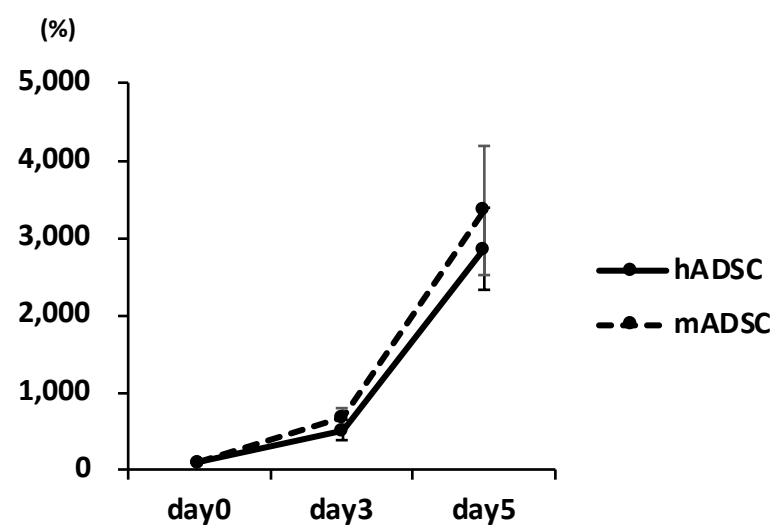
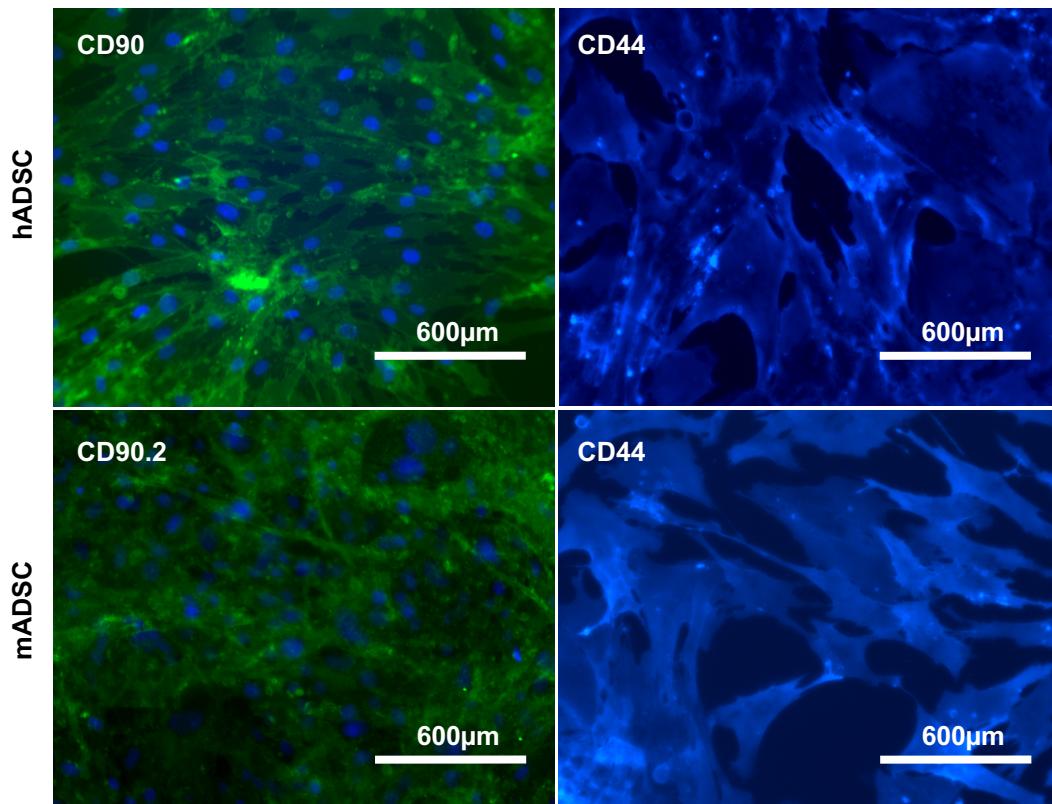
