD14  
HFE5  
FEPS3  
BBS16  
ANALBA  
RJALS  
TTD2  
TTD3  
FANCT  
DFNB97  
CVID13  
PCLD2  
NPCA3  
MVA3  
SPGF28  
BMFS5  
OCBMD  
EV5  
NS11  
IDDHBA  
LPAQTL

NSDVS1  
NSDVS2  
ARVD14  
NS13  
OFC1  
LMPHM5  
HFM  
PCOS1  
WT4  
CNC2  
WT3  
GLM4  
CMM4  
LTL  
NBLST4  
FL1  
GLM6  
NAFLD1  
NBLST7  
MIC7  
NF4  
HPV18I1  
LALL  
ACO1  
ACTG1  
APRT  
ACTA2  
ST3GAL4  
PSEN1  
ANG  
APOE  
NR2F2  
ARRB1  
GRB2  
ATP2A2  
BCL3  
BTG1  
HSD17B1  
CEACAM1  
MS4A1  
BMP2  
RECE-BMP2  
BMP4



CAD  
CDH15  
CNR1  
CBR1  
CUX1  
CDR2  
CGA  
CHGA  
PSP  
CLTC  
COL4A3  
COL6A1  
COL18A1  
CSF1  
CR2  
CRYBB2  
ATF2  
CARS1  
VIPR1  
FLI1  
EWSR2  
EZR  
CYP2B6  
CYP2E1  
CYP4B1  
COX6C  
DPT  
ZIC1  
PURA  
CSNK1A1  
PRDX2  
NME3  
BPTF  
EPHB3  
RFXAP  
CX3CL1  
DFFA  
ASCL2  
GPI  
MTHFD1  
SERPINF1  
OAS2  
TNFRSF6B

MSH5  
WISP2  
ZNF169  
FZD6  
LPAR2  
SPO11  
SPINT1  
TLE4  
CXCR6  
ZNF278  
ENC1  
TM7SF3  
GOPC  
TOX  
GORASP1  
HIPK2  
ACADS  
BCL2L10  
CERS2  
GAGE2A  
GAGE2B  
GAGE12C  
GAGE12D  
GAGE12E  
GAGE12F  
GAGE12G  
GAGE12H  
GAGE12J  
GAGE13  
GAGE2D  
GAGE2E  
GAGE10  
XAGE3  
MAGEE1  
MAGEE2  
MAGEB10  
MAGEB16  
MAGEB17  
AFF2  
FRAXE  
DSG2  
CYP24A1  
ARNT

ERCC1  
EEF1G  
TYMP  
EGF  
EPHX1  
FPGS  
GRP  
TACSTD2  
GATA2  
GFAP  
GOT1  
ENPEP  
GSTA1  
GUK1  
GNAS  
GNAS1  
GNB1  
GZMA  
HBB  
HSPG2  
HK1  
HIST1H1C  
H2AFZ  
HLA-DRA  
HLA-G  
HOXC13  
HOXD11  
MNX1  
MIC6  
FCGR1A  
ADAR  
IGHV@  
KLK2  
LGALS1  
AL-A1  
LYL1  
STMN1  
ALOX5  
ALOX15  
LCP1  
YBX1  
MPI  
CD63

MBD1  
MAPT  
MUC5AC  
MYBL1  
MLLT1  
MLLT3  
MYH11  
NDUFV1  
HMGB1  
NFKBIA  
NFKB2  
CRK  
CTTN  
FOS  
FOXG1  
OSM  
SPI1  
MECOM  
WNT3  
REG1A  
PPY  
ELAVL4  
PBX3  
PSG1  
PRNP  
PRDX1  
PTGS1  
COX3  
POMC  
PSMA4  
PTPN6  
PTPN7  
PPP2CB  
MAPK1  
BCHE  
SFTPC  
RHOG  
RAB6A  
RALB  
RAG1  
RAG2  
KDM5A  
RRM1

