

Table S1. Differentially altered proteins identified in ARID1A-overexpressing and empty vector control SW48 cells.

No.	Protein accession number	Gene Names	Protein name	Peptide sequences	Intensity (mean ± standard deviation)		P-value (unpaired t-test)	Log ₂ (fold change) ^a
					Empty vector	ARID1A		
1	Q96H35	RBM18	Probable RNA-binding protein 18	LALSKKLVVR	0.000±0.00	15.862±3.04	8.27923 x10 ⁻⁴	13.93
2	Q4ZIN3	TMEM259	Membralin	DQCFGDR	0.000±0.00	13.762±1.14	3.14598x10 ⁻⁵	13.74
3	Q6ZT07	TBC1D9	TBC1 domain family member 9	ISDFLQQTTSK	0.000±0.00	13.599±1.95	2.67227 x10 ⁻⁴	13.72
4	P08631	HCK	Tyrosine-protein kinase HCK	DYDPRQGDTVK	0.000±0.00	13.714±3.46	2.36198 x10 ⁻³	13.71
5	Q9H706	GAREM1	GRB2 associated and regulator of MAPK protein 1	DIKEPVQYFNSVE EVAK	0.000±0.00	13.411±0.16	1.43958x10 ⁻⁸	13.71
6	Q16515	ASIC2	Acid-sensing ion channel 2	DMMLYCKFK	0.000±0.00	13.161±0.17	1.72986 x10 ⁻⁸	13.68
7	Q13470	TNK1	Non-receptor tyrosine-protein kinase TNK1	EVSVMNLEHPH VLR	0.000±0.00	13.264±2.13	4.19574 x10 ⁻⁴	13.68
8	Q8NFD5	ARID1B	AT-rich interactive domain-containing protein 1B	CICVSNIVR	0.000±0.00	13.255±2.27	5.39093 x10 ⁻⁴	13.68
9	Q96K21	ZFYVE19	Abscission/NoCut checkpoint regulator	EENTRQER	0.000±0.00	13.240±2.26	5.27156 x10 ⁻⁴	13.68
10	Q7Z794	KRT77	Keratin, type II cytoskeletal 1b	FASFIDK	0.000±0.00	13.052±1.23	5.12024 x10 ⁻⁵	13.67
11	Q13231	CHIT1	Chitotriosidase-1	TLLAIGWNFGT QK	0.000±0.00	12.934±0.40	6.246 x10 ⁻⁷	13.66
12	Q9Y2T3	GDA	Guanine deaminase	FVSEMLQK	0.000±0.00	12.899±0.64	4.09322 x10 ⁻⁶	13.65
13	Q9NRD1	FBXO6	F-box only protein 6	DLIDLMTLWK	0.000±0.00	12.897±0.99	2.32037 x10 ⁻⁵	13.65
14	P40189	IL6ST	Interleukin-6 receptor subunit beta	NLSCIVNEGK	0.000±0.00	12.961±2.00	3.60053 x10 ⁻⁴	13.65
15	Q9BXI3	NT5C1A	Cytosolic 5'-nucleotidase 1A	ALEAVNRRLR	0.000±0.00	12.889±1.38	8.49063 x10 ⁻⁵	13.65
16	Q9NQ69	LHX9	LIM/homeobox protein Lhx9	DSLVCYCR	0.000±0.00	12.764±0.98	2.29092 x10 ⁻⁵	13.64
17	Q9Y5I2	PCDHA10	Protocadherin alpha-10	DINDNPPRFSVTE QK	0.000±0.00	12.730±0.40	6.27543 x10 ⁻⁷	13.64
18	Q8NEM1	ZNF680	Zinc finger protein 680	AFNQFANLTR	0.000±0.00	12.727±1.23	5.75698 x10 ⁻⁵	13.63
19	P08729	KRT7	Keratin, type II cytoskeletal 7	AIQRLQAEIDNIK NQR	0.000±0.00	12.663±0.80	1.05265 x10 ⁻⁵	13.63
20	Q86V71	ZNF429	Zinc finger protein 429	AFNWSSTLTKHK	0.000±0.00	12.598±0.02	2.94119 x10 ⁻¹²	13.62
21	Q13395	TARBP1	Probable methyltransferase TARBP1	AAGAALR	0.000±0.00	12.533±0.29	2.00669 x10 ⁻⁷	13.61
22	Q86Y25	ZNF354C	Zinc finger protein 354C	AFNQYSSFNEHR	0.000±0.00	12.515±0.99	2.54046 x10 ⁻⁵	13.61
23	Q9UJ41	RABGEF1	Rab5 GDP/GTP exchange factor	LMTGEDGYIFTN LCCAVAFIEK	0.000±0.00	12.597±1.99	3.92433 x10 ⁻⁴	13.61
24	Q8IYN0	ZNF100	Zinc finger protein 100	FYKCEECGK	0.000±0.00	12.475±0.44	1.0284 x10 ⁻⁶	13.61
25	O75027	ABCB7	Iron-sulfur clusters transporter ABCB7, mitochondrial	ENISKEEER	0.000±0.00	12.453±0.36	4.82419 x10 ⁻⁷	13.60

26	Q9P1A6	DLGAP2	Disks large-associated protein 2	AASFRQNSASER	0.000±0.00	12.419±0.68	6.11971 x10 ⁻⁶	13.60
27	Q8TC56	GARIN3	Golgi-associated RAB2 interactor protein 3	NQKASSHRASAG HK	0.000±0.00	12.392±0.77	1.01073 x10 ⁻⁵	13.60
28	P51812	RPS6KA3	Ribosomal protein S6 kinase alpha-3	ADPSQFELLK	0.000±0.00	12.477±1.94	3.67926 x10 ⁻⁴	13.59
29	P36955	SERPINF1	Pigment epithelium-derived factor	LAAAVSNFGYDL YR	0.000±0.00	12.409±1.27	7.20323 x10 ⁻⁵	13.59
30	Q6ZRC1	C4orf50	Uncharacterized protein C4orf50	DQGAHQASLDE ATRLQEELQAK	0.000±0.00	12.368±0.38	5.62894 x10 ⁻⁷	13.59
31	Q8N7X1	RBMXL3	RNA-binding motif protein, X-linked-like-3	GFAFVTFESPADA K	0.000±0.00	12.397±1.12	4.40949 x10 ⁻⁵	13.59
32	A1L3X0	ELOVL7	Elongation of very long chain fatty acids protein 7	TVHLYDNWIKDA DPR	0.000±0.00	12.311±0.15	1.59981 x10 ⁻⁸	13.59
33	Q15506	SPA17	Sperm surface protein Sp17	KMKTNLSLQNEEK	0.000±0.00	12.285±0.32	3.23225 x10 ⁻⁷	13.58
34	Q13508	ART3	Ecto-ADP-ribosyltransferase 3	LEDHGEK	0.000±0.00	12.276±0.12	6.52518 x10 ⁻⁹	13.58
35	Q8N8U2	CDYL2	Chromodomain Y-like protein 2	GLDSLFSYLQDK	0.000±0.00	12.434±2.44	9.16665 x10 ⁻⁴	13.58
36	Q96EX3	DYNC2I2	Cytoplasmic dynein 2 intermediate chain 2	LDHGDWSTLK	0.000±0.00	12.262±0.60	3.92431 x10 ⁻⁶	13.58
37	Q99683	MAP3K5	Mitogen-activated protein kinase kinase kinase 5	AFILKCFEPDPDK	0.000±0.00	12.253±0.36	4.77696 x10 ⁻⁷	13.58
38	Q6NSI8	SANBR	SANT and BTB domain regulator of class switch recombination	FDPTQLTKGCKV R	0.000±0.00	12.301±1.57	1.68757 x10 ⁻⁴	13.58
39	Q8IUD6	RNF135	E3 ubiquitin-protein ligase RNF135	AFSSGVDLSMASP K	0.000±0.00	12.261±1.01	2.97558 x10 ⁻⁵	13.58
40	Q9BYG4	PARD6G	Partitioning defective 6 homolog gamma	DGASVRVTPHGL EKVPGIFISR	0.000±0.00	12.242±0.57	3.18797 x10 ⁻⁶	13.58
41	Q6ZV29	PNPLA7	Patatin-like phospholipase domain-containing protein 7	DLLTLMK	0.000±0.00	12.325±1.94	3.87791 x10 ⁻⁴	13.58
42	P03952	KLKB1	Plasma kallikrein	EIIHQYK	0.000±0.00	12.232±1.08	3.94375 x10 ⁻⁵	13.57
43	Q9NR71	ASAH2	Neutral ceramidase	SPYSYLQNPQSER	0.000±0.00	12.234±1.14	5.00258 x10 ⁻⁵	13.57
44	Q00532	CDKL1	Cyclin-dependent kinase-like 1	EHNKPTRK	0.000±0.00	12.220±1.27	7.6779 x10 ⁻⁵	13.57
45	Q06187	BTK	Tyrosine-protein kinase BTK	DSSKAGK	0.000±0.00	12.133±1.06	3.81578 x10 ⁻⁵	13.56
46	Q8TAK5	GABPB2	GA-binding protein subunit beta-2	MTALHWATER	0.000±0.00	12.082±0.38	6.62106 x10 ⁻⁷	13.56
47	Q9Y6A4	CFAP20	Cilia- and flagella-associated protein 20	KYFTFEVQLDD K	0.000±0.00	12.135±1.68	2.36845 x10 ⁻⁴	13.56
48	P00352	ALDH1A1	Aldehyde dehydrogenase 1A1	IFVEESYDEFVRR SVER	0.000±0.00	12.061±0.51	2.1547 x10 ⁻⁶	13.56
49	P0CG30	GSTT2B	Glutathione S-transferase theta-2B	GLELFLDLVSQPS R	0.000±0.00	12.090±1.41	1.18621 x10 ⁻⁴	13.56
50	Q8WXX5	DNAJC9	DnaJ homolog subfamily C member 9	ISLEDIQAFEK	0.000±0.00	12.037±0.28	1.91604 x10 ⁻⁷	13.55
51	Q5PSV4	BRMS1L	Breast cancer metastasis-suppressor 1-like protein	DQLYKER	0.000±0.00	12.122±1.83	3.31005 x10 ⁻⁴	13.55
52	Q6ZVH6	n/a	Putative uncharacterized protein FLJ42569	TLLSPVCVPARDQ	0.000±0.00	12.032±0.19	4.09435 x10 ⁻⁸	13.55

				RAPR				
53	P15882	CHN1	N-chimaerin	FGSQTRNFRLYYD GK	0.000±0.00	12.046±0.74	9.25066 x10 ⁻⁶	13.55
54	A3KN83	SBNO1	Protein strawberry notch homolog 1	DYNNIGKFLNR	0.000±0.00	12.057±1.31	9.16732 x10 ⁻⁵	13.55
55	Q6UVW9	CLEC2A	C-type lectin domain family 2 member A	AELAQIDTQEDM EFLKR	0.000±0.00	12.132±2.23	7.03358 x10 ⁻⁴	13.55
56	Q86TN4	TRPT1	tRNA 2'-phosphotransferase 1	KQRFALQLGDPST GLLIR	0.000±0.00	12.003±0.72	8.674 x10 ⁻⁶	13.55
57	Q9P2T0	THEG	Testicular haploid expressed gene protein	DPRWEVLDVTKK	0.000±0.00	12.122±2.22	6.99438 x10 ⁻⁴	13.55
58	Q9HOR1	AP5M1	AP-5 complex subunit mu-1	APAPVTYGSLLL	0.000±0.00	11.993±0.67	6.31729 x10 ⁻⁶	13.55
59	Q06455	RUNX1T1	Protein CBFA2T1	ALSLVIGDCR	0.000±0.00	11.985±0.45	1.36253 x10 ⁻⁶	13.55
60	Q5XUX0	FBXO31	F-box only protein 31	DEFSTKCNQTDH HRMSGGR	0.000±0.00	11.943±0.74	9.9972 x10 ⁻⁶	13.54
61	P43268	ETV4	ETS translocation variant 4	FEGDIKQEGVGAF R	0.000±0.00	11.913±0.12	7.83781 x10 ⁻⁹	13.54
62	O94966	USP19	Ubiquitin carboxyl-terminal hydrolase 19	AVPPGNDPVSPA MVRSR	0.000±0.00	11.907±0.51	2.19154 x10 ⁻⁶	13.54
63	P07911	UMOD	Uromodulin	DWVSVVTPAR	0.000±0.00	11.888±0.90	2.19327 x10 ⁻⁵	13.53
64	Q06730	ZNF33A	Zinc finger protein 33A	SCQCNECGK	0.000±0.00	11.870±0.66	6.24542 x10 ⁻⁶	13.53
65	Q7L7X3	TAOK1	Serine/threonine-protein kinase TAO1	AGNILLTEPGQVK	0.000±0.00	11.897±1.54	1.8117 x10 ⁻⁴	13.53
66	Q14140	SERTAD2	SERTA domain-containing protein 2	IVSPCDGPSK	0.000±0.00	11.823±0.31	3.09722 x10 ⁻⁷	13.53
67	P20813	CYP2B6	Cytochrome P450 2B6	AEAFSGR	0.000±0.00	11.817±0.46	1.52088 x10 ⁻⁶	13.53
68	O95171	SCEL	Sciellin	ATISRYSSDDTLD RISDR	0.000±0.00	11.806±0.60	4.39198 x10 ⁻⁶	13.53
69	Q5JVX7	C1orf141	Uncharacterized protein C1orf141	EDKSCSITK	0.000±0.00	11.800±0.44	1.27551 x10 ⁻⁶	13.53
70	P21506	ZNF10	Zinc finger protein 10	EKPYECK	0.000±0.00	11.863±1.54	1.83632 x10 ⁻⁴	13.53
71	Q8IYJ2	C10orf67	Uncharacterized protein C10orf67, mitochondrial	EADRLNKSWEK	0.000±0.00	11.811±1.02	3.71844 x10 ⁻⁵	13.52
72	Q9NWS6	FAM118A	Protein FAM118A	DSVEKTTNRSEQK	0.000±0.00	11.788±0.49	1.94509 x10 ⁻⁵	13.52
73	Q9HCH3	CPNE5	Copine-5	ALCNGDYDR	0.000±0.00	11.777±0.65	6.3098 x10 ⁻⁶	13.52
74	Q8TAM2	TTC8	Tetratricopeptide repeat protein 8	LGMYREAEK	0.000±0.00	11.774±0.84	1.71001 x10 ⁻⁵	13.52
75	P12035	KRT3	Keratin, type II cytoskeletal 3	AGGFGGGR	0.000±0.00	11.764±0.71	8.98623 x10 ⁻⁶	13.52
76	Q15569	TESK1	Dual specificity testis-specific protein kinase 1	EDLRGGK	0.000±0.00	11.755±0.74	1.05105 x10 ⁻⁵	13.52
77	A8MYZ6	FOXO6	Forkhead box protein O6	LTLSQIYDWMVR	0.000±0.00	11.744±0.65	6.12588 x10 ⁻⁶	13.52
78	Q8N8Y2	ATP6V0D2	V-type proton ATPase subunit d 2	EVQMNVLAFNR	0.000±0.00	11.851±2.00	5.07703 x10 ⁻⁴	13.52
79	O00462	MANBA	Beta-mannosidase	LPQSTDPLRFTKD TIYLTQVMQAQC VK	0.000±0.00	11.724±0.30	2.95841 x10 ⁻⁷	13.52
80	Q6ZMT1	STAC2	SH3 and cysteine-rich domain-containing protein 2	CCQPFSGNKEQG YMSLK	0.000±0.00	11.720±0.31	3.11859 x10 ⁻⁷	13.52

81	Q9P291	ARMCX1	Armadillo repeat-containing X-linked protein 1	ELGGVPIIAK	0.000±0.00	11.765±1.30	9.77171 x10 ⁻⁵	13.52
82	Q93074	MED12	Mediator of RNA polymerase II transcription subunit 12	AYMNLAK	0.000±0.00	11.745±1.18	6.71496 x10 ⁻⁵	13.51
83	Q9BYW3	DEFB126	Beta-defensin 126	KCKPEEMHVK	0.000±0.00	11.703±0.34	4.69447 x10 ⁻⁷	13.51
84	Q96RI9	TAAR9	Trace amine-associated receptor 9	IESTASQAQSSSES YKERVAK	0.000±0.00	11.705±0.57	3.85247 x10 ⁻⁶	13.51
85	P47712	PLA2G4A	Cytosolic phospholipase A2	GAFGDMLDTPDP YVELFISTTPDSRK	0.000±0.00	11.714±1.02	3.78866 x10 ⁻⁵	13.51
86	Q9UI08	EVL	Ena/VASP-like protein	AASQSDKPAEK	0.000±0.00	11.686±0.51	2.38456 x10 ⁻⁶	13.51
87	P55795	HNRNPH2	Heterogeneous nuclear ribonucleoprotein H2	AEVRTHYDPPR	0.000±0.00	11.682±0.47	1.71666 x10 ⁻⁶	13.51
88	O43159	RRP8	Ribosomal RNA-processing protein 8	CHKQALVGSDSA EDEKR	0.000±0.00	11.695±1.00	3.54118 x10 ⁻⁵	13.51
89	Q15349	RPS6KA2	Ribosomal protein S6 kinase alpha-2	ADPSQFELLK	0.000±0.00	11.698±1.15	6.07554 x10 ⁻⁵	13.51
90	Q8NHS4	CLHC1	Clathrin heavy chain linker domain-containing protein 1	CLALAQIVYSECG LHK	0.000±0.00	11.699±1.43	1.45464 x10 ⁻⁴	13.51
91	Q5T7N3	KANK4	KN motif and ankyrin repeat domain-containing protein 4	AGGNGTK	0.000±0.00	11.691±1.33	1.0784 x10 ⁻⁴	13.51
92	Q96M60	FAM227B	Protein FAM227B	GFWIHWK	0.000±0.00	11.810±2.60	1.41484x10 ⁻³	13.51
93	Q92574	TSC1	Hamartin	EVEMMKAAAYRK	0.000±0.00	11.620±0.38	7.50105 x10 ⁻⁷	13.50
94	Q6UX07	DHRS13	Dehydrogenase/reductase SDR family member 13	LDRPVVGWR	0.000±0.00	11.634±0.81	1.53043 x10 ⁻⁵	13.50
95	Q9NVM6	DNAJC17	DnaJ homolog subfamily C member 17	CKKEDESK	0.000±0.00	11.621±1.09	5.0263 x10 ⁻⁵	13.50
96	Q12770	SCAP	Sterol regulatory element-binding protein cleavage-activating protein	DLLFGVPGK	0.000±0.00	11.637±1.55	2.02321 x10 ⁻⁴	13.50
97	Q9NX76	CMTM6	CKLF-like MARVEL transmembrane domain-containing protein 6	AEALTEPLNA	0.000±0.00	11.565±0.21	7.91512 x10 ⁻⁸	13.50
98	Q9POU4	CXXC1	CXXC-type zinc finger protein 1	AGSGTGVGAMLA R	0.000±0.00	11.565±0.54	3.15013 x10 ⁻⁶	13.50
99	O75061	DNAJC6	Putative tyrosine-protein phosphatase auxilin	DTLKDTSSR	0.000±0.00	11.598±1.23	8.3058 x10 ⁻⁵	13.50
100	P14136	GFAP	Glial fibrillary acidic protein	ETSLDTKSVSEGH LK	0.000±0.00	11.587±1.26	9.0285 x10 ⁻⁵	13.49
101	Q6ZVH7	ESPNL	Espin-like protein	EASASPPRSEAQR	0.000±0.00	11.762±2.73	1.71230 x10 ⁻⁴	13.49
102	Q93084	ATP2A3	Sarcoplasmic/endoplasmic reticulum calcium ATPase 3	EFTLEFSR	0.000±0.00	11.526±0.22	8.31921 x10 ⁻⁸	13.49
103	Q6P444	MTRF2	Mitochondrial fission regulator 2	DIPNMLDVLK	0.000±0.00	11.537±0.75	1.17292 x10 ⁻⁵	13.49
104	Q9BZ67	FRMD8	FERM domain-containing protein 8	ELQIHDEEVLR	0.000±0.00	11.533±0.86	2.03082 x10 ⁻⁵	13.49
105	Q15631	TSN	Translin	EAVTEILGIEPDR	0.000±0.00	11.529±0.94	2.92579 x10 ⁻⁵	13.49
106	Q6ZQY7	n/a	Putative uncharacterized protein FLJ46792	TVQGEDRNTMFR	0.000±0.00	11.484±0.32	3.81154 x10 ⁻⁷	13.49
107	Q8IYU2	HACE1	E3 ubiquitin-protein ligase HACE1	IIFDHFHFLLECP LMSR	0.000±0.00	11.525±1.26	9.33637 x10 ⁻⁵	13.49