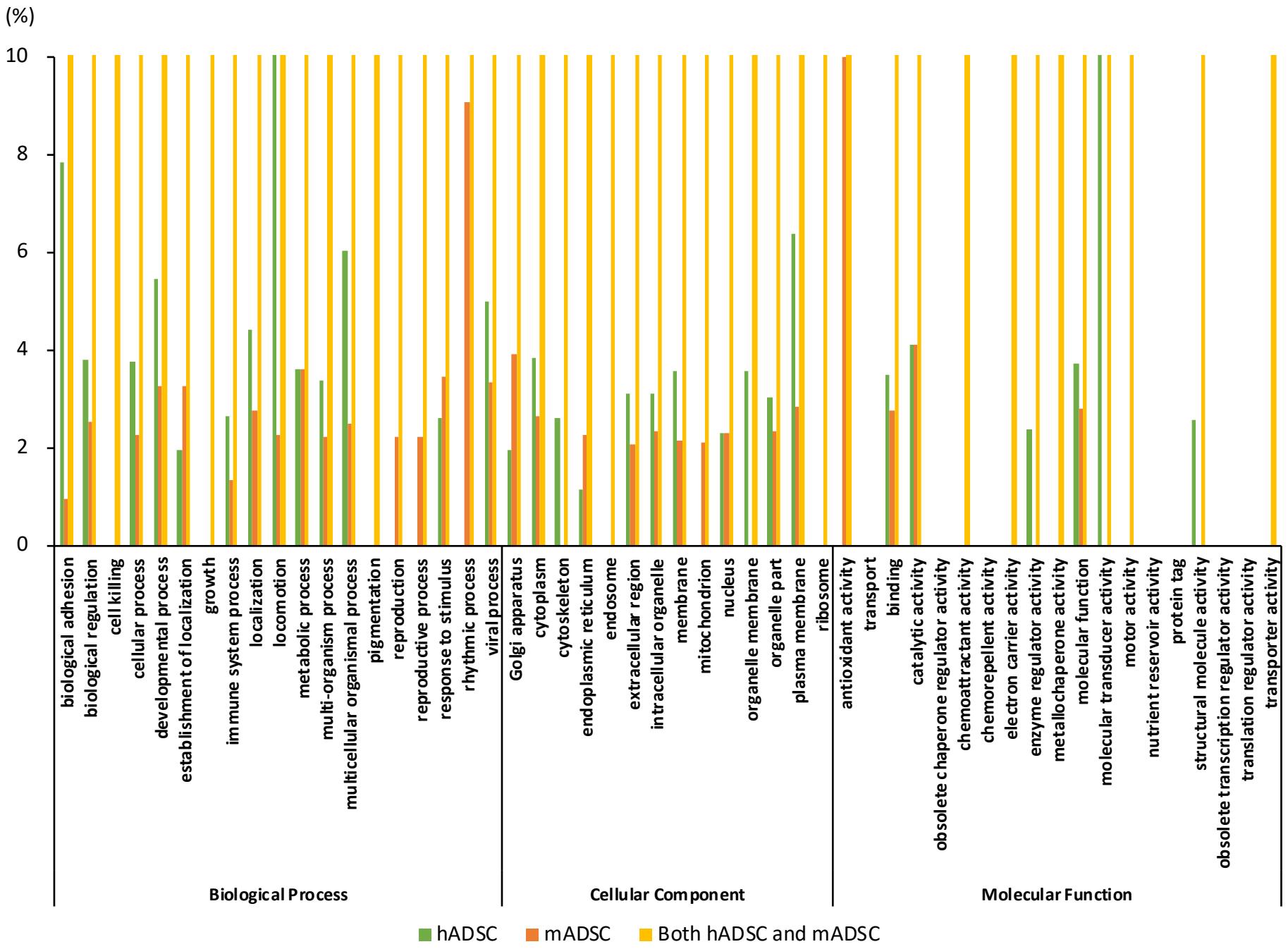