RPS6  
RPN1  
RLF  
TSPAN31  
SRI  
MMP3  
SDC1  
TLN1  
CD247  
TRAC  
TCL1A  
TAL1  
TIMP2  
GTF2E2  
PDGFB  
CNTN2  
ZFP36  
TPM1  
TM4SF1  
EFNA1  
U2AF2  
RPS27A  
CMPK1  
MIR508  
MIR509-1  
MXRA5  
CSAG1  
EOLA1  
GATA1  
IL2RG  
SSX1  
CD99  
TBL1Y  
SRY  
MTND5  
CACNB2  
IFI27  
CYB561  
CDH11  
RAD23A  
LRP2  
TNS1  
ADH7

MAP3K10  
AP1B1  
ASIP  
GCH1  
ALDH1L1  
ID3  
HNF4A  
AADAC  
BTC  
RPS8  
MEP1B  
GSTT1  
PRKCQ  
RPS3  
NTRK2  
IK  
IL15  
REST  
ID4  
NKX2-5  
TGM4  
GABPB  
GABPB1  
NBL1  
PPP5C  
MPP2  
TFAP4  
ELOB  
LAMA3  
DDB2  
MRE11  
HSPA8  
VSNL1  
TAGLN  
ANP32A  
GCKR  
PDCD2  
GFI1  
CDKN2D  
GHR  
GHBP  
GNAQ  
PKN1

CTNND1  
PDCD6  
MFAP5  
CDH5  
CYP2C9  
CAPRIN1  
DNAJC3  
PTGFRN  
PTK2B  
MSRA  
DDX1  
C1QBP  
GUCA2B  
RHEB  
TBXT  
KAT5  
PLIP  
TCEA1  
NR2C2  
ABCC9  
ATOH1  
STX1B  
BAG1  
ZNF146  
GRB7  
GRB10  
CASP6  
RND2  
ADD3  
CCNG1  
PTP4A2  
PTP4A1  
TFAP2B  
ABCA3  
TBX3  
UBE2I  
TGFB1  
TEAD4  
STXBP2  
SMARCC1  
MGAT5  
USP11  
ZMYM3

FGF13  
USP9X  
NONO  
MAGEB1  
MAGEB2  
MAGEB3  
MAGEB4  
GPC4  
OFD1  
SSX2  
MAGED1  
EGFL6  
IKBKG  
SPANXA1  
PPP2R3B  
ABCD1  
RLIM  
CTPS2  
SH2D1A  
PDHA1  
P2RY8  
SSX7  
SSX8  
SSX9  
MAGEH1  
MCTS1  
BRCC3  
SPANXN1  
SPANXN2  
SPANXN3  
SPANXN4  
SPANXN5  
06-Sep  
BEX4  
BEX5  
MIR223  
FUBP1  
RIPK1  
CRADD  
RPS19  
NFS1  
AAMP  
LRP6



NMI  
MBD3  
TRPM1  
CDC20  
PSIP1  
FOXH1  
RPS12  
PTCH2  
RPS23  
RPS28  
RPL9  
04-Sep  
RPL6  
RPL26  
SLIT2  
TPD52L2  
CCNE2  
CDYL  
RECQL5  
NR1H4  
PDZK1  
TSSC4  
ANGPTL1  
TIMELESS  
EIF2S2  
EIF3H  
EIF4G3  
FMO5  
RASGRP1  
AKAP9  
CCNA1  
NEK2  
09-Sep  
TTK  
ADGRG1  
RASAL1  
SVIL  
ESPL1  
RPL38  
SELENBP1  
SLC22A4  
KRIT1  
ING2

DBF4  
PLXNB2  
APPL1  
B4GALT7  
SSRP1  
RAB3D  
LMO7  
GPNMB  
GFI1B  
SCGB2A1  
KLK7  
ACSL6  
BAMBI  
ITSN2  
CBX5  
AMACR  
LARS2  
TONSL  
MGAT4B  
AIM2  
EHMT2  
SLC30A9  
MGAT3  
MGAT4A  
VAT1  
TLX3  
AKAP11  
RBM39  
ANGPTL3  
LILRB2  
PUF60  
MALT1  
MMP24  
PCSK7  
MTHFD2  
CNOT3  
SOX5  
BRAP  
SLC9A3R1  
FXD3  
DOK2  
ANGPTL2  
SENP6