108	Q6VAB6	KSR2	Kinase suppressor of Ras 2	DNEDQLKAFKR	0.000±0.00	11.471±0.29	2.70988 x10 ⁻⁷	13.49
109	Q9UKB1	FBXW11	F-box/WD repeat-containing protein 11	EKDLCIK	0.000±0.00	11.469±0.37	7.28789 x10 ⁻⁷	13.48
110	Q9H6V9	LDAH	Lipid droplet-associated hydrolase	AFLLFPTIERMSES PNGR	0.000±0.00	11.486±0.96	3.17017 x10 ⁻⁵	13.48
111	O15393	TMPRSS2	Transmembrane protease serine 2	AACRDMGYK	0.000±0.00	11.461±0.44	1.42682 x10 ⁻⁶	13.48
112	Q6P2P2	PRMT9	Protein arginine N-methyltransferase 9	ETLEFWLRHVED ESAMLQRPK	0.000±0.00	11.450±0.15	1.8394 x10 ⁻⁸	13.48
113	P78395	PRAME	Melanoma antigen preferentially expressed in tumors	IFAMPMDIKMIL K	0.000±0.00	11.481±1.10	5.52893 x10 ⁻⁵	13.48
114	Q9Y5A6	ZSCAN21	Zinc finger and SCAN domain-containing protein 21	AFSNSSNLTKHR	0.000±0.00	11.500±1.43	1.53618 x10 ⁻⁴	13.48
115	Q96MK3	FAM20A	Pseudokinase FAM20A	FSDFGKAMFKPM R	0.000±0.00	11.46±0.91	2.58635 x10 ⁻⁵	13.48
116	Q9HB29	IL1RL2	Interleukin-1 receptor-like 2	LYDAYVLYPKPH KESQR	0.000±0.00	11.461±0.96	3.26375 x10 ⁻⁵	13.48
117	Q7Z402	TMC7	Transmembrane channel-like protein 7	LTEAQRDMRN	0.000±0.00	11.469±1.14	6.36731 x10 ⁻⁵	13.48
118	Q7Z3T8	ZFYVE16	Zinc finger FYVE domain-containing protein 16	CKSILLQSLIEGME DRK	0.000±0.00	11.450±0.92	2.75211 x10 ⁻⁵	13.48
119	Q99583	MNT	Max-binding protein MNT	EKEYEHMER	0.000±0.00	11.527±1.96	5.2003 x10 ⁻⁴	13.48
120	Q9UMX0	UBQLN1	Ubiquilin-1	ALSNLESIPGGYN ALRR	0.000±0.00	11.458±1.16	6.91014 x10 ⁻⁵	13.48
121	Q9UNK0	STX8	Syntaxin-8	IQQRNQYERK	0.000±0.00	11.428±0.58	4.26402 x10 ⁻⁶	13.48
122	O00170	AIP	AH receptor-interacting protein	VIQEGRGELPDFQ DGTK	0.000±0.00	11.403±0.10	3.34228 x10 ⁻⁹	13.48
123	Q17RS7	GEN1	Flap endonuclease GEN homolog 1	DLPGIPLQNESR	0.000±0.00	11.397±0.51	2.74243 x10 ⁻⁶	13.48
124	O95996	APC2	Adenomatous polyposis coli protein 2	AFTRERPQGR	0.000±0.00	11.384±0.23	1.04928 x10 ⁻⁷	13.47
125	Q86UD0	SAPCD2	Suppressor APC domain-containing protein 2	APLAGPSAAAR	0.000±0.00	11.429±1.26	9.59261 x10 ⁻⁵	13.47
126	Q96MC2	DRC1	Dynein regulatory complex protein 1	ELEYLNNRMK	0.000±0.00	11.587±2.55	1.41259 x10 ⁻³	13.47
127	Q68CR7	LRRC66	Leucine-rich repeat-containing protein 66	KEEWKIK	0.000±0.00	11.386±0.56	3.88844 x10 ⁻⁶	13.47
128	Q9UN19	DAPP1	Dual adapter for phosphotyrosine and 3-phosphotyrosine and 3-phosphoinositide	DSVKHFHVEYTG YSFK	0.000±0.00	11.380±0.37	7.74329 x10 ⁻⁷	13.47
129	Q6PI48	DARS2	Aspartate--tRNA ligase, mitochondrial	LICLVTGSPSIRDV IAFPK	0.000±0.00	11.608±2.99	2.54841 x10 ⁻³	13.47
130	Q6ZRI6	C15orf39	Uncharacterized protein C15orf39	AEKRPLR	0.000±0.00	11.398±1.10	5.7289 x10 ⁻⁵	13.47
131	Q9NZ63	C9orf78	Splicing factor C9orf78	GDSESEDEQDSE EVR	0.000±0.00	11.355±0.35	5.85194 x10 ⁻⁷	13.47
132	Q9Y6C2	EMILIN1	EMILIN-1	RFLRPRYR	0.000±0.00	11.382±1.54	2.14136 x10 ⁻⁴	13.47
133	Q86VG3	IFTAP	Intraflagellar transport-associated protein	DTSPDLEKSCD	0.000±0.00	11.391±1.71	3.22028 x10 ⁻⁴	13.46
134	P26951	IL3RA	Interleukin-3 receptor subunit alpha	AQQLTWDLNR	0.000±0.00	11.303±0.57	4.21678 x10 ⁻⁶	13.46

135	O00214	LGALS8	Galectin-8	AGCIVCNTLINEK	0.000±0.00	11.317±1.01	4.11969 x10 ⁻⁵	13.46
136	Q9H871	RMND5A	E3 ubiquitin-protein transferase RMND5A	DQCVTVERELEK	0.000±0.00	11.297±0.59	4.92876 x10 ⁻⁶	13.46
137	Q9NPD5	SLCO1B3	Solute carrier organic anion transporter family member 1B3	ISITQIERR	0.000±0.00	11.332±1.28	1.05598 x10 ⁻⁴	13.46
138	Q96GM8	TOE1	Target of EGR1 protein 1	AVCHAARTR	0.000±0.00	11.325±1.53	2.1329 x10 ⁻⁴	13.46
139	Q8WX92	NELFB	Negative elongation factor B	LEALQKALEPTGQSGEAVK	0.000±0.00	11.290±1.22	8.80329 x10 ⁻⁵	13.46
140	Q92630	DYRK2	Dual specificity tyrosine-phosphorylation-regulated kinase 2	ATPMTPEQAMK	0.000±0.00	11.270±0.90	2.65254 x10 ⁻⁵	13.46
141	Q495T6	MMEL1	Membrane metallo-endopeptidase-like 1	AYLKWMAEGGK	0.000±0.00	11.248±0.42	1.27004 x10 ⁻⁶	13.46
142	Q11130	FUT7	Alpha-(1,3)-fucosyltransferase 7	CHLSANRSLLASADAVVFHHRELQTR	0.000±0.00	11.244±0.45	1.64204 x10 ⁻⁶	13.46
143	Q7Z7G0	ABI3BP	Target of Nesh-SH3	DNVEGGIWSK	0.000±0.00	11.264±0.92	2.94279 x10 ⁻⁵	13.46
144	A6NMZ2	SNTN	Sentan	AIATTALIFRNSSDSDGK	0.000±0.00	11.248±0.62	6.14909 x10 ⁻⁶	13.46
145	Q96RR1	TWNK	Twinkle mtDNA helicase	ASQEADNVLILQDR	0.000±0.00	11.282±1.30	1.14881 x10 ⁻⁴	13.46
146	Q6ZRG5	n/a	Putative uncharacterized protein FLJ43944	EVEPSATQQEASGHPLK	0.000±0.00	11.226±0.49	2.43435 x10 ⁻⁶	13.45
147	Q8IV32	CCDC71	Coiled-coil domain-containing protein 71	AVHWSWR	0.000±0.00	11.347±2.17	8.19743 x10 ⁻⁴	13.45
148	P30046	DDT	D-dopachrome decarboxylase	FFPLESWQIGK	0.000±0.00	11.213±0.27	2.31888 x10 ⁻⁷	13.45
149	Q9Y264	ANGPT4	Angiopoietin-4	ENGTVNFQRNWKDYK	0.000±0.00	11.229±0.96	3.52307 x10 ⁻⁵	13.45
150	Q96KP6	TNIP3	TNFAIP3-interacting protein 3	LNEELHELK	0.000±0.00	11.228±0.95	3.31926 x10 ⁻⁵	13.45
151	Q2NKQ1	SGSM1	Small G protein signaling modulator 1	APLKLLCDNMK	0.000±0.00	11.258±1.40	1.5446 x10 ⁻⁴	13.45
152	Q9H2W6	MRPL46	39S ribosomal protein L46, mitochondrial	ALDENQRLAK	0.000±0.00	11.211±0.64	6.84758 x10 ⁻⁶	13.45
153	Q8N3E9	PLCD3	1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase delta-3	IEIHGVPADCAR	0.000±0.00	11.186±0.02	2.6777 x10 ⁻¹²	13.45
154	P55316	FOXG1	Forkhead box protein G1	EVKMIPK	0.000±0.00	11.278±1.76	3.74923 x10 ⁻⁴	13.45
155	Q6P6B7	ANKRD16	Ankyrin repeat domain-containing protein 16	AAVTGQDEAIR	0.000±0.00	11.176±0.54	3.54681 x10 ⁻⁶	13.45
156	P10155	RO60	RNA-binding protein RO60	ALLQEMPLTALLR	0.000±0.00	11.226±1.54	2.28122 x10 ⁻⁴	13.45
157	Q6KF10	GDF6	Growth/differentiation factor 6	ALLVVVTRSQR	0.000±0.00	11.201±1.18	8.13813 x10 ⁻⁵	13.45
158	Q9P2N6	KANSL3	KAT8 regulatory NSL complex subunit 3	ALQSDRLAR	0.000±0.00	11.199±1.25	1.00648 x10 ⁻⁴	13.44
159	Q96LC7	SIGLEC10	Sialic acid-binding Ig-like lectin 10	AVTETTK	0.000±0.00	11.154±0.41	1.19477 x10 ⁻⁶	13.44
160	O94769	ECM2	Extracellular matrix protein 2	ALHFRLRNNNK	0.000±0.00	11.152±0.37	7.79895 x10 ⁻⁷	13.44
161	Q96BN8	OTULIN	Ubiquitin thioesterase otulin	AIELYNDKEK	0.000±0.00	11.142±0.11	7.43929 x10 ⁻⁹	13.44
162	Q96LA5	FCRL2	Fc receptor-like protein 2	APGGQVTEGQK	0.000±0.00	11.215±1.67	3.11195 x10 ⁻⁴	13.44
163	Q8NCN2	ZBTB34	Zinc finger and BTB domain-containing protein 34	IESPERTDVYVEQ	0.000±0.00	11.146±1.00	4.24002 x10 ⁻⁵	13.44

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164	Q71H61	ILDR2	Immunoglobulin-like domain-containing receptor 2	GYRIQADKER	0.000±0.00	11.126±0.63	7.00522 x10 ⁻⁶	13.44
165	A4D1Z8	GRIFIN	Grifin	GLSWGDR	0.000±0.00	11.115±0.27	2.29345 x10 ⁻⁷	13.44
166	Q08881	ITK	Tyrosine-protein kinase ITK/TSK	NCLVGENQVIK	0.000±0.00	11.131±0.79	1.66013 x10 ⁻⁵	13.44
167	Q96CB8	INTS12	Integrator complex subunit 12	GIDSSYRPSQK	0.000±0.00	11.163±1.37	1.46479 x10 ⁻⁴	13.44
168	O60240	PLIN1	Perilipin-1	GLDHLEEK	0.000±0.00	11.183±1.69	3.33557 x10 ⁻⁴	13.44
169	Q76M96	CCDC80	Coiled-coil domain-containing protein 80	KAQDKILSNEYEE K	0.000±0.00	11.223±2.13	7.96522 x10 ⁻⁴	13.44
170	Q13227	GPS2	G protein pathway suppressor 2	KVLHEEEK	0.000±0.00	11.147±1.38	1.50671 x10 ⁻⁴	13.44
171	Q8N7C4	TMEM217	Transmembrane protein 217	ISTAEILHSRNLK	0.000±0.00	11.140±1.34	1.35634 x10 ⁻⁴	13.44
172	P24385	CCND1	G1/S-specific cyclin-D1	EVLPSMRK	0.000±0.00	11.087±0.72	1.15904 x10 ⁻⁵	13.43
173	O15121	DEGS1	Sphingolipid delta	REILAKYPEIK	0.000±0.00	11.091±0.92	3.09494 x10 ⁻⁵	13.43
174	Q9UN67	PCDHB10	Protocadherin beta-10	AVRELCFPR	0.000±0.00	11.061±0.09	2.82828 x10 ⁻⁹	13.43
175	Q9P2J3	KLHL9	Kelch-like protein 9	AACRWLRLEDPR	0.000±0.00	11.069±0.58	5.12984 x10 ⁻⁶	13.43
176	Q16270	IGFBP7	Insulin-like growth factor-binding protein 7	DACGCCPMCAR	0.000±0.00	11.056±0.78	1.66038 x10 ⁻⁵	13.43
177	Q6IAA8	LAMTOR1	Ragulator complex protein LAMTOR1	IAAYAYSALSQIR VDAK	0.000±0.00	11.085±1.30	1.20806 x10 ⁻⁴	13.43
178	P21980	TGM2	Protein-glutamine gamma-glutamyltransferase 2	LVVRRGQPFWLT LHFEGR	0.000±0.00	11.130±1.79	4.20409 x10 ⁻⁴	13.43
179	O75663	TIPRL	TIP41-like protein	FFLRIDGVLIRMN DTR	0.000±0.00	11.047±0.75	1.40816 x10 ⁻⁵	13.43
180	Q8N4C9	C17orf78	Uncharacterized protein C17orf78	LCQCQWLWR	0.000±0.00	11.035±0.98	4.03534 x10 ⁻⁵	13.43
181	P30876	POLR2B	DNA-directed RNA polymerase II subunit RPB2	ICRPLLIVEK	0.000±0.00	11.002±0.51	3.00786 x10 ⁻⁶	13.42
182	Q8WUA4	GTF3C2	General transcription factor 3C polypeptide 2	AYFTAPR	0.000±0.00	11.002±0.59	5.38512 x10 ⁻⁶	13.42
183	Q86UE3	ZNF546	Zinc finger protein 546	AFSRVRDLR	0.000±0.00	11.017±1.02	4.80195 x10 ⁻⁵	13.42
184	Q9P2N2	ARHGAP28	Rho GTPase-activating protein 28	AQPPNAESR	0.000±0.00	11.118±2.10	7.9211 x10 ⁻⁴	13.42
185	Q9BTU6	PI4K2A	Phosphatidylinositol 4-kinase type 2-alpha	AYPFYWAWLPQA K	0.000±0.00	10.973±0.81	1.93933 x10 ⁻⁵	13.42
186	F5H4B4	FAM227A	Protein FAM227A	AIWLDSFWWIFHE R	0.000±0.00	10.930±0.22	1.0045 x10 ⁻⁷	13.42
187	Q8ND07	BBOF1	Basal body-orientation factor 1	LIKTDESVDRAK	0.000±0.00	10.951±0.96	3.88246 x10 ⁻⁵	13.42
188	Q8IUC8	GALNT13	Polypeptide N-acetylgalactosaminyltransferase 13	GDRTLPRV	0.000±0.00	10.911±0.51	3.1302 x10 ⁻⁶	13.41
189	Q2M3M2	SLC5A9	Sodium/glucose cotransporter 4	LTSIEEPLWR	0.000±0.00	10.897±0.15	2.54121 x10 ⁻⁸	13.41
190	Q86WJ1	CHD1L	Chromodomain-helicase-DNA-binding protein 1-like	DLDAFENETAKK	0.000±0.00	10.967±1.58	2.74625 x10 ⁻⁴	13.41
191	O94901	SUN1	SUN domain-containing protein 1	IGAVGQAVSR	0.000±0.00	10.913±0.89	2.86215 x10 ⁻⁵	13.41
192	Q15555	MAPRE2	Microtubule-associated protein RP/EB family member 2	QGQDAIPPPDPE QIFNLPK	0.000±0.00	10.942±1.50	2.25921 x10 ⁻⁴	13.41
193	Q15940	ZNF726P1	Putative zinc finger protein 726P1	AFKQHSTLTTHKII	0.000±0.00	10.868±0.56	4.76416 x10 ⁻⁶	13.41

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194	Q5TAA0	TTC22	Tetratricopeptide repeat protein 22	ALGYGQQIPMEE KR	0.000±0.00	10.862±0.74	1.3887 x10 ⁻⁵	13.40
195	Q8N5F7	NKAP	NF-kappa-B-activating protein	EASGSGGR	0.000±0.00	10.855±0.67	9.86261 x10 ⁻⁶	13.40
196	Q5VT98	PRAMEF20	PRAME family member 20	ESYDVRGIVCR	0.000±0.00	10.848±0.63	7.71187 x10 ⁻⁶	13.40
197	O15118	NPC1	NPC intracellular cholesterol transporter 1	FLPMFLSDNPNPK	0.000±0.00	10.855±0.86	2.56992 x10 ⁻⁵	13.40
198	B4DS77	SHISA9	Protein shisa-9	LLGCFTELCLAR	0.000±0.00	10.878±1.47	2.12063 x10 ⁻⁴	13.40
199	Q8N5I9	NOPCHAP1	NOP protein chaperone 1	LPNSEGGK	0.000±0.00	10.843±0.99	4.61167 x10 ⁻⁵	13.40
200	Q15464	SHB	SH2 domain-containing adapter protein B	LLNKCAASAAEES GAGKK	0.000±0.00	10.825±1.05	5.8409 x10 ⁻⁵	13.40
201	P48506	GCLC	Glutamate--cysteine ligase catalytic subunit	FKPPPNSDIGWR	0.000±0.00	10.803±0.76	1.65842 x10 ⁻⁵	13.40
202	P01148	GNRH1	Progonadoliberin-1	DAENLIDSFQEIV K	0.000±0.00	10.766±0.24	1.62258 x10 ⁻⁷	13.39
203	Q9ULT6	ZNRF3	E3 ubiquitin-protein ligase ZNRF3	CGLEHRAVSPAHP FRRPK	0.000±0.00	10.793±0.95	3.92535 x10 ⁻⁵	13.39
204	P33402	GUCY1A2	Guanylate cyclase soluble subunit alpha-2	DAEKNFHNISNR	0.000±0.00	10.731±0.58	5.81817 x10 ⁻⁶	13.39
205	Q96L12	CALR3	Calreticulin-3	DKGLQTTQNGR	0.000±0.00	10.704±0.15	2.85618 x10 ⁻⁸	13.39
206	P22415	USF1	Upstream stimulatory factor 1	IIPDCSMESTKSGQ SK	0.000±0.00	10.716±0.70	1.19706 x10 ⁻⁵	13.39
207	O95450	ADAMTS2	A disintegrin and metalloproteinase with thrombospondin motifs 2	GLAAQEAQGR	0.000±0.00	10.710±0.57	5.25561 x10 ⁻⁶	13.39
208	P13535	MYH8	Myosin-8	AEKQRSDLR	0.000±0.00	10.701±0.71	1.26974 x10 ⁻⁵	13.38
209	Q08AE8	SPIRE1	Protein spire homolog 1	ALDYGLK	0.000±0.00	10.679±0.68	1.06583 x10 ⁻⁵	13.38
210	O95825	CRYZL1	Quinone oxidoreductase-like protein 1	KDLFPVGREIAGI VLDVGSK	0.000±0.00	10.666±0.59	6.01983 x10 ⁻⁶	13.38
211	O43567	RNF13	E3 ubiquitin-protein ligase RNF13	LPAEGLK	0.000±0.00	10.646±0.35	7.92996 x10 ⁻⁷	13.38
212	Q9Y512	SAMM50	Sorting and assembly machinery component 50 homolog	DDIIICEIGDVFKA K	0.000±0.00	10.652±0.82	2.34295 x10 ⁻⁵	13.38
213	P0C7M6	IQCF3	IQ domain-containing protein F3	GVLVRRLLVAA LR	0.000±0.00	10.626±0.28	3.43844 x10 ⁻⁷	13.38
214	Q5MCW4	ZNF569	Zinc finger protein 569	HTGEKPYHCIECG KAFSQKSHLVR	0.000±0.00	10.640±0.72	1.41481 x10 ⁻⁵	13.37
215	O43909	EXTL3	Exostosin-like 3	IQIPAAPIREEAAA EIPHR	0.000±0.00	10.648±1.01	5.2623 x10 ⁻⁵	13.37
216	Q9Y2E5	MAN2B2	Epididymis-specific alpha-mannosidase	EIRTFIHFQQQ	0.000±0.00	10.675±1.45	2.17842 x10 ⁻⁴	13.37
217	Q9H777	ELAC1	Zinc phosphodiesterase ELAC protein 1	TILLDSEENSYLLF DDEQFVVK	0.000±0.00	10.618±0.60	6.61972 x10 ⁻⁶	13.37
218	Q16877	PFKFB4	6-phosphofructo-2-kinase/fructose-2,6- bisphosphatase 4	ATIFNFGQNGYK	0.000±0.00	10.616±0.79	2.01477 x10 ⁻⁵	13.37