**A****B**



Supplementary Table 1. Identification of endogenous proteins contained both hADSC and mADSC.

UniProt/SWISS-PROT ID	Alternate ID	biological adhesion	Biological Process	locomotion	rhythmic process	Cellular Component	plasma membrane	Molecular Function	antioxidant activity	molecular transducer activity	emPAI <sup>a</sup>
											hMSC_P3_D mouse_D
Actbl2						plasma membrane					70.14 166.14
VIM(Vim)						immunological synapse, integrin complex					453.06 73.019
MYH9(Myh9)		platelet aggregation, single organism	axon guidance, blood vessel endothelial cell migration, leukocyte migration, ne								373.45 194.72
MYH10(Myh10)		cell adhesion	axon guidance, neuron migration, substrate-dependent cell migration, cell exte			plasma membrane					51.183 30.689
FLNA(Flna)		platelet aggregation	wound healing, spreading of cells			plasma membrane					366.81 192.6
Hsp90aa1			neuron migration			apical plasma membrane, basolateral plasma membrane, brush border membrane, ruffle membrane, sperm plasma					69.192 128.05
HSP90B1(Hsp90b1)						plasma membrane					76.775 46.563
TUBB2A											133.64 98.417
TUBB6(Tubb6)											80.566 34.922
HSPA5		cell-cell adhesion	axon guidance			CatSper complex, plasma membrane					229.38 144.98
HSPA1A		cell-cell adhesion				lateral plasma membrane, sarcolemma					20.852 3.1747
ACTN4(Actn4)		focal adhesion assembly, platelet aggregation				plasma membrane					213.26 142.86
ACTN1(Actn1)		focal adhesion assembly, platelet aggregation				plasma membrane					154.5 86.776
GAPDH(Gapdh)						plasma membrane					117.53 41.271
Ywhab		cell-cell adhesion				plasma membrane					22.748 25.398
PKM(Pkm)		cell-cell adhesion				ruffle membrane					177.24 95.242
TLN1(Tln1)		cell adhesion, platelet aggregation				extrinsic component of plasma membrane, plasma membrane					160.18 84.659
ENO1(Eno1)		cell-cell adhesion				plasma membrane					115.64 109
CLTC1						clathrin coat of coated pit					13.27 13.757
Citc						basolateral plasma membrane, extrinsic component of plasma membrane, sarcolemma					101.42 131.22
ANXA2(Anxa2)		cell-cell adhesion									114.69 112.17
LDHA		cell-cell adhesion				plasma membrane, sarcolemma					191.46 47.621
PLEC(Plec)		cell-cell adhesion				plasma membrane					122.27 77.252
ALDOA(Aldoa)		cell-cell adhesion				external side of plasma membrane					119.43 58.203
EEF2(Eef2)		cell-cell adhesion				plasma membrane					80.566 79.368
P4HB(P4hb)						T-tubule, sarcolemma					99.523 64.553
DYNC1H1(Dync1h1)						plasma membrane, sarcolemma					90.992 82.543
VDAC1(Vdac1)											38.861 138.63
AHNAK		cell-cell adhesion									132.7 9.5242
FLNC(Flnc)											134.59 30.689
UBA1(Ugdh)											69.192 76.193
COL1A1(Col1a1)											90.992 20.107
S100A11(S100a11)		cell-cell adhesion	leukocyte migration			apical plasma membrane					23.696 28.573
FN1		calcium-independent cell-matrix adhe	glial cell migration, leukocyte migration			extrinsic component of cytoplasmic side of plasma membrane, lateral plasma membrane, plasma membrane					103.31 19.048
IQGAP1(Iqgap1)		cell-cell adhesion				plasma membrane					83.409 45.504
Both hADSC and mADSC	FLNB(Flnb)					plasma membrane					59.714 44.446
PGAM1											32.226 104.77
VCP											58.766 69.844
PGK1											50.235 58.203
ATP5B(Atp5b)			inductive cell migration, negative regulation of cell adhesion involved in substr			plasma membrane					41.705 49.737
Hspa9											27.487 63.495
ANXA5(Anxa5)						external side of plasma membrane					66.348 30.689
LRP1(Lrp1)						integral component of plasma membrane					54.027 60.32
Pdia3											58.766 48.679
ATP5A1(Atp5a)											36.018 41.271
GSN(Gsn)			neutrophil migration			plasma membrane					40.757 19.048
WDR1(Wdr1)						plasma membrane					51.183 52.912
ACLY(Acly)						plasma membrane					44.548 40.213
HSPD1(Hspd1)						plasma membrane					36.018 30.689
KPNB1(Kpnb1)											32.226 52.912
TAGLN(Tagln)		leukocyte cell-cell adhesion	leukocyte migration			apical plasma membrane, basolateral plasma membrane, microvillus membrane, plasma membrane					66.348 16.932
MSN(Msn)		cell-matrix adhesion, epithelial cell-cell adhesion, platelet aggregation				plasma membrane					48.34 43.388
VCL(Vcl)		cell adhesion	cell migration			plasma membrane, sarcolemma					68.244 15.874
Thbs1						external side of plasma membrane					62.557 21.165
ASS1(Ass1)											12.322 33.864
LGALS1											74.879 4.233
Fasn		cell-cell adhesion				plasma membrane					0.94783 86.776
ANXA6(Anxa6)			cell migration			ruffle membrane					49.287 25.398
ARF4(Arf4)			axon guidance			plasma membrane					16.113 13.757
Vdac2			ameboidal-type cell migration								24.644 41.271
DPYSL2(Dpysl2)											54.974 37.039
CAP1(Cap1)											49.287 28.573
HSPA4											31.279 45.504
PLS3(Pls3)											29.383 31.747
SPTAN1(Sptan1)		cell-cell adhesion	axon guidance			caveola					19.905 33.864
AARS(Aars)											36.966 40.213
MYOF(Myof)											48.34 22.223
P4HA1(P4ha1)											36.018 14.815
MAP1B											58.766 6.3495
Nme2		cell adhesion									21.8 43.388
Nme1											7.5827 19.048
PSMD2											25.592 44.446