GALNT7  
PMS2L1  
TERF2IP  
WNK1  
USH1C  
RAD18  
NDRG1  
CAPN10  
PFKFB4  
IL22  
ALKBH1  
MFHAS1  
MYCNOS  
MINPP1  
CXCL16  
ABCB6  
MMP26  
B4GAT1  
NRG3  
HMG20B  
ADAM15  
FBXO8  
FBXW11  
BTRCP2A  
TRIM13  
BICRA  
NOP53  
RIPK4  
JAM1  
DCDC2  
DLEU2  
TRIM33  
FGL1  
MAPRE2  
PES1  
HERC2  
B3GNT3  
B3GNT4  
SEMA6A  
PCNT  
SART1  
PPP2R1A  
KIF1B

RNASEH2A  
IFT122  
DNAJC12  
RBM15  
SIGLEC12  
SESN1  
KLK14  
RASAL2  
CGREF1  
CGRRF1  
FZD8  
FADS1  
TNFSF9  
SLC45A2  
SELENON  
MSRB1  
NUDT6  
NCAPG  
RAB38  
DDX43  
WNT3A  
WNT8A  
WNT5B  
ST6GALNAC4  
ATF5  
ELMO2  
ZNF320  
HTRA2  
SS18L2  
MARK4  
UGT2B28  
HUNK  
CLIC4  
SLC36A1  
RAI14  
BAALC  
FBXO32  
PYY2  
HAVCR2  
TIMM8B  
NCKIPSD  
NSD1  
NAT8

OSBP2  
OSBPL5  
OSBPL10  
IL17RD  
CITED4  
NAGK  
FXN  
KMT2B  
CST6  
TRAF2  
TRAF3  
ZNF148  
SUMO1  
ATP2A3  
WNT7B  
WNT2B  
CCDC6  
LIMK2  
NOVA2  
GPR18  
GPR31  
RAC1  
RAC2  
NINJ1  
NRP2  
YEATS4  
MAPKAPK3  
MIA2  
PSMB4  
ELF3  
RREB1  
ZMYM2  
EIF4EBP1  
EIF4EBP2  
SOX10  
TNFRSF9  
MFGE8  
OVOL1  
SEL1L  
ABLIM1  
EMP1  
TRAF6  
UPK1B

HAND2  
BRPF1  
FADD  
TRDMT1  
CYTH2  
TFG  
LGALS4  
RNF217AS1  
DJ1  
CELF2  
KIF2A  
CXADR  
FHL2  
MCM4  
TUBB3  
MARK3  
NCOA1  
PRKAA1  
HIST1H4I  
CHN2  
WNT9A  
IGFBP7  
GPR19  
MARCKSL1  
TADA3  
PRMT1  
CDH6  
CDH8  
CDH19  
CDH17  
MNT  
CHEK1  
USP12  
TCF20  
UROS  
ELP4  
SIMO  
ACADM  
SMG1  
PI15  
NSD3  
APOBEC3G  
RPTOR

VENTX  
DYNLRB1  
DYNLRB2  
CRELD1  
PDZK1IP1  
ST3GAL1  
PTF1A  
PUM1  
CARD10  
CARD14  
CARD9  
IRF5  
APOL3  
MORF4L1  
LOXL4  
SFMBT1  
ALPK1  
TLN2  
AIRE  
GLYAT  
ENOSF1  
EPSTI1  
SBDS  
PPP1R13L  
PARD6A  
MAML2  
ARHGEF2  
SMPD1  
ANGPTL5  
SAR1B  
SAR1A  
LCOR  
C10ORF12  
TJP2  
SARM1  
USP32  
APOBEC3C  
CTNNBIP1  
SESN2  
PLEKHA4  
PLEKHA5  
PCSK9  
TET1

PHF11  
OTOP2  
NKD1  
SETDB2  
SPRYD7  
RCBTB1  
CMTM6  
TRIB3  
NTM  
CEP57  
RANGRF  
DHX32  
SEMA7A  
SPRY4  
SPOCK3  
ASH1L  
HIPK1  
GALNT10  
CYP2A13  
ERRFI1  
ELAC1  
MRO  
NUAK1  
NUAK2  
CENPV  
SPDEF  
PTGES2  
PRSS21  
SEMA3E  
DDX41  
EXT2  
IRGM  
ADSL  
GALNT14  
CCNB1IP1  
PAXIP1  
RRAGC  
SLC28A3  
CHST15  
IGF2BP2  
STOML2  
ARG1  
PRPF19