219	Q5TIA1	MEI1	Meiosis inhibitor protein 1	AVRQAATAGTPG PRR	0.000±0.00	10.721±2.04	8.05165 x10 ⁻⁴	13.37
220	Q7RTU7	SCX	Basic helix-loop-helix transcription factor scleraxis	AGGRRAGGGGPG GRPGR	0.000±0.00	10.65 0± 1.53	2.72928 x10 ⁻⁴	13.37
221	P56180	TPTE	Putative tyrosine-protein phosphatase TPTE	ESPHTSEFK	0.000±0.00	10.589±0.69	1.19576 x10 ⁻⁵	13.37
222	P52737	ZNF136	Zinc finger protein 136	DQNIKDHYKHR	0.000±0.00	10.622±1.41	1.9722 x10 ⁻⁴	13.37
223	Q00987	MDM2	E3 ubiquitin-protein ligase Mdm2	GEISEKAK	0.000±0.00	10.572±0.90	3.47051 x10 ⁻⁵	13.36
224	Q8TEW6	DOK4	Docking protein 4	ATNFSDIVKQGYV K	0.000±0.00	10.610±1.48	2.42791 x10 ⁻⁴	13.36
225	Q13394	MAB21L1	Putative nucleotidyltransferase MAB21L1	CTGIWPR	0.000±0.00	10.543±0.07	1.08506 x10 ⁻⁹	13.36
226	A0A1B0GX9 5	TRBV7-4	T cell receptor beta variable 7-4	IQRTEQGDSAVYL CASSL	0.000±0.00	10.541±0.13	1.58698 x10 ⁻⁸	13.36
227	P50336	PPOX	Protoporphyrinogen oxidase	ELSIRSCFPSLFQA EQTHR	0.000±0.00	10.555±0.75	1.69942 x10 ⁻⁵	13.36
228	Q9Y5B6	PAXBP1	PAX3- and PAX7-binding protein 1	DAYIGLCLPK	0.000±0.00	10.642±1.85	5.67603 x10 ⁻⁴	13.36
229	Q8IWN7	RPIL1	Retinitis pigmentosa 1-like 1 protein	ADFGGQDDLDF	0.000±0.00	10.636±2.05	8.51728 x10 ⁻⁴	13.36
230	P04070	PROC	Vitamin K-dependent protein C	LIDGKMTRR	0.000±0.00	10.584±1.62	3.49887 x10 ⁻⁴	13.36
231	Q9UKP3	ITGB1BP2	Integrin beta-1-binding protein 2	VFQAQMK	0.000±0.00	10.503±0.51	3.57749 x10 ⁻⁶	13.36
232	Q6ZN57	ZFP2	Zinc finger protein ZFP2	RIHTGEKPYECMV CGK	0.000±0.00	10.504±0.62	7.99835 x10 ⁻⁶	13.36
233	Q9Y646	CPQ	Carboxypeptidase Q	AQNRSYER	0.000±0.00	10.489±0.45	2.16245 x10 ⁻⁶	13.36
234	Q5T7W0	ZNF618	Zinc finger protein 618	APEGSPHGGSVRS R	0.000±0.00	10.483±0.60	7.08536 x10 ⁻⁶	13.35
235	P42263	GRIA3	Glutamate receptor 3	ALKMVQVQGMT GNIQFDYGR	0.000±0.00	10.557±1.70	4.2415 x10 ⁻⁴	13.35
236	P17213	BPI	Bactericidal permeability-increasing protein	DDMIPKESK	0.000±0.00	10.488±0.83	2.59591 x10 ⁻⁵	13.35
237	P07550	ADRB2	Beta-2 adrenergic receptor	YQSLLTKNKAR	0.000±0.00	10.454±0.12	1.09158 x10 ⁻⁸	13.35
238	Q8IX19	MCEMP1	Mast cell-expressed membrane protein 1	ELWNVSNSVQAC EER	0.000±0.00	10.486±1.36	1.82361 x10 ⁻⁴	13.35
239	Q9NRB3	CHST12	Carbohydrate sulfotransferase 12	FLSAGVKQSDLPR	0.000±0.00	10.514±1.83	5.74352 x10 ⁻⁴	13.35
240	Q15067	ACOX1	Peroxisomal acyl-coenzyme A oxidase 1	AEVHESYKHLK	0.000±0.00	10.458±1.31	1.58399 x10 ⁻⁴	13.34
241	Q86X24	HORMAD1	HORMA domain-containing protein 1	IVLHHFDSSSQES VPKRR	0.000±0.00	10.407±0.39	1.37615 x10 ⁻⁶	13.34
242	Q14781	CBX2	Chromobox protein homolog 2	GELGMSPPGSKIP K	0.000±0.00	10.456±1.39	1.99056 x10 ⁻⁴	13.34
243	Q330K2	NDUFAF6	NADH dehydrogenase	DYEGYLCSLLPA ESR	0.000±0.00	10.428±1.08	7.39867 x10 ⁻⁵	13.34
244	O14672	ADAM10	Disintegrin and metalloproteinase domain- containing protein 10	DDKELCHVCCMK K	0.000±0.00	10.412±0.84	2.79254 x10 ⁻⁵	13.34

245	Q13243	SRSF5	Serine/arginine-rich splicing factor 5	LIVENLSSR	0.000±0.00	10.383±0.17	4.39242 x10 ⁻⁸	13.34
246	Q6UXZ3	CD300LD	CMRF35-like molecule 5	KNRVSIR	0.000±0.00	10.635±2.98	3.47086 x10 ⁻³	13.34
247	Q8N442	GUF1	Translation factor GUF1, mitochondrial	AQTASLFYNC EGK	0.000±0.00	10.372±0.11	8.17183 x10 ⁻⁹	13.34
248	Q6IBW4	NCAPH2	Condensin-2 complex subunit H2	KDFRMNTC VPHPR	0.000±0.00	10.404±1.14	9.29897 x10 ⁻⁵	13.34
249	P05120	SERPINB2	Plasminogen activator inhibitor 2	ITNCILFFGR	0.000±0.00	10.359±0.56	5.59788 x10 ⁻⁶	13.34
250	Q96F63	CCDC97	Coiled-coil domain-containing protein 97	DEEERYFD EEPE DAPSP ELDGD	0.000±0.00	10.368±0.81	2.49631 x10 ⁻⁵	13.34
251	Q92734	TFG	Protein TFG	LTLFVNG QPRPLE SSQVK	0.000±0.00	10.322±0.25	2.28404 x10 ⁻⁷	13.33
252	Q9Y5E9	PCDHB14	Protocadherin beta-14	CTLLVK VMDIND NPPEV TISSITK	0.000±0.00	10.341±1.23	1.29202 x10 ⁻⁴	13.33
253	Q6GTX8	LAIR1	Leukocyte-associated immunoglobulin-like receptor 1	ATVNG LPEKDR	0.000±0.00	10.244±0.64	1.03629 x10 ⁻⁵	13.32
254	Q03169	TNFAIP2	Tumor necrosis factor alpha-induced protein 2	ELMDRA LELEAR R	0.000±0.00	10.243±0.68	1.30746 x10 ⁻⁵	13.32
255	Q7Z2K6	ERMP1	Endoplasmic reticulum metalloproteinase 1	EGAAA APPPER	0.000±0.00	10.352±2.02	8.97136 x10 ⁻⁴	13.32
256	Q14696	MESD	LRP chaperone MESD	DFLVG QDR	0.000±0.00	10.225±0.16	4.19162 x10 ⁻⁸	13.32
257	Q8NB59	SYT14	Synaptotagmin-14	LTLNS MGQEMS KCK	0.000±0.00	10.238±0.79	2.35087 x10 ⁻⁵	13.32
258	Q5TON1	CFAP70	Cilia- and flagella-associated protein 70	AEFNQ VVLG DSA K	0.000±0.00	10.247±0.99	5.78084 x10 ⁻⁵	13.32
259	P20849	COL9A1	Collagen alpha-1	GLPGV EGPR	0.000±0.00	10.212±0.16	3.56318 x10 ⁻⁸	13.32
260	A6NFE3	EFCAB10	EF-hand calcium-binding domain-containing protein 10	ETSSR ELQAA EYL EK	0.000±0.00	10.222±0.80	2.46605 x10 ⁻⁵	13.32
261	Q9BVQ7	SPATA5L1	Ribosome biogenesis protein SPATA5L1	AGAPGAR	0.000±0.00	10.202±1.20	1.24002 x10 ⁻⁴	13.31
262	Q2TAL6	VWC2	Brorin	DEGGSGR	0.000±0.00	10.153±0.25	2.33957 x10 ⁻⁷	13.31
263	Q9UPZ9	CILK1	Serine/threonine-protein kinase ICK	NGILSN PGK	0.000±0.00	10.170±1.00	6.13182 x10 ⁻⁵	13.31
264	O14798	TNFRSF10C	Tumor necrosis factor receptor superfamily member 10C	QEEVP QQTV APQ QQR	0.000±0.00	10.133±0.20	1.09068 x10 ⁻⁷	13.31
265	P40937	RFC5	Replication factor C subunit 5	EFGSM VLELN AS DDR	0.000±0.00	10.132±0.40	1.68258 x10 ⁻⁶	13.31
266	Q8WXF0	SRSF12	Serine/arginine-rich splicing factor 12	GFAYV QFED VRD AEDAL YNLNR	0.000±0.00	10.111±0.50	3.95451 x10 ⁻⁶	13.30
267	Q6FHJ7	SFRP4	Secreted frizzled-related protein 4	LSPDRCK	0.000±0.00	10.094±0.88	3.82492 x10 ⁻⁵	13.30
268	Q16527	CSRP2	Cysteine and glycine-rich protein 2	IIGAG KPWH KNCF RCAK	0.000±0.00	10.152±1.77	5.745 x10 ⁻⁴	13.30
269	Q86SG2	ANKRD23	Ankyrin repeat domain-containing protein 23	MDFISI QQLV SGE	0.000±0.00	10.077±0.89	4.05996 x10 ⁻⁵	13.29

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270	Q9UQM7	CAMK2A	Calcium/calmodulin-dependent protein kinase type II subunit alpha	ITAAEALK	0.000±0.00	10.131±1.60	3.89908 x10 ⁻⁴	13.29	
271	Q8IV01	SYT12	Synaptotagmin-12	LWTSGSFSPSPFP NYDYRYLQQK	0.000±0.00	10.044±0.26	2.85646 x10 ⁻⁷	13.29	
272	Q27J81	INF2	Inverted formin-2	AFTEERAK	0.000±0.00	10.085±1.16	1.15213 x10 ⁻⁴	13.29	
273	Q9H361	PABPC3	Polyadenylate-binding protein 3	AVDEMNGKELNG K	0.000±0.00	10.033±0.53	5.34431 x10 ⁻⁶	13.29	
274	Q8N1F8	STK11IP	Serine/threonine-protein kinase 11-interacting protein	EPWEELFSIGLR	0.000±0.00	10.063±1.15	1.11956 x10 ⁻⁴	13.29	
275	P55075	FGF8	Fibroblast growth factor 8	LIVETDTFGSRVR	0.000±0.00	10.023±0.66	1.22418 x10 ⁻⁵	13.29	
276	O95671	ASMTL	Probable bifunctional dTTP/UTP pyrophosphatase/methyltransferase protein [Includes: dTTP/UTP pyrophosphatase	AEDLFQDAYYS PETRLR	0.000±0.00	9.993±0.28	4.29734 x10 ⁻⁷	13.29	
277	Q9Y600	CSAD	Cysteine sulfinic acid decarboxylase	EPEELKQLDLEL R	0.000±0.00	9.928±0.74	2.02262 x10 ⁻⁵	13.27	
278	Q9NYM4	GPR83	G-protein coupled receptor 83	VAWTEKNDGQR	0.000±0.00	9.927±0.88	4.00819 x10 ⁻⁵	13.27	
279	Q9UQ03	CORO2B	Coronin-2B	LKEELAQK	0.000±0.00	9.963±1.50	3.26609 x10 ⁻⁴	13.27	
280	Q9HIR3	MYLK2	Myosin light chain kinase 2, skeletal/cardiac muscle	EALGGGK	0.000±0.00	9.883±0.67	1.3955 x10 ⁻⁵	13.27	
281	Q86UD4	ZNF329	Zinc finger protein 329	AFRDGSYLTQHE R	0.000±0.00	9.890±0.81	2.8881 x10 ⁻⁵	13.27	
282	Q8NH61	OR51F2	Olfactory receptor 51F2	YTTILTNRARIAK	0.000±0.00	9.813±0.08	2.82068 x10 ⁻⁹	13.26	
283	Q7Z5R6	APBB1IP	Amyloid beta A4 precursor protein-binding family B member 1-interacting protein	LALEKLKEAK	0.000±0.00	9.620±0.49	4.55374 x10 ⁻⁶	13.23	
284	Q96PQ1	SIGLEC12	Sialic acid-binding Ig-like lectin 12	AGDHVSR	0.000±0.00	9.640±0.94	5.99791 x10 ⁻⁵	13.23	
285	Q9UJA3	MCM8	DNA helicase MCM8	LNSSPITTRQLESL IR	0.000±0.00	9.581±0.11	1.07408 x10 ⁻⁸	13.23	
286	Q9Y5H9	PCDHA2	Protocadherin alpha-2	ASSIRRGR	0.000±0.00	9.511±0.31	7.14855 x10 ⁻⁷	13.21	
287	P41208	CETN2	Centrin-2	ALGFEPK	0.000±0.00	9.433±0.69	1.86574 x10 ⁻⁵	13.20	
288	Q8IW40	CCDC103	Coiled-coil domain-containing protein 103	DWRRHLPSGPER	0.000±0.00	9.394±0.33	1.0543 x10 ⁻⁶	13.20	
289	O95813	CER1	Cerberus	EEAKKFVHHFMMF R	0.000±0.00	9.385±0.90	5.43881 x10 ⁻⁵	13.19	
290	Q9UBG0	MRC2	C-type mannose receptor 2	DQPGYSR	0.000±0.00	9.340±0.20	1.50974 x10 ⁻⁷	13.19	
291	P78536	ADAM17	Disintegrin and metalloproteinase domain-containing protein 17	EGVQCSDRNSPCC K	0.000±0.00	9.267±0.67	1.75768 x10 ⁻⁵	13.18	
292	Q96P50	ACAP3	Arf-GAP with coiled-coil, ANK repeat and PH domain-containing protein 3	APLHHATLLGR	0.000±0.00	9.121±0.25	3.63136 x10 ⁻⁷	13.15	
293	P50897	PPT1	Palmitoyl-protein thioesterase 1	EDVYRNHSIFLAD	0.000±0.00	9.103±1.32	2.80341 x10 ⁻⁴	13.14	

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294	Q14164	IKBKE	Inhibitor of nuclear factor kappa-B kinase subunit epsilon	CWGFDQFFAETS DILQR	3.208±5.55	15.553±4.06	3.59006x10 ⁻²	9.48	
295	Q96Q05	TRAPPC9	Trafficking protein particle complex subunit 9	GQFANPK	3.195±5.53	14.727±4.34	4.67791x10 ⁻²	9.39	
296	Q12774	ARHGEF5	Rho guanine nucleotide exchange factor 5	ATLSNQEHQWLF SR	2.906±5.03	13.173±1.54	2.78038 x10 ⁻²	9.32	
297	Q6QEF8	CORO6	Coronin-6	ALRERVQAQEQR	3.581±6.20	14.110±2.14	4.98259 x10 ⁻²	9.31	
298	Q52LJ0	FAM98B	Protein FAM98B	GPLLEEALTK	3.094±5.36	13.531±3.44	4.68950 x10 ⁻²	9.30	
299	Q9HCU5	PREB	Prolactin regulatory element-binding protein	CGAETQHEGLEL R	3.008±5.21	12.998±0.08	2.93400 x10 ⁻²	9.29	
300	Q9BYV9	BACH2	Transcription regulator protein BACH2	CEQSYGTNSSDES GSFSEADSESCPV QDR	3.040±5.26	13.026±1.05	3.22311 x10 ⁻²	9.28	
301	Q86SF2	GALNT7	N-acetylgalactosaminyltransferase 7	EWQYFKNLHR	3.656±6.33	13.808±0.13	4.99634 x10 ⁻²	9.28	
302	Q7Z628	NET1	Neuroepithelial cell-transforming gene 1 protein	IGEATKPDGTVEQ IGHILVSWLPR	3.435±5.95	13.619±2.23	4.99359 x10 ⁻²	9.28	
303	Q9NUL3	STAU2	Double-stranded RNA-binding protein Staufen homolog 2	HKVISGTTLGYS PK	3.270±5.66	13.039±1.40	4.40931 x10 ⁻²	9.25	
304	Q96AE7	TTC17	Tetratricopeptide repeat protein 17	GPQDGVARSSCY GDCRSEDDEATE WITFQVK	3.055±5.29	12.560±1.22	3.86981 x10 ⁻²	9.22	
305	Q9BVN2	RUSC1	AP-4 complex accessory subunit RUSC1	AVSPAAGEEAPA AKEPGAQAGLEV R	3.191±5.52	12.392±1.35	4.87102 x10 ⁻²	9.18	
306	P55157	MTTP	Microsomal triglyceride transfer protein large subunit	AVVEAKKLILGGL EK	2.932±5.08	12.004±0.55	3.70129 x10 ⁻²	9.18	
307	Q96M27	PRRC1	Protein PRRC1	GAQERIDSLR	3.075±5.32	11.991±1.12	4.69542 x10 ⁻²	9.16	
308	P31483	TIA1	Cytotoxic granule associated RNA binding protein TIA1	DTSSSTVVSTQR	3.017±5.22	11.702±0.38	4.53717 x10 ⁻²	9.13	
309	Q8WVR3	TRAPPC14	Trafficking protein particle complex subunit 14	DLVERHQASLGR	2.653±4.59	11.119±0.11	3.31480 x10 ⁻²	9.12	
310	O75173	ADAMTS4	A disintegrin and metalloproteinase with thrombospondin motifs 4	MSQTGSHPGRGL AGR	2.825±4.89	10.866±0.95	4.90619 x10 ⁻²	9.05	
311	Q96C92	ENTR1	Endosome-associated-trafficking regulator 1	ISEVKDEEEDS	15.738±0.03	6.239±5.40	3.82385 x10 ⁻²	-5.15	
312	Q9Y5L3	ENTPD2	Ectonucleoside triphosphate diphosphohydrolase 2	SLLPLLLLAAAGL AGLLLLCVPTR	11.196±0.98	2.903±5.03	4.86206 x10 ⁻²	-9.08	
313	Q96M29	TEKT5	Tektin-5	CCQEQMR	11.402±0.95	2.972±5.15	4.93402 x10 ⁻²	-9.10	
314	Q9BU76	MMTAG2	Multiple myeloma tumor-associated protein 2	APCAGPSR	10.983±1.5	2.551±4.42	3.52266 x10 ⁻²	-9.11	