<sup>a</sup>Exponentially Modified Protein Abundance Index ([http://www.matrixscience.com/help/quant\\_empai\\_help.html](http://www.matrixscience.com/help/quant_empai_help.html)).



Table 1. Cont. 2.

UniProt/SWISS-PROT ID	Alternate ID	biological adhesion	Biological Process		Cellular Component	Molecular Function	emPAI <sup>a</sup>	
			locomotion	rhythmic process	plasma membrane	antioxidant activity	molecular transducer activity	hMSC_P3_D mouse_D
	DPYSL3(Dpys13)			circadian regulation of gene expression	plasma membrane			27.487 10.582
	Ppp1ca				plasma membrane	glutathione dehydrogenase (ascorbate) activity		12.322 17.99
	Tpt1							11.374 21.165
	UCHL1							21.8 4.233
	Gsto1							1.8957 34.922
	PLOD1(Plod1)							18.957 12.699
	Dstn							8.5305 21.165
	Rars	cell-cell adhesion			plasma membrane			15.165 14.815
	CCT3(CCct3)				apical plasma membrane, plasma membrane			15.165 13.757
	Anxa4							18.009 11.641
	ATL3(Atl3)							21.8 8.4659
	BZW1	cell-cell adhesion						8.5305 21.165
	MVP							39.809 2.1165
	Aldh18a1							8.5305 21.165
	STAT3							2.8435 25.398
	TARS(Tars)							10.426 12.699
	Ctsb							0.94783 33.864
	CSRP1	platelet aggregation						19.905 5.2912
	GANAB(Ganab)							44.548 11.641
	ARHgap1	cell-cell adhesion						16.113 9.5242
	Sec22b							14.218 12.699
	STIP1(Stip1)							14.218 12.699
	EPRS							31.279 7.4077
	IARS							37.913 6.3495
	Lars							11.374 12.699
	Fh							14.218 13.757
	PARK7	cell-cell adhesion			plasma membrane	peroxiredoxin activity		21.8 3.1747
	Hspe1							4.7392 23.281
	ASNS							15.165 11.641
	Atp1a1				T-tubule, apical plasma membrane, basolateral plasma membrane, caveola, integral component of plasma membrane			7.5827 17.99
	Cs							1.8957 27.514
	GLG1		leukocyte migration		plasma membrane			15.165 4.233
	NPM1							11.374 15.874
	LRRC59	cell-cell adhesion						17.061 10.582
	CTNNA1	epithelial cell-cell adhesion			catenin complex, flotillin complex, plasma membrane			18.957 10.582
	EHD1	cell-cell adhesion			ciliary pocket membrane			11.374 13.757
	FERMT2	focal adhesion assembly, substrate adhesion-dependent cell spreading		ovarian follicle development	extrinsic component of cytoplasmic side of plasma membrane, lamellipodium membrane			21.8 4.233
	GLS							14.218 6.3495
	SEC13							10.426 7.4077
	TXN							35.07 14.815
	TNC	cell adhesion						31.279 9.5242
	ALDH7A1							11.374 12.699
	DHX9							12.322 13.757