DCXR  
GSDMC  
ETHE1  
CDKL3  
ANAPC1  
MMP25  
PRICKLE2  
CYBA  
LAMTOR5  
FBXO38  
PXRICS  
HMCN1  
CTDSPL  
RAB11FIP2  
NBPF12  
C1ORF152  
JDP2  
ANO6  
CREB3L2  
FGFR1OP2  
POTEB  
POTEH  
POTEE  
POTEA  
POTEG  
ARL5A  
VASH1  
RND1  
POU6F2  
AJUBA  
KDM2B  
APITD1  
CLDN7  
EEF1E1  
WIP1  
NUDT5  
SPRED1  
TRIM36  
OIT3  
ANGPTL6  
NLRP2  
CDCA5  
PHLPP1

SYNJ2  
MIR19A  
MIR19B1  
MIR20A  
MIR92A1  
MZB1  
MRTFB  
CYP27B1  
RASGRP3  
ATAD5  
ARHGAP20  
MIR122A  
GOLGA8B  
PDGFD  
OS9  
MAL2  
CDCA7L  
PSMG2  
MIR24-1  
miRNA189  
LPL  
YPEL3  
CCDC88A  
CADM4  
ACOX1  
NCOA7  
NKAIN2  
AMICA1  
UBN1  
API5  
UBAP1  
NEK8  
DCP2  
ETNK1  
ARHGAP21  
CRYL1  
KAT7  
UBR4  
SPIN1  
CDCA7  
HES2  
ARSJ  
VPS45

SARNP  
CHMP3  
H2AFY  
MYO18A  
RINT1  
ANO1  
TSPAN33  
CHST11  
ST8SIA6  
IGF2AS  
CENPM  
INO80  
CEP162  
AKT1S1  
RPS19BP1  
DERL2  
RNASEH2B  
RUFY1  
RUFY2  
RNASEH2C  
PHF20  
P3H1  
EPB41L4B  
LINS1  
SLC2A12  
TMPRSS11E  
NTN4  
RMI1  
SPTSSB  
SAMD9  
LOH3CR2A  
LRRC4  
DCAF6  
BRE  
PAF1  
FAM126A  
RASSF4  
PRSS53  
ZC3H12A  
ZNF687  
YTHDF2  
SMYD2  
PHB2

USP28  
UST  
BZRAP1  
CHD5  
DRAM1  
SLC25A33  
MEX3A  
MEX3B  
TMEM259  
RGSL1  
RGSL2  
TMEM30B  
LUZP6  
PPFIA1  
SETBP1  
NELFB  
ANKRD11  
UNC45A  
GSDMB  
CLDN8  
CHCHD7  
KIF27  
NOXO1  
KLHDC2  
KCTD5  
ABLIM3  
SCARA5  
C9ORF64  
C9ORF103  
RASEF  
GKAP1  
CNTROB  
MTHFD1L  
TTC21A  
WDR46  
GLB1  
EBP  
PLEKHM1  
GATA5  
KDM3A  
POLDIP2  
12-Sep  
13-Sep

BANP  
CKAP2  
MIR206  
PLA2G12B  
ADAMTS20  
HIPK4  
TCTEX1D4  
SCUBE2  
VMP1  
STARD3NL  
MIR128-2  
MIR128-1  
MEMO1  
CMPK2  
LCORL  
PALI2  
ARMC10  
OTUD6B  
GRASP  
APC2  
RASL10B  
IDO2  
ECHDC1  
MIRLET7A2  
MIRLET7C  
MIR26A1  
MIR26B  
CAB39  
MYSM1  
RGL4  
ATAD3A  
CCDC34  
MIRN610  
LIN7C  
GGT7  
RASL11A  
FAT4  
RAB24  
ARFGAP3  
GEN1  
HBS1L  
ARID3B  
METTL3