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315	Q9UPR6	ZFR2	Zinc finger RNA-binding protein 2	EDVTASAQHALR MLAFRQTHK	11.562±0.4 8	3.017±5.22	4.77830 x10 ⁻²	-9.12
316	Q08AG5	ZNF844	Zinc finger protein 844	ALSYLNFRHMK MHTR	11.696±0.5 2	2.943±5.10	4.15491 x10 ⁻²	-9.14
317	O75899	GABBR2	Gamma-aminobutyric acid type B receptor subunit 2	AMETLHASSR	12.013±0.3 1	3.145±5.45	4.80184 x10 ⁻²	-9.15
318	Q9NPY3	CD93	Complement component C1q receptor	DETQSHYFLCKEK	11.952±1.3 6	3.042±5.27	4.70015 x10 ⁻²	-9.15
319	Q58EX7	PLEKHG4	Puratrophin-1	ALAQRCQR	12.307±0.2 5	3.250±5.63	4.95922 x10 ⁻²	-9.17
320	Q8IVF5	TIAM2	Rho guanine nucleotide exchange factor TIAM2	AFVEDTAK	12.179±0.7 5	3.100±5.37	4.40813 x10 ⁻²	-9.18
321	Q9Y4F4	TOGARAM1	TOG array regulator of axonemal microtubules protein 1	AMVNNVTPAR	12.222±1.3 4	2.92±5.06	3.69128 x10 ⁻²	-9.21
322	Q04695	KRT17	Keratin, type I cytoskeletal 17	ALEEANTELEVK	12.689±0.2 3	3.280±5.68	4.56034 x10 ⁻²	-9.21
323	P63162	SNRPN	Small nuclear ribonucleoprotein-associated protein N	GTPIGMPPPGMRP PPPGIR	12.398±0.0 4	3.042±5.27	3.70513 x10 ⁻²	-9.21
324	Q8NCL4	GALNT6	Polypeptide N-acetylgalactosaminyltransferase 6	EEATEKPWLK	12.709±1.5 3	3.217±5.57	4.66160 x10 ⁻²	-9.21
325	P98198	ATP8B2	Phospholipid-transporting ATPase ID	AVTLAIGDGAND VSMIK	12.554±0.5 3	3.026±5.24	3.50306 x10 ⁻²	-9.23
326	A1IGU5	ARHGEF37	Rho guanine nucleotide exchange factor 37	DLAKQVLQR	12.848±0.0 3	3.188±5.52	3.87398 x10 ⁻²	-9.24
327	Q9HC62	SEN2	Sentrin-specific protease 2	DKPITFTQHQMPL FR	12.684±0.5 4	3.032±5.25	3.39388 x10 ⁻²	-9.25
328	P10244	MYBL2	Myb-related protein B	QWTLIAKHLK	13.088±1.2 4	3.307±5.73	4.44837 x10 ⁻²	-9.25
329	P17927	CR1	Complement receptor type 1	APICEIISCEPPPTIS NGDFYSNNR	13.217±0.8 6	3.415±5.91	4.68066 x10 ⁻²	-9.25
330	Q6WRX3	ZYG11A	Protein zyg-11 homolog A	FVMRWLCK	13.025±0.3 2	3.270±5.66	4.07762 x10 ⁻²	-9.25
331	Q8NB46	ANKRD52	Serine/threonine-protein phosphatase 6 regulatory ankyrin repeat subunit C	DTLWLTPLHR	13.277±1.4 9	3.351±5.80	4.54794 x10 ⁻²	-9.26
332	Q15080	NCF4	Neutrophil cytosol factor 4	DIAVEEDLSSTPLL K	12.855±1.2 9	3.050±5.28	3.53866 x10 ⁻²	-9.26
333	O75127	PTCD1	Pentatricopeptide repeat-containing protein 1, mitochondrial	DGLQLLTDMK	13.401±0.8 4	3.347±5.80	4.10049 x10 ⁻²	-9.28

334	Q9BW27	NUP85	Nuclear pore complex protein Nup85	EFHRMYGEKR	13.175±0.7 5	3.143±5.44	3.40978 x10 ⁻²	-9.28
335	P07288	KLK3	Prostate-specific antigen	DTIVANP	12.650±2.3 4	2.664±4.61	2.87048 x10 ⁻²	-9.29
336	Q9NXH9	TRMT1	tRNA (guanine(26)-N(2))-dimethyltransferase	FALEVPGLR	13.185±0.5 4	3.117±5.4	3.24046 x10 ⁻²	-9.29
337	Q96R84	OR1F2P	Putative olfactory receptor 1F2	DIAAAVR	13.751±1.2 7	3.477±6.02	4.44466 x10 ⁻²	-9.29
338	P52756	RBM5	RNA-binding protein 5	AAERREK	14.186±0.1 1	3.714±6.43	4.78181 x10 ⁻²	-9.31
339	Q9UIW2	PLXNA1	Plexin-A1	GVPYSQRPK	13.527±1.3 7	3.158±5.47	3.33285 x10 ⁻²	-9.32
340	Q8IZF0	NALCN	NALCN	CLRPLRIFK	13.866±1.0 5	3.390±5.87	3.82734 x10 ⁻²	-9.32
341	P29965	CD40LG	CD40 ligand	DIMLNKEETK	14.087±0.4 6	3.568±6.18	4.23659 x10 ⁻²	-9.32
342	Q8N715	CCDC185	Coiled-coil domain-containing protein 185	AEKEEKCHIEGIK	13.882±0.5 9	3.304±5.72	3.33417 x10 ⁻²	-9.34
343	O94913	PCF11	Pcf11	ASGHYFDEK	14.360±2.5 2	3.502±6.06	4.57183 x10 ⁻²	-9.34
344	Q9P2F6	ARHGAP20	Rho GTPase-activating protein 20	DIGNCAYSK	14.069±0.6 0	3.234±5.60	2.90347 x10 ⁻²	-9.36
345	P49703	ARL4D	ADP-ribosylation factor-like protein 4D	QDQPGALSAAEV EK	14.398±0.1 5	3.334±5.77	2.94133 x10 ⁻²	-9.38
346	Q68CP9	ARID2	AT-rich interactive domain-containing protein 2	DIVDDNEVRDLIS DRNK	14.507±2.3 2	3.260±5.65	3.31580 x10 ⁻²	-9.39
347	Q9Y5Z7	HCFC2	Host cell factor 2	GYGPATQVR	15.910±4.8 4	3.084±5.34	3.68068 x10 ⁻²	-9.52
348	Q96HQ2	CDKN2AIPNL	CDKN2AIP N-terminal-like protein	MVGGEAAAVERE LVSGVR	8.904±0.07	0.000±0.00	2.56394 x10 ⁻⁹	-13.12
349	Q96HR8	NAF1	H/ACA ribonucleoprotein complex non-core subunit NAF1	MEVVEAAAAQLE TLK	9.036±0.12	0.000±0.00	2.33906 x10 ⁻⁸	-13.14
350	Q96T53	MBOAT4	Ghrelin O-acyltransferase	AASGGFR	9.085±0.05	0.000±0.00	7.71344 x10 ⁻¹⁰	-13.15
351	Q9BY32	ITPA	Inosine triphosphate pyrophosphatase	AEKNAVSHR	9.235±0.11	0.000±0.00	1.43214 x10 ⁻⁸	-13.17
352	Q8NG41	NPB	Neuropeptide B	ANVFLSLRAADC LAA	9.239±0.11	0.000±0.00	1.15229 x10 ⁻⁸	-13.17
353	O95994	AGR2	Anterior gradient protein 2 homolog	LPQTLSRGWGDQ LIWTQTYEEALYK	9.318±0.18	0.000±0.00	8.58505 x10 ⁻⁸	-13.19

354	Q9Y2B4	TP53TG5	TP53-target gene 5 protein	LRTVLKLNLSLLK	9.347±0.72	0.000±0.00	2.33443 x10 ⁻⁵	-13.19
355	Q5H9R7	PPP6R3	Serine/threonine-protein phosphatase 6 regulatory subunit 3	DLPDEVR	9.404±0.76	0.000±0.00	2.83523 x10 ⁻⁵	-13.20
356	Q8N0U8	VKORC1L1	Vitamin K epoxide reductase complex subunit 1-like protein 1	GFGLLGSIK	9.495±0.10	0.000±0.00	8.11627 x10 ⁻⁹	-13.21
357	Q8N5J2	MINDY1	Ubiquitin carboxyl-terminal hydrolase MINDY-1	SEGLQLNFQQNV DDAMTVLPK	9.542±0.30	0.000±0.00	6.17721 x10 ⁻⁷	-13.22
358	P52758	RIDA	2-iminobutanoate/2-iminopropanoate deaminase	AAGCDFTNVVK	9.626±0.53	0.000±0.00	6.07263 x10 ⁻⁶	-13.23
359	Q14139	UBE4A	Ubiquitin conjugation factor E4 A	IQRWLAER	9.654±0.49	0.000±0.00	4.4489 x10 ⁻⁶	-13.24
360	P22736	NR4A1	Nuclear receptor subfamily 4 group A member 1	IFMDTLPF	9.719±0.92	0.000±0.00	5.30999 x10 ⁻⁵	-13.24
361	O14717	TRDMT1	tRNA (cytosine(38)-C(5))-methyltransferase	LQSEPLPFQAPGQ VLMEFPK	9.712±0.52	0.000±0.00	5.55236 x10 ⁻⁶	-13.24
362	Q8IYB0	n/a	Putative uncharacterized protein MGC39545	ACNNYQYGYLAK PDTSEFWIKCR	9.753±0.80	0.000±0.00	3.01227 x10 ⁻⁵	-13.25
363	Q6PIF2	SYCE2	Synaptonemal complex central element protein 2	IIQEKLQEFTQKM AK	9.748±0.35	0.000±0.00	1.10565 x10 ⁻⁶	-13.25
364	Q9UBY0	SLC9A2	Sodium/hydrogen exchanger 2	KVTSSETDEIR	9.798±0.75	0.000±0.00	2.21417 x10 ⁻⁵	-13.26
365	Q8N137	CNTROB	Centrobilin	DALQLEMSLVQA RYESQR	9.824±0.64	0.000±0.00	1.1876 x10 ⁻⁵	-13.26
366	P04432	IGKV1D-39	Immunoglobulin kappa variable 1D-39	ASQSISSYLNWYQ QKPGK	9.838±0.25	0.000±0.00	2.6198 x10 ⁻⁷	-13.26
367	Q8NFU0	BEST4	Bestrophin-4	FPTMEHVVDAGF MSQEERK	9.900±0.37	0.000±0.00	1.26102 x10 ⁻⁶	-13.27
368	Q8N371	KDM8	Bifunctional peptidase and arginyl-hydroxylase JMJD5	ALDLSFSVSFWW S	9.919±0.72	0.000±0.00	1.85597 x10 ⁻⁵	-13.27
369	Q14651	PLS1	Plastin-1	AGLMLQEADKLG CK	9.950±1.08	0.000±0.00	8.98464 x10 ⁻⁵	-13.27
370	O60925	PFDN1	Prefoldin subunit 1	AAPVDLELK	9.980±1.09	0.000±0.00	9.12824 x10 ⁻⁵	-13.28
371	Q2VWA4	SKOR2	SKI family transcriptional corepressor 2	AGLSGLFWPAGR	9.968±0.57	0.000±0.00	7.06558 x10 ⁻⁶	-13.28
372	Q13487	SNAPC2	snRNA-activating protein complex subunit 2	YLSSVSR	9.983±0.45	0.000±0.00	2.6368 x10 ⁻⁶	-13.28
373	P78317	RNF4	E3 ubiquitin-protein ligase RNF4	DVYVTTHTPRNA R	9.993±0.71	0.000±0.00	1.67523 x10 ⁻⁵	-13.28
374	Q8IX30	SCUBE3	Signal peptide, CUB and EGF-like domain-containing protein 3	AEETTASCGLPCL R	10.037±1.1 1	0.000±0.00	9.84422 x10 ⁻⁵	-13.29
375	Q14197	MRPL58	Peptidyl-tRNA hydrolase ICT1, mitochondrial	CLRWGLSR	10.109±1.4 5	0.000±0.00	2.73346 x10 ⁻⁴	-13.29
376	Q9BXR6	CFHR5	Complement factor H-related protein 5	ESYKVGDVVK	10.084±1.1 4	0.000±0.00	1.05648 x10 ⁻⁴	-13.29
377	O00204	SULT2B1	Sulfotransferase 2B1	GVCGDWK	10.052±0.5	0.000±0.00	3.90537 x10 ⁻⁶	-13.29

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378	Q8IXQ9	ETFBKMT	Electron transfer flavoprotein beta subunit lysine methyltransferase	CKFWWER	10.054±0.52	0.000±0.00	4.61485 x10 ⁻⁶	-13.29
379	Q96JY0	MAEL	Protein maelstrom homolog	EWRAAQGKDPGPSEK	10.086±0.29	0.000±0.00	4.52543 x10 ⁻⁷	-13.30
380	Q15059	BRD3	Bromodomain-containing protein 3	KAKVAPPAK	10.102±0.35	0.000±0.00	9.54039 x10 ⁻⁷	-13.30
381	Q9P031	CCDC59	Thyroid transcription factor 1-associated protein 26	GEGVSTVGYRNK	10.205±1.31	0.000±0.00	1.74408 x10 ⁻⁴	-13.31
382	P17027	ZNF23	Zinc finger protein 23	AFSVNGK	10.167±0.67	0.000±0.00	1.26672 x10 ⁻⁵	-13.31
383	Q15760	GPR19	Probable G-protein coupled receptor 19	FYTIVYPLSFK	10.162±0.09	0.000±0.00	3.70089 x10 ⁻⁹	-13.31
384	Q9Y371	SH3GLB1	Endophilin-B1	IMKQTEVLLQPNPNAR	10.233±0.76	0.000±0.00	1.9861 x10 ⁻⁵	-13.32
385	Q9C0E2	XPO4	Exportin-4	ANLVIQCENWWNLAK	10.305±1.50	0.000±0.00	2.87675 x10 ⁻⁴	-13.32
386	Q9P0L9	PKD2L1	Polycystic kidney disease 2-like 1 protein	EDILSCYDVYSPDK	10.314±1.44	0.000±0.00	2.44776 x10 ⁻⁴	-13.32
387	P06681	C2	Complement C2	FGHGDKVR	10.269±0.65	0.000±0.00	1.04648 x10 ⁻⁵	-13.32
388	Q9H6B9	EPHX3	Epoxide hydrolase 3	EFQSRFHVVAVDLRGYGPSDAPR	10.300±0.49	0.000±0.00	3.45664 x10 ⁻⁶	-13.33
389	Q8WX77	IGFBPL1	Insulin-like growth factor-binding protein-like 1	GGPSDHEATAWILINPLR	10.424±1.94	0.000±0.00	7.48771 x10 ⁻⁴	-13.33
390	Q13615	MTMR3	Myotubularin-related protein 3	ELESVSSFRSWK	10.363±1.28	0.000±0.00	1.51411 x10 ⁻⁴	-13.33
391	O95716	RAB3D	Ras-related protein Rab-3D	ASAGDTQAGPR	10.326±0.58	0.000±0.00	6.3765 x10 ⁻⁶	-13.33
392	Q9NPB8	GPCPD1	Glycerophosphocholine phosphodiesterase GPCPD1	DFVPPVYHDLTCCLTMK	10.386±1.45	0.000±0.00	2.42843 x10 ⁻⁴	-13.33
393	Q15648	MED1	Mediator of RNA polymerase II transcription subunit 1	MAIMYWK	10.398±0.82	0.000±0.00	2.5844 x10 ⁻⁵	-13.34
394	P28908	TNFRSF8	Tumor necrosis factor receptor superfamily member 8	DLPEPRVSTEHTNNK	10.406±0.73	0.000±0.00	1.55822 x10 ⁻⁵	-13.34
395	Q8TCT7	SPPL2B	Signal peptide peptidase-like 2B	AALYAPK	10.395±0.22	0.000±0.00	1.2614 x10 ⁻⁷	-13.34
396	P24588	AKAP5	A-kinase anchor protein 5	EKASMLCFK	10.506±1.86	0.000±0.00	6.14007 x10 ⁻⁴	-13.34

397	Q8IYW5	RNF168	E3 ubiquitin-protein ligase RNF168	DIDSSDRK	10.406±0.4 9	0.000±0.00	3.39241 x10 ⁻⁶	-13.34
398	Q6JQN1	ACAD10	Acyl-CoA dehydrogenase family member 10	EFGRLCSEMLK	10.424±0.8 3	0.000±0.00	2.62105 x10 ⁻⁵	-13.34
399	P59047	NLRP5	NACHT, LRR and PYD domains-containing protein 5	EEDVRMACEALK	10.424±0.6 1	0.000±0.00	7.67113 x10 ⁻⁶	-13.35
400	Q9UDY4	DNAJB4	DnaJ homolog subfamily B member 4	FHPDKNK	10.435±0.4 4	0.000±0.00	2.01679 x10 ⁻⁶	-13.35
401	Q8IWS0	PHF6	PHD finger protein 6	CMLFSSALVSSH DNESLGGFSIEDV QK	10.494±1.1 9	0.000±0.00	1.0744 x10 ⁻⁴	-13.35
402	Q9HA72	CALHM2	Calcium homeostasis modulator protein 2	ANEDQLFQRTAE VHSR	10.470±0.7 4	0.000±0.00	1.64442 x10 ⁻⁵	-13.35
403	Q5NUL3	FFAR4	Free fatty acid receptor 4	FPFSDVKGDHR	10.482±0.9 5	0.000±0.00	4.33653 x10 ⁻⁵	-13.35
404	P23443	RPS6KB1	Ribosomal protein S6 kinase beta-1	CKLNLPPYLTQEA RDLLK	10.586±2.1 0	0.000±0.00	9.42818 x10 ⁻⁴	-13.35
405	O43447	PPIH	Peptidyl-prolyl cis-trans isomerase H	AVANSSPVNPVVF FDVSIQQEVGR	10.536±1.6 0	0.000±0.00	3.41208 x10 ⁻⁴	-13.35
406	P59051	BRWD1-AS2	Putative uncharacterized protein encoded by BRWD1-AS2	ATLPNPRLGAPAV PR	10.631±2.3 4	0.000±0.00	1.41003 x10 ⁻³	-13.35
407	P19012	KRT15	Keratin, type I cytoskeletal 15	ALEEANADLEVK	10.494±0.6 2	0.000±0.00	7.84603 x10 ⁻⁶	-13.36
408	Q9NRZ5	AGPAT4	1-acyl-sn-glycerol-3-phosphate acyltransferase delta	GFAITVRSR	10.556±1.5 0	0.000±0.00	2.59926 x10 ⁻⁴	-13.36
409	Q9Y2Z4	YARS2	Tyrosine--tRNA ligase, mitochondrial	EREALETERVR	10.521±0.8 4	0.000±0.00	2.6946 x10 ⁻⁵	-13.36
410	Q6IA86	ELP2	Elongator complex protein 2	ITSVHSR	10.600±1.4 5	0.000±0.00	2.25173 x10 ⁻⁴	-13.36
411	Q9NP70	AMBN	Ameloblastin	LGIMSSEEVAGGR	10.567±0.2 0	0.000±0.00	8.62814 x10 ⁻⁸	-13.37
412	Q02338	BDH1	D-beta-hydroxybutyrate dehydrogenase, mitochondrial	LPGKTLACDR	10.626±0.1 1	0.000±0.00	8.70703 x10 ⁻⁹	-13.38
413	Q9NSD5	SLC6A13	Sodium- and chloride-dependent GABA transporter 2	GVKSTGK	10.630±0.2 8	0.000±0.00	3.31563 x10 ⁻⁷	-13.38
414	P81277	PRLH	Prolactin-releasing peptide	GAASRTHR	10.695±1.4 2	0.000±0.00	1.98485 x10 ⁻⁴	-13.38
415	Q96MD2	KICS2	KICSTOR subunit 2	FSFYFHEALSR	10.685±1.3 1	0.000±0.00	1.45572 x10 ⁻⁴	-13.38