	GSPT1(Gspt1)			circadian rhythm				7.5827 8.4659
	KIF5B(Kif5b)	cell-cell adhesion	axon guidance, motor neuron axon guidance					12.322 8.4659
	MDH1							13.27 4.233
	NOMO1							12.322 12.699
	TPM1							39.809 6.3495
	Por							1.8957 22.223
Both hADSC and mADSC	Ptg51					peroxidase activity		0.94783 24.34
	ANXA1	granulocyte chemotaxis, monocyte chemoattractant protein-1, estrous cycle			apical plasma membrane, basolateral plasma membrane, cornified envelope, extrinsic component of external side of postsynaptic membrane			35.07 3.1747
	COMT							15.165 7.4077
	EIF3I							12.322 9.5242
	EIF2S1							14.218 6.3495
	EIF4g1	cell-cell adhesion						6.6348 20.107
	PPA1							12.322 8.4659
	LTA4H				plasma membrane			12.322 12.699
	RPL5							12.322 9.5242
	STRAP					peroxidase activity, peroxiredoxin activity, thioredoxin peroxidase activity		12.322 10.582
	PRDX4							23.696 9.5242
	Glud1							1.8957 19.048
	GOT1							13.27 8.4659
	AP2A1				AP-2 adaptor complex, apical plasma membrane, basolateral plasma membrane			21.8 7.4077
	SHMT2							9.4783 10.582
	Me1							0.94783 23.281
	Pcbp2							15.165 19.048
	PSMD3							16.113 8.4659
	Ahcy							7.5827 20.107
	SDHA(Sdha)							8.5305 7.4077
	TXND5							19.905 4.233
	UGGT1(Uggt1)							28.435 9.5242
	CNN1							8.5305 14.815
	Dctn1							9.4783 11.641
	EIF3B							8.5305 16.932
	MAPRE1	cell-cell adhesion			cell projection membrane			5.687 15.874
	PAICS(Paics)	cell-cell adhesion						8.5305 5.2912
	Ubr4							7.5827 10.582
	PGM3							14.218 6.3495
	ALDH1L2							18.957 1.0582
	FKBP10							29.383 2.1165
	Pck2							9.4783 11.641
	PSMC3							15.165 6.3495
	Psmd7							7.5827 13.757
	RCN1							11.374 6.3495
	Gd1							24.644 12.699
	Gpd2							1.8957 15.874
	Ipo4							2.8435 20.107
	Ap1b1							7.5827 14.815
	FKBP9							15.165 6.3495
	NPEPPS							5.687 14.815
	PSMB1							7.5827 14.815
	PSMB5(Psmb5)							12.322 8.4659
	RTN4	cell-cell adhesion	cerebral cortex radial glia guided migration		plasma membrane			12.322 9.5242
	SET							5.687 16.932
	XPO1(Xpo1)							6.6348 8.4659
	PRMT1							3.7913 16.932
	ARPC1B							17.061 6.3495
	CRTAP							9.4783 9.5242
	EHD2							15.165 4.233
	EIF3H(Eif3h)				caveola			2.8435 11.641

<sup>a</sup>Exponentially Modified Protein Abundance Index ([http://www.matrixscience.com/help/quant\\_empai\\_help.html](http://www.matrixscience.com/help/quant_empai_help.html)).

Table 1. Cont 3.