TIPARP  
RNF31  
ABCC10  
MIRN101-2  
MIR370  
RAB1B  
RNMTL1  
WRAP53  
RERG  
RAB10  
VTRNA1-1  
VTRNA1-2  
VTRNA1-3  
CCNY  
UTP20  
TAF1D  
DHRS3  
QSOX2  
LANCL2  
RAB4B  
RAB22A  
DEPDC6  
SDHAF2  
CTC1  
MIR184  
MIR184\*  
POLN  
FAM102A  
ENOX1  
RBCK1  
TWF1  
CRNKL1  
SMG6  
TRAPPC1  
ETAA1  
TAOK2  
TMEM18  
ZNF296  
C18ORF54  
SLX4  
SPATA13  
KIAA1549  
ARHGAP18

DRAM2  
DDX42  
MIR138-1  
ADI1  
MIA3  
HPSE2  
SPEN  
ATG14  
RUBCN  
NTMT1  
ALDH1L2  
BTN3A1  
ATF7IP  
ACKR1  
MIR130B  
EIF2D  
CCDC115  
ZNF260  
SCAMP5  
RNF213  
TMEM205  
PLAAT3  
BAHD1  
TOE1  
TMEM25  
CDC42BPG  
NBPF9  
KPNA7  
TENT2  
SPECC1L  
DIS3L2  
CHTOP  
SLC16A9  
ZNF638  
TDRD3  
TFAP2E  
C9ORF116  
KLHDC8A  
BRAT1  
HIF1AAS1  
RASGEF1A  
ZDHHC7  
ZDHHC21

LINC00538  
FAM123A  
RPRD1B  
RASSF10  
CEP63  
MMS19  
TMEM207  
MIR199B  
TMUB1  
SH2D4A  
GATAD2A  
GATAD2B  
MIR410  
MIR487B  
GOLT1B  
ASUN  
TUBB2A  
PRSS55  
PGAP2  
DHRS4L1  
DHRS4L2  
MIR1909  
MIR1915  
IFNE  
RC3H2  
EXOC8  
CCDC28A  
GNG12AS1  
CDK12  
MIR297  
TIMMDC1  
ARMC5  
SPAG5  
CHCHD6  
SH3BGR13  
ZNF451  
BUD23  
DELE1  
CEACAM8  
TNFAIP8L1  
RSL1D1  
PPP2R3C  
MIR520C



BTBD10  
MAGI3  
MIR99AHG  
MIR100HG  
MYCNUT  
MIR339  
TSTD1  
SPRTN  
UQCC3  
IFIT5  
RNF220  
DCUN1D3  
DDRKG1  
CMTR2  
ZBTB49  
CLEC4G  
MIR520G  
FRMD4A  
LINC01018  
TAX1BP3  
EWSAT1  
SFR1  
DDX31  
DAPK2  
FAM118B  
FAM30A  
SNORD13  
SKA2  
ZNF589  
TAOK3  
NIT2  
GCNT4  
IGDCC4  
NCOA5  
WDR83  
TMEM14A  
MRFAP1  
CCDC68  
DHRS4AS1  
CHD9  
PDIA5  
GIMAP6  
ABHD6

MIR490  
NORAD  
DNAJC21  
TSR3  
LINC00673  
RNASEK  
TFAP2AAS2  
HAND2AS1  
RUNDC3B  
FAM26F  
SHF  
PRAG1  
AGBL2  
AGBL3  
SHC4  
PRRC2C  
INCA1  
KLHDC9  
CNKSR3  
IPCEF1  
COLGALT1  
COLGALT2  
LINC00672  
TP53INP2  
SRXN1  
SPRY4IT1  
EQTN  
TXNL4B  
KBTBD7  
MFSD12  
LIMCH1  
BAGE2  
BAGE3  
THEMIS2  
PSMD6  
TP53I11  
PYROXD2  
HILPDA  
AEBP2  
LDLRAD3  
KLHL22  
ZNF689  
SPZ1

CNOT6L  
WDFY1  
MPV17L  
A1CF  
ZNF341  
ZNF197  
VHLAK  
DUSP26  
CAP2  
BRINP3  
PLEKHB2  
BRD7  
BICRAL  
WAKMAR2  
PEAK3  
ZBTB10  
CDH24  
HIGD1A  
SH3RF1  
ZDHHC19  
PSORS1C3  
ZNF281  
EPGN  
NEK10  
CACUL1  
LAYN  
ROMO1  
ZNFX1  
ANGEL2  
BIVM  
MIR30D  
M1AP