416	Q9UK80	USP21	Ubiquitin carboxyl-terminal hydrolase 21	ILVLHLNRFASASR	10.668±0.9 0	0.000±0.00	3.38045 x10 ⁻⁵	-13.38
417	Q2M3W8	ZNF181	Zinc finger protein 181	LSKGMIPDWESR	10.707±1.4 3	0.000±0.00	2.05191 x10 ⁻⁴	-13.38
418	Q8NBS3	SLC4A11	Solute carrier family 4 member 11	DFVPGFK	10.682±0.9 1	0.000±0.00	3.43588 x10 ⁻⁵	-13.38
419	Q5T9G4	ARMC12	Armadillo repeat-containing protein 12	DSGELRRLNSLE CK	10.686±0.4 0	0.000±0.00	1.30761 x10 ⁻⁶	-13.38
420	Q8IZP9	ADGRG2	Adhesion G-protein coupled receptor G2	EDSCNGK	10.715±0.7 6	0.000±0.00	1.71094 x10 ⁻⁵	-13.38
421	O43316	PAX4	Paired box protein Pax-4	GIGGSKPR	10.711±0.1 7	0.000±0.00	4.12675 x10 ⁻⁸	-13.39
422	Q96PU5	NEDD4L	E3 ubiquitin-protein ligase NEDD4-like	DIFGASDPYVK	10.743±0.4 4	0.000±0.00	1.94049 x10 ⁻⁶	-13.39
423	P40938	RFC3	Replication factor C subunit 3	AIYHLEAFVAK	10.768±0.9 7	0.000±0.00	4.30793 x10 ⁻⁵	-13.39
424	Q15545	TAF7	Transcription initiation factor TFIID subunit 7	HGIVRVDRVPLAS K	10.804±1.4 6	0.000±0.00	2.12139 x10 ⁻⁴	-13.39
425	Q9H4A9	DPEP2	Dipeptidase 2	AVIGSKFIGIGGD YDGAGK	10.776±0.6 3	0.000±0.00	7.73511 x10 ⁻⁶	-13.39
426	Q3ZCT8	KBTD12	Kelch repeat and BTB domain-containing protein 12	ELAEMIDVVLTAE GEK	10.775±0.5 0	0.000±0.00	2.99523 x10 ⁻⁶	-13.39
427	O75674	TOM1L1	TOM1-like protein 1	EVYLDLVKK	10.773±0.1 2	0.000±0.00	9.81747 x10 ⁻⁹	-13.40
428	Q9Y2H9	MAST1	Microtubule-associated serine/threonine-protein kinase 1	LISNGAYGAVYL VRHR	10.826±1.2 5	0.000±0.00	1.14947 x10 ⁻⁴	-13.40
429	Q9NTJ4	MAN2C1	Alpha-mannosidase 2C1	AELAVFHR	10.825±1.1 1	0.000±0.00	7.0916 x10 ⁻⁵	-13.40
430	P07357	C8A	Complement component C8 alpha chain	LYYGDDEKYFRK PYNFLK	10.817±0.9 1	0.000±0.00	3.34249 x10 ⁻⁵	-13.40
431	Q9Y5R5	DMRT2	Doublesex- and mab-3-related transcription factor 2	ELENIMLEREYK	10.854±1.3 1	0.000±0.00	1.37892 x10 ⁻⁴	-13.40
432	Q96MS3	GLT1D1	Glycosyltransferase 1 domain-containing protein 1	DTYQQLIRKLEGS TED	10.892±1.6 8	0.000±0.00	3.56943 x10 ⁻⁴	-13.40
433	Q8TBZ3	WDR20	WD repeat-containing protein 20	ATEGGGK	10.884±1.6 0	0.000±0.00	3.00581 x10 ⁻⁴	-13.40
434	P0C645	OR4E1	Olfactory receptor 4E1	EEAILLNQTSLSVT YFRLR	10.827±0.6 4	0.000±0.00	8.0662 x10 ⁻⁶	-13.40
435	Q9POS9	TMEM14C	Transmembrane protein 14C	FMPAGLIAGASLL	10.822±0.3	0.000±0.00	9.39578 x10 ⁻⁷	-13.40

				MVAK	7			
436	P35504	UGT1A5	UDP-glucuronosyltransferase 1A5	CCAYGYR	10.889±1.5 3	0.000±0.00	2.48011 x10 ⁻⁴	-13.40
437	Q9Y6I7	WSB1	WD repeat and SOCS box-containing protein 1	QSRCVNIWHR	10.881±1.0 7	0.000±0.00	6.05223 x10 ⁻⁵	-13.40
438	Q13530	SERINC3	Serine incorporator 3	FFISINLILCVVASI ISIHPK	10.858±0.5 9	0.000±0.00	5.64065 x10 ⁻⁶	-13.41
439	Q86TI4	WDR86	WD repeat-containing protein 86	EHRGSVICLELVN R	10.929±1.6 2	0.000±0.00	3.04902 x10 ⁻⁴	-13.41
440	Q8TF47	ZFP90	Zinc finger protein 90 homolog	HLGSEASTQKK	10.871±0.7 5	0.000±0.00	1.52718 x10 ⁻⁵	-13.41
441	Q8NCQ5	FBXO15	F-box only protein 15	LIRIFCLHPGLLVG VWK	10.947±1.5 9	0.000±0.00	2.85238 x10 ⁻⁴	-13.41
442	P11474	ESRRA	Steroid hormone receptor ERR1	AGPGGGAER	10.912±0.9 9	0.000±0.00	4.36337 x10 ⁻⁵	-13.41
443	Q9NPG8	ZDHHC4	ZDHHC4	GGAQIFSCIPECL QR	10.904±0.8 3	0.000±0.00	2.18542 x10 ⁻⁵	-13.41
444	Q92805	GOLGA1	Golgin subfamily A member 1	EINFEYLK	10.939±1.3 1	0.000±0.00	1.33726 x10 ⁻⁴	-13.41
445	Q7Z6J4	FGD2	FYVE, RhoGEF and PH domain-containing protein 2	CSDYRAELK	10.899±0.6 8	0.000±0.00	9.84283 x10 ⁻⁶	-13.41
446	O14976	GAK	Cyclin-G-associated kinase	AMLQVNPEER	10.932±1.1 3	0.000±0.00	7.54553 x10 ⁻⁵	-13.41
447	Q86XK2	FBXO11	F-box only protein 11	AVSRGQCLYK	10.920±0.8 9	0.000±0.00	2.96244 x10 ⁻⁵	-13.41
448	Q8J025	APCDD1	Protein APCDD1	LGQQVNR	10.911±0.7 0	0.000±0.00	1.10263 x10 ⁻⁵	-13.41
449	Q8WY21	SORCS1	VPS10 domain-containing receptor SorCS1	EQYTAKPQKCPG K	10.916±0.2 3	0.000±0.00	1.28117 x10 ⁻⁷	-13.41
450	A8MYA2	CXorf49	Uncharacterized protein CXorf49	AQLPTHRPLPRL SVR	11.026±1.4 1	0.000±0.00	1.72642 x10 ⁻⁴	-13.42
451	Q99592	ZBTB18	Zinc finger and BTB domain-containing protein 18	ELDREDKASDDE MMTPESER	10.976±0.4 6	0.000±0.00	1.99183 x10 ⁻⁶	-13.42
452	Q9H116	GZF1	GDNF-inducible zinc finger protein 1	EQKTAEGDVG YR	10.984±0.6 5	0.000±0.00	7.92669 x10 ⁻⁶	-13.42
453	Q5FVE4	ACSBG2	Long-chain-fatty-acid--CoA ligase ACSBG2	AIQQGINAVNQE MNAQR	10.989±0.4 9	0.000±0.00	2.53302 x10 ⁻⁶	-13.42
454	A8MV24	C17orf98	Uncharacterized protein C17orf98	MAYLSECR	11.027±0.9 8	0.000±0.00	4.01558 x10 ⁻⁵	-13.42

455	Q9H3G5	CPVL	Probable serine carboxypeptidase CPVL	AFDMINRFIYGK	11.035±1.0 2	0.000±0.00	4.80304 x10 ⁻⁵	-13.43
456	P55081	MFAP1	Microfibrillar-associated protein 1	AEIERMRNLTEEE R	11.014±0.3 7	0.000±0.00	8.24578 x10 ⁻⁷	-13.43
457	Q9NPC6	MYOZ2	Myozenin-2	LSHNTMMK	11.082±1.3 4	0.000±0.00	1.39568 x10 ⁻⁴	-13.43
458	Q92570	NR4A3	Nuclear receptor subfamily 4 group A member 3	GFGEWLDSIK	11.073±1.1 4	0.000±0.00	7.34765 x10 ⁻⁵	-13.43
459	Q92954	PRG4	Proteoglycan 4	GVLHNEVKVSIL WRGLPNVVTSAIS LPNIR	11.072±1.0 3	0.000±0.00	4.82361 x10 ⁻⁵	-13.43
460	O75354	ENTPD6	Ectonucleoside triphosphate diphosphohydrolase 6	ELVSPCLSPSFK	11.063±0.7 9	0.000±0.00	1.75712 x10 ⁻⁵	-13.43
461	Q8N141	ZFP82	Zinc finger protein 82 homolog	ECRKAFR	11.194±2.0 7	0.000±0.00	7.19079 x10 ⁻⁴	-13.43
462	Q9NTN9	SEMA4G	Semaphorin-4G	EIHWEASPEMQSK CHQK GK	11.275±2.7 2	0.000±0.00	1.99781 x10 ⁻³	-13.43
463	Q9H3M7	TXNIP	Thioredoxin-interacting protein	VAGRVIVEVCEVT RVK	11.104±0.6 5	0.000±0.00	7.60807 x10 ⁻⁶	-13.44
464	Q8N103	TAGAP	T-cell activation Rho GTPase-activating protein	EVSPEPIVSTVAR	11.120±0.8 7	0.000±0.00	2.50602 x10 ⁻⁵	-13.44
465	Q9BS31	ZNF649	Zinc finger protein 649	AFSQKSCLVAHQ R	11.177±1.4 9	0.000±0.00	2.00824 x10 ⁻⁴	-13.44
466	O43172	PRPF4	U4/U6 small nuclear ribonucleoprotein Prp4	APDDLVA PVVKK PHIYYGSLEEKER	11.122±0.6 3	0.000±0.00	6.92519 x10 ⁻⁶	-13.44
467	O76054	SEC14L2	SEC14-like protein 2	APKLFVAYNLIK PFLSEDTRK	11.153±0.2 3	0.000±0.00	1.20519 x10 ⁻⁷	-13.44
468	O43426	SYNJ1	Synaptojanin-1	ASAGRLTPESQSK	11.158±0.4 0	0.000±0.00	1.09299 x10 ⁻⁶	-13.45
469	O00505	KPNA3	Importin subunit alpha-4	AENPSLENHR	11.247±1.7 1	0.000±0.00	3.36733 x10 ⁻⁴	-13.45
470	Q8NH55	OR52E5	Olfactory receptor 52E5	IIPHTYCEHMGLA K	11.250±1.6 2	0.000±0.00	2.7161 x10 ⁻⁴	-13.45
471	Q13595	TRA2A	Transformer-2 protein homolog alpha	DLREVFSR	11.261±1.7 8	0.000±0.00	3.94223 x10 ⁻⁴	-13.45
472	O14965	AURKA	Aurora kinase A	EVLEHPWITANSS KPSNCQNK	11.179±0.4 3	0.000±0.00	1.46407 x10 ⁻⁶	-13.45
473	Q9H354	PRO1933	Putative uncharacterized protein PRO1933	FMVDIPIIKNTQVL RIPVLK	11.199±0.5 6	0.000±0.00	4.02651 x10 ⁻⁶	-13.45

474	Q8N8X9	MAB21L3	Protein mab-21-like 3	ARWPRCLQR	11.201±0.5 3	0.000±0.00	3.23324 x10 ⁻⁶	-13.45
475	Q14627	IL13RA2	Interleukin-13 receptor subunit alpha-2	ECTVEYELKYRNI GSETWK	11.296±1.7 9	0.000±0.00	3.98237 x10 ⁻⁴	-13.45
476	P17036	ZNF3	Zinc finger protein 3	DISQGLKFKEAYE R	11.201±0.3 3	0.000±0.00	4.83128 x10 ⁻⁷	-13.45
477	Q05195	MXD1	Max dimerization protein 1	GLVPLGPSSR	11.222±0.1 5	0.000±0.00	1.97258 x10 ⁻⁸	-13.45
478	Q49MI3	CERKL	Ceramide kinase-like protein	EATQVYYEK	11.326±1.9 3	0.000±0.00	5.29055 x10 ⁻⁴	-13.45
479	O96013	PAK4	Serine/threonine-protein kinase PAK 4	AMKMIRDNLPPR	11.280±1.3 3	0.000±0.00	1.24907 x10 ⁻⁴	-13.45
480	P57055	RIPPLY3	Protein ripply3	DQGINQGQR	11.311±1.5 8	0.000±0.00	2.40408 x10 ⁻⁴	-13.46
481	Q68D10	SPTY2D1	Protein SPT2 homolog	AAQGPQR	11.505±3.1 1	0.000±0.00	3.06567 x10 ⁻³	-13.46
482	Q96LS8	C2orf48	Putative uncharacterized protein C2orf48	LSGWELTK	11.287±1.2 0	0.000±0.00	8.33496 x10 ⁻⁵	-13.46
483	P55084	HADHB	Trifunctional enzyme subunit beta, mitochondrial	LAAAFAVSRLEQ DEYALR	11.257±0.5 8	0.000±0.00	4.52177 x10 ⁻⁶	-13.46
484	P45452	MMP13	Collagenase 3	LIEEDFPGIGDKV DAVYEK	11.261±0.6 0	0.000±0.00	5.29316 x10 ⁻⁶	-13.46
485	Q8NHY3	GAS2L2	GAS2-like protein 2	EERYPPELPRGR	11.284±0.8 8	0.000±0.00	2.4614 x10 ⁻⁵	-13.46
486	Q1XH10	SKIDA1	SKI/DACH domain-containing protein 1	RTDLTINCLAEGA SSSPK	11.272±0.5 0	0.000±0.00	2.5714 x10 ⁻⁶	-13.46
487	P02686	MBP	Myelin basic protein	GNHAGKRELNAE K	11.283±0.7 0	0.000±0.00	9.89513 x10 ⁻⁶	-13.46
488	O14832	PHYH	Phytanoyl-CoA dioxygenase, peroxisomal	LVKGERTNL	11.411±2.2 2	0.000±0.00	8.81742 x10 ⁻⁴	-13.46
489	Q86W54	SPATA24	Spermatogenesis-associated protein 24	CNEIESHIKQEDI LNGK	11.318±1.2 0	0.000±0.00	8.16183 x10 ⁻⁵	-13.46
490	O95243	MBD4	Methyl-CpG-binding domain protein 4	GCRKSCSGFVQSD SK	11.303±0.8 3	0.000±0.00	1.96058 x10 ⁻⁵	-13.46
491	Q8N398	VWA5B2	von Willebrand factor A domain-containing protein 5B2	ALGDPATPTEGPR	11.308±0.6 7	0.000±0.00	8.39572 x10 ⁻⁶	-13.46
492	Q2M3G0	ABCB5	ATP-binding cassette sub-family B member 5	EKAFAQMYEEML QTQHR	11.296±0.1 2	0.000±0.00	9.65412 x10 ⁻⁹	-13.46
493	POCB48	UBTFL6	Putative upstream-binding factor 1-like protein 6	EYKVELDLWLK	11.301±0.3	0.000±0.00	7.97172 x10 ⁻⁷	-13.46

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494	Q5TC82	RC3H1	Roquin-1	DAKPKDVVAAGS VEMMNVESK	11.348±1.1 4	0.000±0.00	6.69558 x10 ⁻⁵	-13.47
495	Q8NDL9	AGBL5	Cytosolic carboxypeptidase-like protein 5	ELLCYSLDGLR	11.474±2.4 5	0.000±0.00	1.247594 x10 ⁻³	-13.47
496	O75880	SCO1	Protein SCO1 homolog, mitochondrial	EAIANYVKEFSPK	11.329±0.2 8	0.000±0.00	2.47281 x10 ⁻⁷	-13.47
497	Q9NQR1	KMT5A	N-lysine methyltransferase KMT5A	GDFVVEYHGDIE ITDAKKR	11.335±0.3 4	0.000±0.00	5.21381 x10 ⁻⁷	-13.47
498	Q6PJT7	ZC3H14	Zinc finger CCCH domain-containing protein 14	LLERCKYWPACK	11.439±1.8 9	0.000±0.00	4.65207 x10 ⁻⁴	-13.47
499	Q8TBE0	BAHD1	Bromo adjacent homology domain-containing 1 protein	AHAEVDGRSTEPP APK	11.366±0.9 0	0.000±0.00	2.5349 x10 ⁻⁵	-13.47
500	O94808	GFPT2	Glutamine--fructose-6-phosphate aminotransferase [isomerizing] 2	EIFEQPESVFNTM RGR	11.369±0.9 7	0.000±0.00	3.40685 x10 ⁻⁵	-13.47
501	P0CB33	ZNF735	Putative zinc finger protein 735	AFKWHSSLAKHK	11.396±1.3 3	0.000±0.00	1.2182 x10 ⁻⁴	-13.47
502	Q9Y620	RAD54B	DNA repair and recombination protein RAD54B	EPSASEEELKELGE RR	11.356±0.0 5	0.000±0.00	2.73152 x10 ⁻¹⁰	-13.47
503	Q8N9W8	GARIN2	Golgi-associated RAB2 interactor protein 2	KNTSKTTMR	11.422±1.3 9	0.000±0.00	1.41465 x10 ⁻⁴	-13.47
504	Q96EK4	THAP11	THAP domain-containing protein 11	DILALMEVK	11.422±1.4 0	0.000±0.00	1.43604 x10 ⁻⁴	-13.47
505	Q86VR8	FJX1	Four-jointed box protein 1	FADGTRACVR	11.398±1.0 4	0.000±0.00	4.51279 x10 ⁻⁵	-13.47
506	Q04912	MST1R	Macrophage-stimulating protein receptor	DILDREYYSVQQH R	11.427±1.3 8	0.000±0.00	1.36549 x10 ⁻⁴	-13.47
507	Q9UKF7	PITPNC1	Cytoplasmic phosphatidylinositol transfer protein 1	EFERATQEATNK	11.395±0.7 1	0.000±0.00	9.82677 x10 ⁻⁶	-13.47
508	P10997	IAPP	Islet amyloid polypeptide	GILKLQVFLIVLSV ALNHLK	11.384±0.3 4	0.000±0.00	5.35349 x10 ⁻⁷	-13.47
509	P29371	TACR3	Neuromedin-K receptor	DPSFNGCSR	11.383±0.2 9	0.000±0.00	2.77326 x10 ⁻⁷	-13.47
510	Q3MIS6	ZNF528	Zinc finger protein 528	ECIKGVNTERSSK	11.423±0.8 7	0.000±0.00	2.2102 x10 ⁻⁵	-13.48
511	Q9H568	ACTL8	Actin-like protein 8	VELTPMQR	11.405±0.1 2	0.000±0.00	7.29401 x10 ⁻⁹	-13.48
512	Q9NQ89	C12orf4	Protein C12orf4	AELVFKCVKGF MEMASWDGGISR	11.461±1.3 1	0.000±0.00	1.12204 x10 ⁻⁴	-13.48

513	Q9Y2E4	DIP2C	Disco-interacting protein 2 homolog C	IQQLVNTLKRPKR PPLR	11.430±0.6 7	0.000±0.00	7.99596 x10 ⁻⁶	-13.48
514	Q86W34	AMZ2	Archaeometzincin-2	KTPSPNKR	11.420±0.3 2	0.000±0.00	4.05351 x10 ⁻⁷	-13.48
515	Q12933	TRAF2	TNF receptor-associated factor 2	AAASVTPPGSLEL LQPGFSK	11.442±0.8 8	0.000±0.00	2.32099 x10 ⁻⁵	-13.48
516	Q6P597	KLC3	Kinesin light chain 3	ALSIYEALGGPHD PNVAK	11.439±0.7 6	0.000±0.00	1.25753 x10 ⁻⁵	-13.48
517	Q96QF0	RAB3IP	Rab-3A-interacting protein	DQLGQELEELTAS LFEEAHK	11.458±0.8 4	0.000±0.00	1.89863 x10 ⁻⁵	-13.48
518	Q9P212	PLCE1	1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase epsilon-1	EYDSHGSEDSQK	11.484±1.1 6	0.000±0.00	6.87772 x10 ⁻⁵	-13.48
519	Q8N4F0	BPIFB2	BPI fold-containing family B member 2	ILNVHVPRLHLKF IAGFGVR	11.454±0.5 2	0.000±0.00	2.78629 x10 ⁻⁶	-13.48
520	Q8WVC0	LEO1	RNA polymerase-associated protein LEO1	ANSDDERPVASD NDDEK	11.468±0.4 6	0.000±0.00	1.66993 x10 ⁻⁶	-13.48
521	Q86YR6	POTED	POTE ankyrin domain family member D	DLIVMLRDTDMN KR	11.496±1.0 1	0.000±0.00	3.86754 x10 ⁻⁵	-13.48
522	Q5QJ74	TBCEL	Tubulin-specific chaperone cofactor E-like protein	EIAAFCAHVSELD LSDNK	11.494±0.3 7	0.000±0.00	7.01836 x10 ⁻⁷	-13.49
523	O75251	NDUFS7	NADH dehydrogenase [ubiquinone] iron-sulfur protein 7, mitochondrial	AVLSAPGLR	11.495±0.3 5	0.000±0.00	5.73284 x10 ⁻⁷	-13.49
524	Q14526	HIC1	Hypermethylated in cancer 1 protein	ERGSPSER	11.561±1.5 2	0.000±0.00	1.89686 x10 ⁻⁴	-13.49
525	Q8WUF5	PPP1R13L	RelA-associated inhibitor	HMDLKQMELDTA AAK	11.511±0.5 9	0.000±0.00	4.49101 x10 ⁻⁶	-13.49
526	Q9BQ31	KCNS3	Potassium voltage-gated channel subfamily S member 3	FDTLRFQQLRK	11.513±0.2 7	0.000±0.00	1.99314 x10 ⁻⁷	-13.49
527	Q9NXW2	DNAJB12	DnaJ homolog subfamily B member 12	AIGTAYAVLSNPE K	11.535±0.8 8	0.000±0.00	2.20728 x10 ⁻⁵	-13.49
528	Q96QF7	GCNA	Germ cell nuclear acidic protein	IGWNNKMVK	11.558±1.1 9	0.000±0.00	7.21116 x10 ⁻⁵	-13.49
529	A0A096LP49	CCDC187	Coiled-coil domain-containing protein 187	EAEHLGTSSSLHL R	11.536±0.8 4	0.000±0.00	1.86204 x10 ⁻⁵	-13.49
530	Q9H869	YY1AP1	YY1-associated protein 1	ILFTKAEDNKYLL TCK	11.524±0.3 8	0.000±0.00	7.72957 x10 ⁻⁷	-13.49
531	Q92526	CCT6B	T-complex protein 1 subunit zeta-2	AIKNAIEDGCMVP GAGAIEVAMAEA LVTYKNSIK	11.528±0.1 8	0.000±0.00	4.13211 x10 ⁻⁸	-13.49