UniProt/SWISS-PROT ID	Alternate ID	Biological Process			Cellular Component		Molecular Function		emPAI <sup>a</sup>
		biological adhesion	locomotion	rhythmic process	plasma membrane		antioxidant activity	molecular transducer activity	hMSC_P3_D mouse_D
Gba									0.94783 16.932
Plod3									5.687 25.398
Cad									5.687 10.582
Rcn2									0.94783 22.223
RPL3									11.374 10.582
Rpn2									4.7392 22.223
Flli									3.7913 15.874
ATIC		cell-cell adhesion							16.113 4.233
MMP14			astrocyte cell migration, cell migration		ovarian follicle development	integral component of plasma membrane			14.218 5.2912
Rpl7									7.5827 8.4659
YARS						plasma membrane			14.218 5.2912
TKT(Tkt)									36.018 32.806
CAPN1									15.165 3.1747
LAMC1		substrate adhesion-dependent cell spreading	axon guidance, cell migration						18.009 1.0582
Sh3bgrl3									1.8957 12.699
COL6A2		cell adhesion				sarcolemma			16.113 1.0582
DBN1		cell-cell adhesion				plasma membrane			16.113 1.0582
EIF3A									12.322 12.699
IDH2						integral component of plasma membrane			9.4783 8.4659
Mrc2									2.8435 20.107
VDAC3									10.426 13.757
SDCBP		cell-cell adhesion		substrate-dependent cell migration, cell extension		interleukin-5 receptor complex			13.27 5.2912
EIF5B									4.7392 12.699
MYO1B		cell-cell adhesion				basolateral plasma membrane, lateral plasma membrane, plasma membrane			12.322 1.0582
Ecm29									5.687 8.4659
EEF1D		cell-cell adhesion							13.27 6.3495
EIF4H		cell-cell adhesion							9.4783 6.3495
NAA15									4.7392 10.582
PHB2									8.5305 9.5242
SRM									12.322 3.1747
Usp14						plasma membrane			5.687 12.699
Dnajb11									3.7913 9.5242
FKBP1A									9.4783 7.4077
RAP1GDS1									10.426 4.233
Pcna									4.7392 9.5242
Akt1									4.7392 11.641
COL5A1		cell adhesion	wound healing, spreading of epidermal cells			ruffle membrane			15.165 3.1747
CORO1C			neural crest cell migration			flotillin complex, lateral plasma membrane			11.374 4.233
Cops7a						integral component of plasma membrane			4.7392 13.757
Hnrnpn									8.5305 8.4659
OLA1		cell-cell adhesion				plasma membrane			5.687 10.582
PAK2		cell-cell adhesion		intestinal epithelial cell migration, leukocyte migration					4.7392 9.5242
PTPN11									5.687 10.582
SEC24D									10.426 4.233
Napa									4.7392 11.641
Dars									9.4783 3.1747
ZYX		cell adhesion, cell-matrix adhesion				integral component of plasma membrane			18.957 2.1165
TGFBI11		cell adhesion							10.426 5.2912
Canx									7.5827 24.34
HNRNPH1									11.374 14.815
Idh1		cell-cell adhesion							11.374 22.223
KPNA6(Kpna6)									10.426 4.233
OTUB1									4.7392 8.4659
PDIM1		cell-cell adhesion							8.5305 7.4077
PSME2									4.7392 8.4659
Psat1									3.7913 19.048
Ctnnb1		cell-matrix adhesion, single organismal cell-cell adhesion	layer formation in cerebral cortex, neuron migration			basolateral plasma membrane, catenin complex, flotillin complex, lateral plasma membrane, microvillus membrane, plasma membrane			9.4783 4.233
FHL1						flotillin complex, plasma membrane			12.322 3.1747
CTNND1						integral component of plasma membrane			9.4783 6.3495
Tomm40									1.8957 12.699
Glrx3						plasma membrane			2.8435 10.582
LIMA1		cell-cell adhesion				AP-2 adaptor complex, clathrin coat of coated pit, postsynaptic membrane, presynaptic membrane			9.4783 3.1747
PICALM		cell-cell adhesion							10.426 2.1165
CBX3									6.6348 5.2912
ARCN1									6.6348 5.2912
COLGALT1									7.5827 5.2912
LMAN2						integral component of plasma membrane			20.852 1.0582
PRDX5									3.7913 10.582
HNRNPA3									7.5827 7.4077
Uba2									10.426 5.2912
TMED7									8.5305 3.1747
CDC37									3.7913 8.4659
PSMD14									8.5305 6.3495
FAM114A1									12.322 1.0582
NANS									13.27 1.0582
PDLIM7									4.7392 9.5242
Pgls									3.7913 8.4659
ABCE1									7.5827 6.3495
Eif3k									9.4783 2.1165
GBE1									0.94783 15.874
Lgals3			eosinophil chemotaxis, macrophage chemotaxis, monocyte chemotaxis, monocyte migration			external side of plasma membrane, immunological synapse			7.5827 2.1165
NACA									12.322 5.2912
PGM1									7.5827 5.2912
Adsl									3.7913 10.582
TALDO1									10.426 7.4077
TAX1BP3									8.5305 3.1747
USP5									3.7913 6.3495
Ipo9									1.8957 11.641
AKR1B1									9.4783 2.1165
FHL2		cell-cell adhesion							10.426 1.0582
CAPG									15.165 4.233
Eif3d									6.6348 6.3495
EIF3F									5.687 7.4077
LIMS1									5.687 8.4659
PSMB6		cell-cell adhesion							5.687 7.4077
PSMD13									5.687 8.4659
PSMD4									7.5827 4.233
CTPS1									5.687 13.757
RSU1									10.426 3.1747
KARS						plasma membrane			5.687 7.4077