532	Q6IA69	NADSYN1	Glutamine-dependent NAD	ELRWFTPWSR	11.769±2.8 2	0.000±0.00	1.95167x10 ⁻³	-13.50
533	Q9Y2G7	ZFP30	Zinc finger protein 30 homolog	IHTSDKLYECK	11.587±0.9 7	0.000±0.00	3.17536 x10 ⁻⁵	-13.50
534	P51178	PLCD1	1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase delta-1	HNVGHLRSR	11.623±1.2 6	0.000±0.00	8.96602 x10 ⁻⁵	-13.50
535	Q6W3E5	GDPD4	Glycerophosphodiester phosphodiesterase domain-containing protein 4	IELYLHLCHK	11.599±0.6 8	0.000±0.00	8.01993 x10 ⁻⁶	-13.50
536	O95822	MLYCD	Malonyl-CoA decarboxylase, mitochondrial	ISEAEAVHPVK	11.675±1.6 3	0.000±0.00	2.43565 x10 ⁻⁴	-13.50
537	P04629	NTRK1	High affinity nerve growth factor receptor	DLRGLGELR	11.748±2.2 9	0.000±0.00	8.83493 x10 ⁻⁴	-13.50
538	O43583	DENR	Density-regulated protein	LDADYPLR	11.614±0.2 8	0.000±0.00	2.27469 x10 ⁻⁷	-13.50
539	Q99962	SH3GL2	Endophilin-A1	TIEYLQNPASR	11.639±0.9 1	0.000±0.00	2.40888 x10 ⁻⁵	-13.50
540	O15049	N4BP3	NEDD4-binding protein 3	AALAGSR	11.624±0.5 7	0.000±0.00	3.84979 x10 ⁻⁶	-13.50
541	Q96QE4	LRRC37B	Leucine-rich repeat-containing protein 37B	EVPGDDYKNK	11.644±0.9 6	0.000±0.00	3.06679 x10 ⁻⁵	-13.50
542	Q5VTL8	PRPF38B	Pre-mRNA-splicing factor 38B	EAKEREK	11.632±0.6 3	0.000±0.00	5.52931 x10 ⁻⁶	-13.50
543	Q9Y3D5	MRPS18C	28S ribosomal protein S18c, mitochondrial	CILCGKHVDYK	11.653±1.0 5	0.000±0.00	4.27441 x10 ⁻⁵	-13.50
544	Q6P9B9	INTS5	Integrator complex subunit 5	ATVERDLRIGR	11.724±1.7 4	0.000±0.00	3.08508 x10 ⁻⁴	-13.51
545	Q9Y4C4	MFHAS1	Malignant fibrous histiocytoma-amplified sequence 1	GIPYIAAYQK	11.636±0.1 4	0.000±0.00	1.2215 x10 ⁻⁸	-13.51
546	O00233	PSMD9	26S proteasome non-ATPase regulatory subunit 9	ANYDVLESQK	11.659±0.8 1	0.000±0.00	1.51775 x10 ⁻⁵	-13.51
547	Q6NSJ0	MYORG	Myogenesis-regulating glycosidase	AGGFSIRNQK	11.676±0.8 9	0.000±0.00	2.25297 x10 ⁻⁵	-13.51
548	Q9NP78	ABCB9	ABC-type oligopeptide transporter ABCB9	QPTMVHDGSLAP DHLEGR	11.655±0.0 1	0.000±0.00	3.14369 x10 ⁻¹³	-13.51
549	Q9H252	KCNH6	Potassium voltage-gated channel subfamily H member 6	ALLQHCPAFSGA GKGCLR	11.657±0.1 6	0.000±0.00	2.57738 x10 ⁻⁸	-13.51
550	Q13586	STIM1	Stromal interaction molecule 1	ALLALNHGLDK	11.705±1.2 8	0.000±0.00	9.25755 x10 ⁻⁵	-13.51
551	O15062	ZBTB5	Zinc finger and BTB domain-containing protein 5	GGASNFPYYRR	11.686±0.9	0.000±0.00	2.3933 x10 ⁻⁵	-13.51

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552	Q14957	GRIN2C	Glutamate receptor ionotropic, NMDA 2C	HLSASERPLSPAR CHYSSFPRADR	11.714±1.3 1	0.000±0.00	1.02564 x10 ⁻⁴	-13.51
553	O15305	PMM2	Phosphomannomutase 2	AAPGPALCLFDV DGTLTAPR	11.729±1.3 5	0.000±0.00	1.15215 x10 ⁻⁴	-13.51
554	Q13368	MPP3	MAGUK p55 subfamily member 3	ALFHYNPR	11.697±0.7 6	0.000±0.00	1.17485 x10 ⁻⁵	-13.51
555	Q9HCS4	TCF7L1	Transcription factor 7-like 1	KPLNAFMLYMK MR	11.684±0.1 7	0.000±0.00	2.96855 x10 ⁻⁸	-13.51
556	O14618	CCS	Copper chaperone for superoxide dismutase	QAVLKGMSGQL QNLGAAVAILGG PGTVQGVVR	11.693±0.2 8	0.000±0.00	2.16635 x10 ⁻⁷	-13.51
557	B2RXF0	TMEM229A	Transmembrane protein 229A	MAGSDVDSEGA RR	11.697±0.4 2	0.000±0.00	1.12428 x10 ⁻⁶	-13.51
558	P0DN78	OPN1MW3	Medium-wave-sensitive opsin 3	AVAKQQK	11.745±1.2 5	0.000±0.00	8.46053 x10 ⁻⁵	-13.51
559	Q6IQ16	SPOPL	Speckle-type POZ protein-like	AMESQRAYR	11.703±0.3 5	0.000±0.00	5.18389 x10 ⁻⁷	-13.51
560	Q9GZU1	MCOLN1	Mucolipin-1	IPISLETQAHIQE K	11.715±0.4 6	0.000±0.00	1.60381 x10 ⁻⁶	-13.52
561	I0J062	PANO1	Proapoptotic nucleolar protein 1	ADTHHARR	11.737±0.9 2	0.000±0.00	2.51938 x10 ⁻⁵	-13.52
562	Q9NWL6	ASNSD1	Asparagine synthetase domain-containing protein 1	DDRVIGDHGKEA R	11.750±1.0 7	0.000±0.00	4.4732 x10 ⁻⁵	-13.52
563	Q9Y345	SLC6A5	Sodium- and chloride-dependent glycine transporter 2	DLELGTQC	11.796±0.8 4	0.000±0.00	1.65994 x10 ⁻⁵	-13.52
564	Q08A18	MAB21L4	Protein mab-21-like 4	FQVFNIQDK	11.784±0.3 2	0.000±0.00	3.77405 x10 ⁻⁷	-13.52
565	Q6ZU64	CFAP65	Cilia- and flagella-associated protein 65	DEKVRQVEVEFTIT DMK	11.896±1.9 3	0.000±0.00	4.3569 x10 ⁻⁴	-13.53
566	P0CW27	CCDC166	Coiled-coil domain-containing protein 166	GPSAGSQPGGAA AAGAEQPLSER	11.800±0.2 1	0.000±0.00	6.94179 x10 ⁻⁸	-13.53
567	Q58F21	BRDT	Bromodomain testis-specific protein	EHQSSSEAQDKS K	11.904±1.8 7	0.000±0.00	3.87687 x10 ⁻⁴	-13.53
568	Q9P2R3	ANKFY1	Rabankyrin-5	ESGAAEQVDNK	11.819±0.2 1	0.000±0.00	6.70599 x10 ⁻⁸	-13.53
569	Q8NDW8	TTC21A	Tetratricopeptide repeat protein 21A	FSNDPVLKFFK	11.841±0.8 9	0.000±0.00	2.12837 x10 ⁻⁵	-13.53
570	Q15773	MLF2	Myeloid leukemia factor 2	LAIQGPEDSPSR	12.034±2.6	0.000±0.00	1.43477 x10 ⁻³	-13.53

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571	Q14203	DCTN1	Dynactin subunit 1	AELKQRLNSQSK	11.840±0.6 3	0.000±0.00	5.41589 x10 ⁻⁶	-13.53
572	Q9NQZ7	ENTPD7	Ectonucleoside triphosphate diphosphohydrolase 7	DRQYERYLAR	11.839±0.1 2	0.000±0.00	6.92107 x10 ⁻⁹	-13.53
573	Q9UKR5	ERG28	Ergosterol biosynthetic protein 28 homolog	CLCAIDIHMK	11.843±0.0 8	0.000±0.00	1.18008 x10 ⁻⁹	-13.53
574	O14793	MSTN	Growth/differentiation factor 8	IEAIKIQILSK	11.873±1.0 1	0.000±0.00	3.4583 x10 ⁻⁵	-13.53
575	Q6UWZ7	ABRAXAS1	BRCA1-A complex subunit Abraxas 1	ALDLDDR	11.854±0.4 8	0.000±0.00	1.85913 x10 ⁻⁶	-13.53
576	Q16533	SNAPC1	snRNA-activating protein complex subunit 1	FEDFTELWR	11.850±0.2 0	0.000±0.00	5.57078 x10 ⁻⁸	-13.53
577	Q5MJ70	SPDYA	Speedy protein A	NTHNNNKSK	11.872±0.7 7	0.000±0.00	1.18182 x10 ⁻⁵	-13.53
578	Q8WTQ7	GRK7	Rhodopsin kinase GRK7	AATFLEDVQNWE LAEEGPTK	12.015±2.3 1	0.000±0.00	8.4464 x10 ⁻⁴	-13.53
579	P26006	ITGA3	Integrin alpha-3	EAGNPGSLFGYSV ALHR	11.878±0.6 8	0.000±0.00	7.15928 x10 ⁻⁶	-13.53
580	Q6PGN9	PSRC1	Proline/serine-rich coiled-coil protein 1	AAASEETRAAK	11.882±0.7 6	0.000±0.00	1.07953 x10 ⁻⁵	-13.53
581	Q5T7R7	C1orf185	Uncharacterized protein C1orf185	AIDERCR	11.884±0.4 7	0.000±0.00	1.6379 x10 ⁻⁶	-13.54
582	Q03518	TAP1	Antigen peptide transporter 1	IFEYLDRTPR	11.879±0.1 1	0.000±0.00	5.85486 x10 ⁻⁹	-13.54
583	Q5VTL7	FNDC7	Fibronectin type III domain-containing protein 7	DAFSMINVHWR	11.944±1.5 0	0.000±0.00	1.61594 x10 ⁻⁴	-13.54
584	Q8TBZ6	TRMT10A	tRNA methyltransferase 10 homolog A	KQGINEDQEESSQK PR	11.946±0.8 5	0.000±0.00	1.69678 x10 ⁻⁵	-13.54
585	Q9BUN1	MENT	Protein MENT	ELPSATPNTAGSS STR	11.934±0.0 5	0.000±0.00	2.87801 x10 ⁻¹⁰	-13.54
586	Q96B26	EXOSC8	Exosome complex component RRP43	AAGFKTVEPLEY YR	11.940±0.3 7	0.000±0.00	6.12434 x10 ⁻⁷	-13.54
587	P78310	CXADR	Coxsackievirus and adenovirus receptor	AKGETAYLPCK	12.065±2.0 4	0.000±0.00	5.10268 x10 ⁻⁴	-13.54
588	Q5UE93	PIK3R6	Phosphoinositide 3-kinase regulatory subunit 6	ATGITEELYQR	12.007±1.2 0	0.000±0.00	6.61192 x10 ⁻⁵	-13.55
589	Q5VVJ2	MYSM1	Deubiquitinase MYSM1	AWTPSCLRGR	12.029±1.4 3	0.000±0.00	1.3081 x10 ⁻⁴	-13.55

590	Q8IZF7	ADGRF2	Adhesion G-protein coupled receptor F2	ELKRISLIFEK	12.187±2.8 0	0.000±0.00	1.66448 x10 ⁻⁴	-13.55
591	Q96EF6	FBXO17	F-box only protein 17	EEFPLCALARYCL RAPFGR	12.048±1.5 6	0.000±0.00	1.79149 x10 ⁻⁴	-13.55
592	Q86Z20	CCDC125	Coiled-coil domain-containing protein 125	DTASNENKEK	12.011±0.3 1	0.000±0.00	2.93218 x10 ⁻⁷	-13.55
593	Q8WXI4	ACOT11	Acyl-coenzyme A thioesterase 11	GETLCSGFCLWRE GDQLTKCCWVR	12.145±2.0 0	0.000±0.00	4.65725 x10 ⁻⁴	-13.56
594	Q68E01	INTS3	Integrator complex subunit 3	LLCHLTPSIYTEFP DETLR	12.062±0.3 5	0.000±0.00	4.75115 x10 ⁻⁷	-13.56
595	Q8N475	FSTL5	Follistatin-related protein 5	AEEWPWNR	12.234±2.5 7	0.000±0.00	1.17724 x10 ⁻³	-13.56
596	C9JN71	ZNF878	Zinc finger protein 878	AFSFPSSVRR	12.210±2.2 8	0.000±0.00	7.46714 x10 ⁻⁴	-13.56
597	Q96AB6	NTAN1	Protein N-terminal asparagine amidohydrolase	GPPEQLRAAR	12.179±1.9 9	0.000±0.00	4.46107 x10 ⁻⁴	-13.56
598	Q6Y1H2	HACD2	Very-long-chain (3R)-3-hydroxyacyl-CoA dehydratase 2	GNGGGGGR	12.069±0.3 9	0.000±0.00	7.54449 x10 ⁻⁷	-13.56
599	Q9Y334	VWA7	von Willebrand factor A domain-containing protein 7	ANPGDPQPHFSHV ILR	12.087±0.9 1	0.000±0.00	2.132 x10 ⁻⁵	-13.56
600	P03372	ESR1	Estrogen receptor	ERLASTNDKGS AMESAK	12.082±0.4 8	0.000±0.00	1.65185 x10 ⁻⁶	-13.56
601	P32241	VIPR1	Vasoactive intestinal polypeptide receptor 1	ILLQKLRPPDIRK	12.105±1.0 1	0.000±0.00	3.16311 x10 ⁻⁵	-13.56
602	Q9P253	VPS18	Vacuolar protein sorting-associated protein 18 homolog	EFPSNLGYSELAF YTPK	12.083±0.4 0	0.000±0.00	7.82842 x10 ⁻⁷	-13.56
603	Q96LM6	TEX37	Testis-expressed sequence 37 protein	DKEFYRPIPNNP K	12.095±0.7 5	0.000±0.00	9.88839 x10 ⁻⁶	-13.56
604	P41221	WNT5A	Protein Wnt-5a	CKKCTEIVDQFVC K	12.098±0.5 3	0.000±0.00	2.49625 x10 ⁻⁶	-13.56
605	Q9BXB5	OSBPL10	Oxysterol-binding protein-related protein 10	HLEEKQR	12.099±0.4 3	0.000±0.00	1.02189 x10 ⁻⁶	-13.56
606	O00238	BMPR1B	Bone morphogenetic protein receptor type-1B	LTALRVK	12.164±1.5 5	0.000±0.00	1.68218 x10 ⁻⁴	-13.56
607	P20702	ITGAX	Integrin alpha-X	ATFQETKNRSLSR	12.099±0.2 7	0.000±0.00	1.77642 x10 ⁻⁷	-13.56
608	A6ND91	ASPDH	Aspartate dehydrogenase domain-containing protein	VGVVGYGR	12.279±2.4 3	0.000±0.00	9.43468 x10 ⁻⁴	-13.56
609	Q9NQZ5	STARD7	StAR-related lipid transfer protein 7, mitochondrial	IQEEELQR	12.112±0.2	0.000±0.00	9.37949 x10 ⁻⁸	-13.56

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610	Q7RTU3	OLIG3	Oligodendrocyte transcription factor 3	AAGESSK	12.184±1.6 1	0.000±0.00	1.95701 x10 ⁻⁴	-13.56
611	Q6ZWH5	NEK10	Serine/threonine-protein kinase Nek10	ALRFLFSMER	12.125±0.5 2	0.000±0.00	2.29897 x10 ⁻⁶	-13.56
612	O15382	BCAT2	Branched-chain-amino-acid aminotransferase, mitochondrial	ALEEGRVR	12.132±0.1 2	0.000±0.00	6.1273 x10 ⁻⁹	-13.57
613	Q8NFM4	ADCY4	Adenylate cyclase type 4	FDQIAKEHECMRI K	12.144±0.4 7	0.000±0.00	1.47525 x10 ⁻⁶	-13.57
614	Q17R89	ARHGAP44	Rho GTPase-activating protein 44	FLSKLSEYQDVNK	12.149±0.4 9	0.000±0.00	1.76389 x10 ⁻⁶	-13.57
615	Q4ADV7	RIC1	Guanine nucleotide exchange factor subunit RIC1	LSEITEEQVQPDA FQPITMGK	12.237±1.6 7	0.000±0.00	2.19464 x10 ⁻⁴	-13.57
616	Q6UXZ4	UNC5D	Netrin receptor UNC5D	EVFINVTR	12.183±0.2 5	0.000±0.00	1.25613 x10 ⁻⁷	-13.57
617	Q9UID3	VPS51	Vacuolar protein sorting-associated protein 51 homolog	AAFLGCLTDVR	12.376±2.6 9	0.000±0.00	1.34034x10 ⁻³	-13.57
618	P31146	CORO1A	Coronin-1A	LDRLEETVQAK	12.272±1.7 5	0.000±0.00	2.65516 x10 ⁻⁴	-13.57
619	O43402	EMC8	ER membrane protein complex subunit 8	ISASLLDSR	12.211±0.7 5	0.000±0.00	9.23963 x10 ⁻⁶	-13.57
620	Q03154	ACY1	Aminoacylase-1	CVSIQYLEAVRRL K	12.197±0.0 7	0.000±0.00	8.4908 x10 ⁻¹⁰	-13.57
621	Q01970	PLCB3	1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase beta-3	EAELEINR	12.206±0.1 2	0.000±0.00	5.6287 x10 ⁻⁹	-13.58
622	Q12846	STX4	Syntaxin-4	NILSSADYVER	12.224±0.7 4	0.000±0.00	9.09488 x10 ⁻⁶	-13.58
623	Q2WJG6	KLHL38	Kelch-like protein 38	ILAYDPQSNK	12.241±0.9 8	0.000±0.00	2.72376 x10 ⁻⁵	-13.58
624	Q9UNN8	PROCR	Endothelial protein C receptor	TLAFPLTIR	12.305±1.7 0	0.000±0.00	2.32132 x10 ⁻⁴	-13.58
625	Q9BUG6	ZSCAN5A	Zinc finger and SCAN domain-containing protein 5A	ASSVNQMRPGE QAHR	12.260±0.8 3	0.000±0.00	1.36661 x10 ⁻⁵	-13.58
626	P48730	CSNK1D	Casein kinase I isoform delta	FGASRAADDAER	12.259±0.5 9	0.000±0.00	3.53538 x10 ⁻⁶	-13.58
627	Q9NR97	TLR8	Toll-like receptor 8	LVDVICASPGDQR	12.272±0.8 7	0.000±0.00	1.66743 x10 ⁻⁵	-13.58
628	Q6MZZ7	CAPN13	Calpain-13	CLFVRPR	12.262±0.3 6	0.000±0.00	5.10288 x10 ⁻⁷	-13.58

629	O43422	THAP12	52 kDa repressor of the inhibitor of the protein kinase	FHTMITEK	12.289±0.65	0.000±0.00	5.08722 x10 ⁻⁶	-13.58
630	Q8N335	GPD1L	Glycerol-3-phosphate dehydrogenase 1-like protein	IIGNNVK	12.282±0.18	0.000±0.00	3.29192 x10 ⁻⁸	-13.58
631	O95232	LUC7L3	Luc7-like protein 3	ISAAQLLDELMGRDRNLAPDEK	12.368±1.77	0.000±0.00	2.66432 x10 ⁻⁴	-13.58
632	Q12772	SREBF2	Sterol regulatory element-binding protein 2	AIFHACR	12.288±0.11	0.000±0.00	4.17386 x10 ⁻⁹	-13.58
633	Q8NC26	ZNF114	Zinc finger protein 114	AFFYQSFLMR	12.295±0.45	0.000±0.00	1.21583 x10 ⁻⁶	-13.59
634	P82650	MRPS22	28S ribosomal protein S22, mitochondrial	DQAAEGINLIK	12.316±0.46	0.000±0.00	1.31498 x10 ⁻⁶	-13.59
635	Q9BV57	ADI1	Acireductone dioxygenase	FTVDEKKNYTKAMR	12.358±1.28	0.000±0.00	7.60814 x10 ⁻⁵	-13.59
636	O15455	TLR3	Toll-like receptor 3	DKDWVWEHFSSMEKEDQSLK	12.322±0.35	0.000±0.00	4.35493 x10 ⁻⁷	-13.59
637	Q9H1B5	XYLT2	Xylosyltransferase 2	LQSLEVGTDWDPK	12.343±0.79	0.000±0.00	1.10066 x10 ⁻⁵	-13.59
638	Q8N5Q1	GARIN5B	Golgi-associated RAB2 interactor protein 5B	AVSPTAPKK	12.353±0.92	0.000±0.00	2.00172 x10 ⁻⁵	-13.59
639	Q9UHQ7	TCEAL9	Transcription elongation factor A protein-like 9	EVDEIDEIR	12.416±1.65	0.000±0.00	2.01978 x10 ⁻⁴	-13.59
640	Q6ZVD8	PHLPP2	PH domain leucine-rich repeat-containing protein phosphatase 2	DWLREDVKR	12.393±1.30	0.000±0.00	7.99829 x10 ⁻⁵	-13.59
641	Q9UP83	COG5	Conserved oligomeric Golgi complex subunit 5	AKIVEPYNK	12.460±1.52	0.000±0.00	1.41255 x10 ⁻⁴	-13.60
642	Q9Y2R2	PTPN22	Tyrosine-protein phosphatase non-receptor type 22	CYQEDDSVPICIHCSAGCGR	12.462±1.35	0.000±0.00	8.97019 x10 ⁻⁵	-13.60
643	Q99549	MPHOSPH8	M-phase phosphoprotein 8	EVLLEFRK	12.430±0.63	0.000±0.00	4.4475 x10 ⁻⁶	-13.60
644	Q9BQQ7	RTP3	Receptor-transporting protein 3	AGDTEVWKQMFQELMR	12.441±0.39	0.000±0.00	6.63839 x10 ⁻⁷	-13.60
645	Q6ZUI0	TPRG1	Tumor protein p63-regulated gene 1 protein	IDHWNNEK	12.487±1.28	0.000±0.00	7.1054 x10 ⁻⁵	-13.60
646	Q8NEZ2	VPS37A	Vacuolar protein sorting-associated protein 37A	DDLVKSIEELAR	12.450±0.38	0.000±0.00	5.71528 x10 ⁻⁷	-13.60
647	Q6ZMT9	DTHD1	Death domain-containing protein 1	DLHLEGFGGPPEPSRHFQVR	12.462±0.75	0.000±0.00	8.67612 x10 ⁻⁶	-13.60
648	Q9Y2P4	SLC27A6	Long-chain fatty acid transport protein 6	EFLDRFGNIK	12.472±0.7	0.000±0.00	7.84724 x10 ⁻⁶	-13.60

					3			
649	Q9P1V8	SAMD15	Sterile alpha motif domain-containing protein 15	LEFP EEESR	12.498±1.1 3	0.000±0.00	4.31416 x10 ⁻⁵	-13.61
650	P07738	BPGM	Bisphosphoglycerate mutase	HGEGAWNK	12.508±0.6 4	0.000±0.00	4.57252 x10 ⁻⁶	-13.61
651	Q9BTP7	FAAP24	Fanconi anemia core complex-associated protein 24	TVQQIPGVGK	12.628±2.2 5	0.000±0.00	6.23762 x10 ⁻⁴	-13.61
652	Q8N7E2	CBLL2	E3 ubiquitin-protein ligase CBLL2	LSPCPPTRSPPPST LHGR	12.516±0.6 3	0.000±0.00	4.18348 x10 ⁻⁶	-13.61
653	Q96HW7	INTS4	Integrator complex subunit 4	CQLLLIKALQEK	12.522±0.0 6	0.000±0.00	3.10283 x10 ⁻¹⁰	-13.61
654	O43548	TGM5	Protein-glutamine gamma-glutamyltransferase 5	ISALGEEKSSPEK	12.536±0.1 6	0.000±0.00	1.83545 x10 ⁻⁸	-13.61
655	Q96PD2	DCBLD2	Discoidin, CUB and LCCL domain-containing protein 2	APKFTQPLQPR	12.553±0.6 1	0.000±0.00	3.81231 x10 ⁻⁶	-13.61
656	Q8WVM0	TFB1M	Dimethyladenosine transferase 1, mitochondrial	EVAERLAANTGS KQR	12.584±1.0 2	0.000±0.00	2.84467 x10 ⁻⁵	-13.62
657	Q2M3X9	ZNF674	Zinc finger protein 674	FLWQA AFIGKETL K	12.575±0.6 2	0.000±0.00	3.96616 x10 ⁻⁶	-13.62
658	Q5TD97	FHL5	Four and a half LIM domains protein 5	CSVSLVKGKFLTQ NKEIFCQK	12.829±3.3 2	0.000±0.00	2.58921 x10 ⁻³	-13.62
659	Q9HCG7	GBA2	Non-lysosomal glucosylceramidase	GQVHYRR	12.617±1.1 9	0.000±0.00	5.2517 x10 ⁻⁵	-13.62
660	Q14112	NID2	Nidogen-2	ENLLEHYGGTPR	12.682±1.8 4	0.000±0.00	2.82042 x10 ⁻⁴	-13.62
661	Q8IZA0	KIAA0319L	Dyslexia-associated protein KIAA0319-like protein	EEINKPPIAK	12.630±1.2 1	0.000±0.00	5.5168 x10 ⁻⁵	-13.62
662	Q8N1E6	FBXL14	F-box/LRR-repeat protein 14	SAAEGCLGLEQLT LQDCQKLTDSL K	12.646±1.0 3	0.000±0.00	2.86383 x10 ⁻⁵	-13.62
663	O94875	SORBS2	Sorbin and SH3 domain-containing protein 2	AISFKNGWQMAR	12.655±0.2 7	0.000±0.00	1.39548 x10 ⁻⁷	-13.63
664	Q9NX62	BPNT2	Golgi-resident adenosine 3',5'-bisphosphate 3'-phosphatase	KLPDLEKTGHK	12.674±0.4 8	0.000±0.00	1.41738 x10 ⁻⁶	-13.63
665	O75794	CDC123	Cell division cycle protein 123 homolog	KWCELIPGAEFR	12.795±2.0 0	0.000±0.00	3.751 x10 ⁻⁴	-13.63
666	Q8NE31	FAM13C	Protein FAM13C	FEEKFEQEKK	12.720±0.2 7	0.000±0.00	1.27956 x10 ⁻⁷	-13.63
667	Q16719	KYNU	Kynureninase	DVFQELEK	12.739±0.2	0.000±0.00	7.9362 x10 ⁻⁸	-13.64

					4			
668	Q58FF6	HSP90AB4P	Putative heat shock protein HSP 90-beta 4	EDQTEYLEER	12.739±0.0 4	0.000±0.00	5.05348 x10 ⁻¹¹	-13.64
669	Q12860	CNTN1	Contactin-1	ILALAPTFEMNPM KKK	12.758±0.5 2	0.000±0.00	1.89234 x10 ⁻⁶	-13.64
670	Q9UHC1	MLH3	DNA mismatch repair protein Mlh3	ACSETEESNTCCS DWQR	12.769±0.2 7	0.000±0.00	1.38882 x10 ⁻⁷	-13.64
671	Q8IZ40	RCOR2	REST corepressor 2	EKHGYNIEQALG MLLWHKHDVEK	12.814±0.5 9	0.000±0.00	2.98206 x10 ⁻⁶	-13.64
672	Q9UN88	GABRQ	Gamma-aminobutyric acid receptor subunit theta	CDTNSTWGLNDD ELMAHGQEK	12.899±1.6 7	0.000±0.00	1.80503 x10 ⁻⁴	-13.65
673	P11908	PRPS2	Ribose-phosphate pyrophosphokinase 2	ENIAEWK	12.896±1.1 6	0.000±0.00	4.24057 x10 ⁻⁵	-13.65
674	Q9H0I2	ENKD1	Enkurin domain-containing protein 1	ALDTTAPR	12.953±1.4 4	0.000±0.00	9.89531 x10 ⁻⁵	-13.65
675	P55160	NCKAP1L	Nck-associated protein 1-like	EVSRAFHLN	13.001±1.9 3	0.000±0.00	3.06263 x10 ⁻⁴	-13.66
676	P0CJ78	ZNF865	Zinc finger protein 865	CELCGKVFQYQPS LTR	12.986±1.6 8	0.000±0.00	1.80058 x10 ⁻⁴	-13.66
677	Q09428	ABCC8	ATP-binding cassette sub-family C member 8	AEIPWRACAK	12.925±0.4 4	0.000±0.00	8.78339 x10 ⁻⁷	-13.66
678	C9JQI7	TMEM232	Transmembrane protein 232	EHPSVSEIPMFPYP DFFTKADK	12.964±1.0 3	0.000±0.00	2.6443 x10 ⁻⁵	-13.66
679	P78314	SH3BP2	SH3 domain-binding protein 2	DPLCPRR	13.003±1.3 9	0.000±0.00	8.50862 x10 ⁻⁵	-13.66
680	Q8NCM2	KCNH5	Potassium voltage-gated channel subfamily H member 5	DITLFKQPIEDDST K	13.079±2.1 4	0.000±0.00	4.54537 x10 ⁻⁴	-13.66
681	Q15042	RAB3GAP1	Rab3 GTPase-activating protein catalytic subunit	CEQEEK	12.976±0.6 3	0.000±0.00	3.61007 x10 ⁻⁶	-13.66
682	Q8TF46	DIS3L	DIS3-like exonuclease 1	EVTKSVEEAQLA QEVK	13.117±2.1 3	0.000±0.00	4.36438 x10 ⁻⁴	-13.67
683	Q8NAF0	ZNF579	Zinc finger protein 579	ASGARNSAK	13.162±2.2 5	0.000±0.00	5.3709 x10 ⁻⁴	-13.67
684	Q14525	KRT33B	Keratin, type I cuticular Ha3-II	DNAELENLIRER	13.079±0.6 7	0.000±0.00	4.47707 x10 ⁻⁶	-13.67
685	Q96IU2	ZBED3	Zinc finger BED domain-containing protein 3	DGCVITKVLL	13.574±4.4 9	0.000±0.00	6.37012 x10 ⁻³	-13.68
686	Q9BYN8	MRPS26	28S ribosomal protein S26, mitochondrial	IARLRQEER	13.276±2.5 3	0.000±0.00	8.07613 x10 ⁻⁴	-13.68

687	Q8N0S2	SYCE1	Synaptonemal complex central element protein 1	AEKAGGQDTSSQ K	13.150±0.2 3	0.000±0.00	5.89877 x10 ⁻⁸	-13.68
688	Q08722	CD47	Leukocyte surface antigen CD47	AVEEPLNAFK	13.444±2.5 2	0.000±0.00	7.60043 x10 ⁻⁴	-13.70
689	Q9BT92	TCHP	Trichoplein keratin filament-binding protein	ELARREK	13.278±0.3 5	0.000±0.00	3.09753 x10 ⁻⁷	-13.70
690	Q9UM73	ALK	ALK tyrosine kinase receptor	GSFLLNNTSADSK HTILSPWMR	13.403±1.3 9	0.000±0.00	7.53319 x10 ⁻⁵	-13.70
691	A8MUP6	GSG1L2	Germ cell-specific gene 1-like protein 2	DNSSNGR	13.366±0.4 7	0.000±0.00	1.03433 x10 ⁻⁶	-13.71
692	Q6ZV80	LINC02898	Putative uncharacterized protein LINC02898	HTLSQVPNK	13.398±0.1 0	0.000±0.00	1.69524 x10 ⁻⁹	-13.71
693	Q6IPR1	ETFRF1	Electron transfer flavoprotein regulatory factor 1	NKDVKNPEK	13.549±0.8 4	0.000±0.00	9.75442 x10 ⁻⁶	-13.72
694	Q4V328	GRIPAP1	GRIP1-associated protein 1	ELHEDKKR	13.778±1.9 1	0.000±0.00	2.36009 x10 ⁻⁴	-13.74
695	P35250	RFC2	Replication factor C subunit 2	FALACNASDKIIEP IQSR	13.745±1.3 3	0.000±0.00	5.67021 x10 ⁻⁵	-13.74
696	Q9H8M5	CNNM2	Metal transporter CNNM2	EKLLEMLR	13.757±1.0 1	0.000±0.00	1.90565 x10 ⁻⁵	-13.75
697	Q9BZW8	CD244	Natural killer cell receptor 2B4	EKQSETSPK	14.058±0.2 6	0.000±0.00	7.3797 x10 ⁻⁸	-13.78
698	Q9GZQ3	COMMD5	COMM domain-containing protein 5	CERRLQD	14.190±1.1 5	0.000±0.00	2.79662 x10 ⁻⁵	-13.79
699	P0CG13	CHTF8	Chromosome transmission fidelity protein 8 homolog	AGGLAEWVLMEL QGEIAR	14.489±2.5 8	0.000±0.00	6.29955 x10 ⁻⁴	-13.81
700	Q8TEK3	DOT1L	Histone-lysine N-methyltransferase, H3 lysine-79 specific	AGAATVK	14.377±0.8 4	0.000±0.00	7.68807 x10 ⁻⁶	-13.81
701	P01236	PRL	Prolactin	IDNYLKLLK	14.396±1.1 6	0.000±0.00	2.79933 x10 ⁻⁵	-13.81
702	Q96NT0	CCDC115	Coiled-coil domain-containing protein 115	QLEPGAA	16.111±2.5 7	0.000±0.00	4.09266 x10 ⁻⁴	-13.96
703	Q9P2C4	TMEM181	Transmembrane protein 181	ACSELRHMPYVD LR	16.259±2.3 6	0.000±0.00	2.80565 x10 ⁻⁴	-13.98
704	P10747	CD28	T-cell-specific surface glycoprotein CD28	RPGPTRK	16.462±3.4 7	0.000±0.00	1.19027 x10 ⁻³	-13.99
705	Q8IWL3	HSCB	Iron-sulfur cluster co-chaperone protein HscB	TLLAPLSR	17.629±0.0 9	0.000±0.00	3.6599 x10 ⁻¹⁰	-14.11

^aFor log₂(fold change) ARID1A/empty vector calculations, an intensity value of 0 was set to 0.001 to prevent division by 0. n/a, not applicable; ARID1A, AT-rich interacting domain-containing protein 1A; TBC1, Tre-2/USP6, BUB2, Cdc16; GRB2, growth factor receptor-bound protein-2; TARBP1, TAR RNA-Binding Protein 1; ABCB7, ATP Binding Cassette Subfamily B Member 7; C4orf50, Chromosome 4 Open Reading Frame 50; RNF135, Ring Finger Protein 135; BTK, Bruton Tyrosine Kinase; C1orf141, Chromosome 1 Open Reading Frame 141; FAM118A, Family With Sequence Similarity 118 Member A; FAM227B, Family With Sequence Similarity 227 Member B; FAM20A, Family With Sequence Similarity 20, Member A; MNT, MAX Network Transcriptional Repressor; RMND5A, Required For Meiotic Nuclear Division 5 Homolog A; ITK/TSK, Interleukin-2-inducible T-cell kinase; FAM227A, Family With Sequence Similarity 227, Member A; ZNRF3, Zinc And Ring Finger 3; RNF13, Ring Finger Protein 13; TPTE, Transmembrane Phosphatase With Tensin Homology; MAB21L1, Mab-21 Like 1; TFG, Trafficking From ER To Golgi Regulator; ICK, Ciliogenesis Associated Kinase 1; MCM8, Minichromosome Maintenance 8 Homologous Recombination Repair Factor; FAM98B, Family With Sequence Similarity 98 Member B; BACH2, BTB Domain And CNC Homolog 2; RUSC1, RUN And SH3 Domain Containing 1; PRRC1, Proline Rich Coiled-Coil 1; TIAM2, TIAM Rac1 Associated GEF 2; NALCN, Sodium leak channel; Pcf11, Pre-mRNA cleavage complex 2 protein; NAF1, Nuclear Assembly Factor 1 Ribonucleoprotein; MINDY-1, MINDY Lysine 48 Deubiquitinase 1; RNF4, Ring Finger Protein 4; GPCPD1, Glycerophosphocholine Phosphodiesterase 1; BRWD1-AS2, BRWD1 Antisense RNA 2; TOM1, Target Of Myb1; ZDHHC4, Zinc Finger DHHC-Type Palmitoyltransferase 4; APCDD1, APC Down-Regulated 1; ACSBG2, Acyl-CoA Synthetase Bubblegum Family Member 2; SCO1, Synthesis Of Cytochrome C Oxidase 1; ABCB9, ATP Binding Cassette Subfamily B Member 9; GRK7, G Protein-Coupled Receptor Kinase 7; MYSM1, Myb Like, SWIRM And MPN Domains 1; UNC5D, Unc-5 Netrin Receptor D; CBLL2, Cbl Proto-Oncogene Like 2; FAM13C, Family With Sequence Similarity 13 Member C; LINC02898, Long Intergenic Non-Protein Coding RNA 2898; HscB, HscB Mitochondrial Iron-Sulfur Cluster Cochaperone.

Table SII. Significantly enriched GO terms and KEGG pathways of altered proteins in ARID1A-overexpressing SW48 cells.