<sup>a</sup>Exponentially Modified Protein Abundance Index ([http://www.matrixscience.com/help/quant\\_empai\\_help.html](http://www.matrixscience.com/help/quant_empai_help.html)).

Table 1. Cont 4.

UniProt/SWISS-PROT ID	Alternate ID	biological adhesion	Biological Process	Cellular Component	Molecular Function	emPAI <sup>a</sup>
			locomotion	plasma membrane	antioxidant activity	hMSC_P3_D mouse_D
			rhythmic process		molecular transducer activity	
Both hADSC and mADSC	Akr1a1			apical plasma membrane		7.5827 4.233
	CNPY2			integral component of plasma membrane		6.6348 5.2912
	AP2A2			AP-2 adaptor complex, plasma membrane		8.5305 6.3495
	Ero1a					5.687 6.3495
	Nars					6.6348 14.815
	Sec23ip					3.7913 9.5242
	ERP29					12.322 4.233
	GPI					17.061 4.233
	ITGA5	cell adhesion mediated by integrin, cell-cell adhesion	leukocyte migration, wound healing, spreading of epidermal cells	ciliary membrane, plasma membrane	virus receptor activity	10.426 1.0582
	LASP1			alphav-beta3 integrin-vitronectin complex, external side of plasma membrane,		10.426 1.0582
	MIF		leukocyte migration, positive chemotaxis			13.27 3.1747
	CYB5R3					17.061 1.0582
	Hnrnpab					3.7913 11.641
	HARS					9.4783 2.1165
	Cpne1			plasma membrane		4.7392 7.4077
	ESD					13.27 15.874
	OAT					13.27 5.2912
	Kpna3					9.4783 9.5242
	ANXA11					9.4783 1.0582
	C1qbp			plasma membrane		0.94783 14.815
	RCN3					10.426 1.0582
	Eef1b					8.5305 25.398
	CARS					14.218 3.1747
	KPNA4					6.6348 11.641
	ESYT1(Esyt1)	cell-cell adhesion		plasma membrane		17.061 1.0582
	Pdlim5			plasma membrane, postsynaptic membrane		6.6348 9.5242
	UAP1			plasma membrane		6.6348 5.2912
	LAP3					12.322 5.2912
	ADH5					14.218 2.1165

<sup>a</sup>Exponentially Modified Protein Abundance Index ([http://www.matrixscience.com/help/quant\\_empai\\_help.html](http://www.matrixscience.com/help/quant_empai_help.html)).