A, GO biological process					
ID	Term	Genes	Gene ratio	P-value	Fold enrichment
GO:0010811	Positive regulation of cell-substrate adhesion	ECM2, CCDC80, ITGA3, ABI3BP, AGR2, VWC2, EMILIN1	0.98	0.001	5.89
GO:0016191	Synaptic vesicle uncoating	GAK, SYNJ1, DNAJC6, SH3GL2	0.56	0.001	17.31
GO:0016055	Wnt signaling pathway	APC2, FBXW11, WNT5A, CSNK1D, APCDD1, SENP2, MESD, HIC1, SFRP4, ZNRF3, CCND1, OTULIN, LEO1, ZBED3	2.11	0.005	2.33
GO:0006629	Lipid metabolic process	MTMR3, MTPP, EPHX3, UMOD, PTPN22, GDPD4, SREBF2, RIDA, ERG28, BDH1, ACOX1, DPEP2, PLIN1, PRLH, PLCD3, BCAT2	2.25	0.005	2.24
GO:0060750	Epithelial cell proliferation involved in mammary gland duct elongation	MED1, WNT5A, ESR1	0.42	0.006	22.72
GO:1900264	Positive regulation of DNA-directed DNA polymerase activity	RFC5, RFC3, CHTF8, RFC2	0.56	0.008	9.32
GO:0006516	Glycoprotein catabolic process	MANBA, FBXO17, PPP6R3, FBXO6	0.56	0.010	8.66
GO:0016180	Small nuclear RNAs (snRNAs) processing	INTS12, INTS3, INTS5, INTS4	0.56	0.012	8.08
GO:0032508	DNA duplex unwinding	RFC5, RFC3, CHTF8, MCM8, RFC2, CHD1L, RAD54B	0.98	0.013	3.59
GO:0045444	Fat cell differentiation	NR4A1, MED1, TTC8, NR4A3, CCND1, PRLH, GDF6, SENP2	1.12	0.014	3.11
GO:0051056	Regulation of small GTPase mediated signal transduction	NET1, TIAM2, ARHGAP44, PLEKHG4, ARHGAP20, CHN1, TAGAP, ARHGAP28, ARHGEF5, FGD2	1.40	0.017	2.55
GO:0030433	Ubiquitin-dependent ERAD pathway	CALR3, FBXO17, DNAJB12, UBQLN1, UBE4A, UMOD, FBXO6, USP19	1.12	0.017	2.99
GO:0043066	Negative regulation of apoptotic process	CERKL, SCX, AURKA, RPS6KA3, MAEL, FFAR4, PRAME, NCKAP1L, ASIC2, TGM2, NTRK1, MED1, ANGPT4, SERPINB2, WNT5A, PAX4, PRAMEF20, CAPN13, HCK, GCLC, PROC, CD40LG, RPS6KB1, MDM2, PPT1, CD28, IL6ST	3.79	0.024	1.57
GO:0045109	Intermediate filament organization	KRT33B, KRT17, KRT3, KRT15, KRT7, KRT77, GFAP	0.98	0.024	3.12
GO:0006511	Ubiquitin-dependent protein catabolic	APC2, HACE1, RNF13, USP21, UBE4A, RC3H1, NEDD4L, NTAN1, FBXO11, FBXL14, USP19, RNF168, PSMD9, ZNRF3,	2.39	0.026	1.82

	process	MDM2, UBQLN1			
GO:0044267	Cellular protein metabolic process	MMP13, FBXO17, KLK3, FBXO6	0.56	0.030	5.77
GO:0009134	Nucleoside diphosphate catabolic process	ENTPD2, ENTPD6, ENTPD7	0.42	0.033	10.1
GO:0006013	Mannose metabolic process	MAN2B2, PMM2, MAN2C1	0.42	0.033	10.1
GO:1903078	Positive regulation of protein localization to plasma membrane	ITGA3, STAC2, AGR2, STX4, AKAP5, PLS1	0.84	0.034	3.3
GO:0034243	Regulation of transcription elongation from RNA polymerase II promoter	INTS12, INTS3, INTS5, INTS4	0.56	0.034	5.51
GO:0038083	Peptidyl-tyrosine autophosphorylation	NTRK1, ALK, ITK, BTK	0.56	0.034	5.51
GO:0006468	Protein phosphorylation	DYRK2, MAST1, CAMK2A, AURKA, RABGEF1, CCND1, GRK7, IKBKE, MAP3K5, PAK4, NTRK1, TNK1, WNT5A, ADAM10, CSNK1D, KSR2, GAK, HCK, TAOK1, NEK10, BTK, TAF7, BMPR1B, CILK1, CDKL1	3.51	0.035	1.55
GO:0045597	Positive regulation of cell differentiation	RPS6KA3, FGF8, PPP1R13L, PAX4, ARID2, ARID1B	0.84	0.042	3.13
GO:0007130	Synaptonemal complex assembly	SYCE2, SYCE1, HORMAD1, MLH3	0.56	0.043	5.05
GO:0035556	Intracellular signal transduction	GUCY1A2, ITK, PRPF38B, WSB1, MAST1, ACOT11, ADCY4, KSR2, NET1, RP1L1, RPS6KA3, TAOK1, RPS6KA2, CHN1, STAC2, BTK, TP53TG5, PLCD3, CILK1, ARHGEF5, PLCD1, PAK4	3.23	0.043	1.55
GO:0007140	Male meiosis	MAEL, SPDYA, MLH3, BRDT	0.56	0.048	4.85
GO:0032465	Regulation of cytokinesis	KLHL9, SH3GLB1, CETN2, ENTR1, AURKA	0.70	0.049	3.61
GO:0046685	Response to arsenic-containing substance	GCLC, SERPINF1, RNF4	0.42	0.049	8.26
GO:0009313	Oligosaccharide catabolic process	MANBA, MAN2B2, MAN2C1	0.42	0.049	8.26
B, GO cellular component					
ID	Term	Genes	Gene ratio	P-value	Fold enrichment
GO:0005829	Cytosol	DYNC2I2, TESK1, PKD2L1, NADSYN1, GBA2, BACH2, RRP8,	32.87	0.000	1.30

		<p>CCT6B, RPS6KA3, PSMD9, RABGEF1, TFG, RUSC1, RPS6KA2, GOLGA1, SPATA24, ANKFY1, PLCE1, FBXO6, MLYCD, LGALS8, WSB1, COG5, KRT3, KRT7, CSNK1D, HCFC2, TIAM2, SULT2B1, ZFYVE16, CRYZL1, BTK, TXNIP, PI4K2A, CERKL, MTMR3, MTPP, NEDD4L, C9ORF78, PIK3R6, KRT33B, SEC14L2, AP5M1, NUP85, NCKAP1L, GSTT2B, ZBED3, PMM2, RAB3IP, TEX37, THAP11, NET1, ADI1, INTS5, PPT1, CD28, ITPA, ITK, ACY1, CETN2, DIS3L, KDM8, NKAP, HSCB, SHB, OSBPL10, GLT1D1, XPO4, IKBKE, APC2, GRIPAP1, SREBF2, COMMD5, GAK, RNF168, APBB1IP, HCK, PLCB3, PABPC3, HNRNPH2, PLIN1, ACSBG2, ARHGEF5, PHLPP2, GPS2, AKAP5, FGD2, RNF135, RIDA, SERTAD2, EXOSC8, CHN1, STX4, EMC8, PAK4, TRMT10A, RIC1, ELP2, SGSM1, AGBL5, KLHL9, TTC8, KRT17, KCNS3, TAOK1, KRT15, STAC2, OTULIN, PLCD3, MPHOSPH8, RAB3GAP1, GDA, NCF4, YARS2, ARHGAP44, CCND1, KMT5A, KPNA3, SH3GL2, MAP3K5, TGM2, SH3GLB1, GUCY1A2, PHYH, FBXW11, STX8, FBXO17, ACOT11, AIP, FBXO15, TSC1, KRT77, CHD1L, FBXO11, TOM1L1, ADAM17, DOK4, FRMD8, TIPRL, DPEP2, PPIH, SRSF5, KANK4, PFKFB4, DAPP1, CORO1A, ARHGAP20, SYCE1, ADGRG2, NLRP5, PLXNA1, MBP, TIA1, IFTAP, ARHGEF37, ATP8B2, GFPT2, ANKRD23, ARHGAP28, TRAPPC9, ESR1, GFAP, FBXO31, NR4A1, GCLC, SYNJ1, MDM2, SPIRE1, CNTROB, DRC1, MXD1, DYRK2, RNF13, MCM8, MAST1, PTPN22, C2ORF48, PITPNC1, TCHP, RO60, PPP1R13L, SNAPC2, KYNU, TAGAP, PPP6R3, MAN2C1, PLEKHG4, RBM18, ELAC1, PLA2G4A, ASMTL, TRAF2, VPS37A, BPGM, KSR2, GPCPD1, SENP2, ARID1B, TSN, PSRC1, SAPCD2, ACOX1, DNAJC6, ALDH1A1, MYH8, DNAJC9, EVL, CILK1, PRPS2, HSP90AB4P, DCTN1, CAMK2A, CXXC1, PARD6G, TPTE, USP19, AURKA, C15ORF39, VPS51, DNAJB4, UBQLN1, BPNT2, TCF7L1, USP21, FBXL14, TTC17, CCS, RPS6KB1, TNIP3, NT5C1A, GPD1L, PAXBP1</p>			
GO:0005654	Nucleoplasm	<p>GABPB2, SPPL2B, BACH2, RRP8, RPS6KA3, PSMD9, CCND1, RPS6KA2, SPATA24, KMT5A, ARID2, KPNA3, GEN1, MED1, SNRPN, CXADR, COG5, AIP, ZBTB34, CSNK1D, CHD1L, HCFC2, FBXO11, HIC1, PRPF4, FRMD8, DPEP2, PPIH, SRSF5, CDKL1, CERKL, MINDY1, FOXG1, NEDD4L, C9ORF78, SEC14L2, SYCE2, SYCE1, CHTF8, NUP85, PLXNA1, GSTT2B, ESRR, TOE1, ZBTB18, TIA1, NCAPH2, INTS3, CBX2,</p>	23.74	0.000	1.31

		ANKRD23, PMM2, ESR1, THAP11, NR4A1, NR4A3, MDM2, INTS5, SPDYA, SPIRE1, INTS4, MXD1, ITPA, INTS12, DYRK2, RNF13, MCM8, CETN2, KDM8, NKAP, HSCB, SHB, PHF6, MYSM1, PITPNC1, MED12, RO60, XPO4, SNAPC1, PPP1R13L, PCF11, SNAPC2, KYNU, PPP6R3, NELFB, MYBL2, MAN2C1, IKBKE, RBM5, RFC5, APC2, GRIPAP1, RFC3, MRPS26, RFC2, RBM18, ELAC1, PAX4, DARS2, TRAF2, VPS37A, SENP2, ETV4, ARID1B, MRPL46, GCNA, SREBF2, TSN, COMMD5, RNF168, PSRC1, SAPCD2, LUC7L3, HNRNPH2, NAF1, DNAJC9, ARHGEF5, BCAT2, PHLPP2, GTF3C2, ABRAXAS1, CAMK2A, DOT1L, CXXC1, FAAP24, GPS2, TMPRSS2, WDR20, MRPL58, RNF4, SPTY2D1, AURKA, MNT, RMND5A, POLR2B, SERTAD2, DNAJB4, BAHD1, EXOSC8, TRA2A, UBQLN1, LEO1, BPNT2, PRAME, CFAP20, TRDMT1, RUNX1T1, SRSF12, TRMT10A, MBD4, TCF7L1, USP21, CCDC59, ELP2, TRMT1, MCOLN1, YY1AP1, MLH3, USF1, RPS6KB1, MFAP1, CDKN2AIPNL, KANSL3, TAF7, FAM98B, MPHOSPH8, ZNF354C, GZF1			
GO:0031390	Ctf18 RFC-like complex	RFC5, RFC3, CHTF8, RFC2	0.56	0.001	17.53
GO:0036064	Ciliary basal body	DYNC2I2, DCTN1, CETN2, CFAP70, RAB3IP, CSNK1D, AURKA, TTC8, TOGARAM1, ENTR1, BBOF1, GAS2L2, CFAP20, CILK1, ENKD1	2.11	0.001	2.72
GO:0005614	Interstitial matrix	ECM2, CCDC80, ABI3BP, VWC2	0.56	0.006	10.23
GO:0005884	Actin filament	APC2, VPS18, HCK, INF2, TSC1, ACTL8, GAS2L2, CORO1A, PLS1	1.26	0.008	3.10
GO:0005663	DNA replication factor C complex	RFC5, RFC3, RFC2	0.42	0.010	18.41
GO:0005881	Cytoplasmic microtubule	APC2, FBXW11, RAB3D, MAST1, TOGARAM1, MAPRE2, ENKD1	0.98	0.010	3.77
GO:0045171	Intercellular bridge	ESRRA, APC2, PHLPP2, AGBL5, PPP1R13L, DCTN1, RBM18, NCAPH2, KICS2	1.26	0.011	2.97
GO:0005737	Cytoplasm	DYNC2I2, TESK1, NADSYN1, RPS6KA3, PSMD9, TFG, RPS6KA2, SPATA24, FBXO6, MLYCD, SPA17, LGALS8, ACAD10, WSB1, CXADR, PRAMEF20, KRT7, CSNK1D, HCFC2, SULT2B1, SFRP4, ZFYVE19, BTK, TXNIP, CBL2, CERKL, TBCEL, MTMR3, NEDD4L, SEC14L2, CYP2B6, PRR1, SPATA5L1, CFAP65, GSTT2B, ZBED3, TOE1, HACE1, STK11IP, TPRG1, INTS3, PMM2, TEX37, NTAN1, NDUFAF6, ADI1, INTS5, ITPA, ACY1, MSTN, CCDC125, HSCB, CSAD,	29.63	0.011	1.15

		<p>CSRP2, XPO4, PCF11, NELFB, IKBKE, APC2, SERPINB2, TACR3, SREBF2, MLF2, GAK, HCK, PABPC3, FAM20A, PRMT9, ACSBG2, MAPRE2, ARHGEF5, TLR3, PHLPP2, CDC123, CCDC103, DOT1L, ADCY4, FGD2, RNF135, SCEL, RIDA, SERTAD2, EXOSC8, TP53TG5, PRAME, PRLH, EMC8, PAK4, SRSF12, GABBR2, ELP2, SORBS2, ACTL8, SGSM1, AGBL5, TAOK1, OTULIN, ETFBKMT, MPHOSPH8, PLCD1, RAB3GAP1, GZF1, MYLK2, NCF4, ARHGAP44, FGF8, CCND1, MAEL, TNFRSF8, TGM5, KPNA3, SH3GL2, MAP3K5, PLS1, SH3GLB1, GUCY1A2, SNRPN, FBXO17, ACOT11, AIP, ADAM10, UBE4A, TSC1, FBXO11, TOM1L1, ADAM17, DOK4, PPIH, BBOF1, KANK4, CDKL1, ANKRD16, FOXO6, CORO1A, KLC3, ESPNL, GRK7, NLRP5, ZC3H14, GAS2L2, ESRRA, TIA1, ARHGEF37, TNK1, ARHGAP28, TRAPPC9, ESR1, CORO2B, DNAJC17, GFAP, MFHAS1, NR4A1, MDM2, CNTROB, RTP3, DYRK2, RNF13, CPQ, MAST1, PTPN22, MYSM1, PITPNC1, TCHP, RO60, KYNU, PPP6R3, GRIFIN, PLEKHG4, SUN1, PLA2G4A, DARS2, KSR2, GPCPD1, ARID1B, TSN, C12ORF4, ARL4D, PSRC1, DNAJC6, ALDH1A1, MYH8, PFDN1, SPOPL, BPI, NAF1, DNAJC9, EVL, CILK1, PRPS2, DCTN1, CAMK2A, PARD6G, RNF4, RMND5A, DDT, UBQLN1, CFAP20, TRDMT1, SKOR2, USP21, FBXL14, YY1AP1, TTC17, CAPN13, CCS, RPS6KB1, NT5C1A, TAF7, FAM98B</p>			
GO:0005794	Golgi apparatus	<p>GALNT13, CPQ, MAST1, XYLT2, ZDHHC4, GARIN3, RUSC1, GOLGA1, APC2, COG5, ENTPD6, ENTPD7, PLA2G4A, ADAM10, CSNK1D, SORCS1, GAK, HCK, NPC1, FAM20A, CERKL, ASAH2, MTTP, NEDD4L, ADRB2, FGD2, FUT7, PRRC1, VPS51, NLRP5, BPNT2, SCAP, PRAME, KIAA0319L, EMC8, EXTL3, PAK4, GALNT7, GALNT6, ATP8B2, RAB3IP, TRAPPC9, MCOLN1, ESR1, SGSM1, CD40LG, PROC, KCNS3, PPT1, RAB3GAP1</p>	7.02	0.025	1.36
GO:0043235	Receptor complex	<p>GABRQ, ALK, NTRK1, VIPR1, ITGA3, MTTP, PKD2L1, MST1R, ADRB2, MCOLN1, IL3RA, IL13RA2, BMPR1B, IL6ST</p>	1.97	0.028	1.96
GO:0035579	Specific granule membrane	<p>CD93, CMTM6, ADAM10, DEGS1, MCEMP1, CD47, LAMTOR1, LAIR1</p>	1.12	0.029	2.70
GO:0035371	Microtubule plus-end	<p>DCTN1, MAST1, GAS2L2, MAPRE2</p>	0.56	0.042	5.11
GO:0005783	Endoplasmic reticulum	<p>CERKL, CALR3, VKORC1L1, RNF13, CPQ, STAU2, MTTP, ATP2A3, UMOD, PKD2L1, MESD, HACD2, AGPAT4, ZDHHC4, ERMP1, UBQLN1, UGT1A5, AGR2, SCAP, PCDHA2, EMC8, EXTL3, TGM2, HACE1, PNPLA7, USP21, CCDC115, STX8,</p>	6.88	0.043	1.31

		DNAJB12, PLA2G4A, TAP1, EPHX3, MBOAT4, TRAPPC9, ELOVL7, SREBF2, TSN, SULT2B1, HADHB, ERG28, PROC, NPC1, STIM1, TMEM259, DEGS1, PLIN1, FAM20A, LDAH			
GO:0005764	Lysosome	VPS18, MANBA, CPQ, CCDC115, KICS2, ABCB9, ADRB2, MCOLN1, GFAP, TOM1L1, CHIT1, HCK, AP5M1, NPC1, MAN2B2, PPT1, LAMTOR1	2.39	0.048	1.68
GO:0015630	Microtubule cytoskeleton	ESRRA, APC2, AGBL5, PSRC1, RUSC1, DCTN1, TAOK1, TEK5, MAPRE2, KANK4, ENKD1, AURKA	1.69	0.048	1.93
C, GO molecular function					
ID	Term	Genes	Gene ratio	P-value	Fold enrichment
GO:0046872	Metal ion binding	GALNT13, CPNE5, TESK1, XYLT2, ZFP30, ZNF329, ANKFY1, ZNF569, ZNF844, PLCE1, TGM5, ARID2, TGM2, VPS18, ZNF680, ZFP2, ENTPD7, RC3H1, ADAM10, ZNF10, TAP1, ZBTB34, HIC1, ACAP3, ADAM17, ZFYVE16, STIM1, ZFYVE19, ZSCAN21, DPEP2, BTK, CBLL2, ZNF674, MTMR3, ZNF23, ZBTB5, C2, ZNF429, AMZ2, ZNF546, ZC3H14, ZBED3, TOE1, ZBTB18, PMM2, THAP12, ZNF726P1, ESR1, SLC6A5, MAN2B2, COL9A1, MDM2, BMPR1B, ZNF136, ITPA, LHX9, CALR3, INTS12, ITK, RNF13, ACY1, CPQ, KDM8, ATP2A3, HSCB, FHL5, ZFP82, PHF6, MYSM1, ADAMTS4, RO60, CSRP2, ZNF528, ZNF649, ITGAX, MAN2C1, RBM5, ZSCAN5A, ITGA3, ELAC1, TRAF2, KSR2, MMEL1, ZFP90, RNF168, NDUFS7, ZNF878, ZNF114, PHLPP2, CAMK2A, ADCY4, CXXC1, ZNF3, GDPD4, USP19, FGD2, RNF135, SCEL, RMND5A, ERMP1, ZNRF3, POLR2B, CHN1, BPNT2, ZNF865, EXTL3, RUNX1T1, GALNT7, ZNF100, GALNT6, USP21, DMRT2, ZNF181, TRMT1, ZNF33A, CCS, ZNF618, MAB21L1, STAC2, NEK10, ZNF735, ZNF579, PLCD3, ZNF354C, GZF1	17.56	0.000	1.35
GO:0030246	Carbohydrate binding	GALNT7, PRPS2, GRIFIN, CALR3, GALNT6, GALNT13, CD93, SIGLEC12, SIGLEC10, CSAD, MRC2, CLEC2A, MAN2B2, COL9A1, CNTN1, FBXO6, MAN2C1, LGALS8	2.53	0.001	2.58
GO:0003689	DNA clamp loader activity	RFC5, RFC3, CHTF8, RFC2	0.56	0.003	12.87
GO:0005515	Protein binding	GABPB2, TESK1, SCX, BACH2, RRP8, PSMD9, RABGEF1, TFG, ANKFY1, PLCE1, VPS18, MED1, CXADR, WSB1, STARD7, TAAR9, SERPINF1, ZNF10, RC3H1, MCEMP1, HCFC2, SULT2B1, ZFYVE16, SCO1, ZFYVE19, ZSCAN21, TXNIP, PI4K2A, MTMR3, ABCB7, NEDD4L, ZNF23, C9ORF78, ABCB9, HACD2, C2, NUP85, NCKAP1L, CFAP65, KIAA0319L,	65.73	0.004	1.07

		<p>TOE1, HACE1, TPRG1, NCAPH2, PMM2, RAB3IP, THAP12, TEX37, GRIN2C, THAP11, ADI1, PPT1, ZNF136, ITK, DIS3L, KDM8, SHB, PHF6, OSBPL10, MRC2, MED12, CSRP2, NELFB, DLGAP2, IKBKE, APC2, BRD3, FCRL2, ZSCAN5A, TACR3, ELOVL7, CDYL2, RNF168, APBB1IP, HADHB, PLCB3, RIPPLY3, INF2, PLIN1, ZNF114, PHLPP2, STAU2, ADCY4, WDR20, GPS2, FGD2, RNF135, FSTL5, RIDA, ERMP1, CHN1, LEO1, AGR2, STX4, TP53TG5, PRAME, ANKRD52, EXTL3, RUNX1T1, ZNF100, TRMT10A, MBD4, RIC1, TRMT1, DCBLD2, TAOK1, LAMTOR1, KLKB1, PLCD1, VKORC1L1, MYLK2, FAM13C, RAB3D, NCF4, ZNF329, ZNF569, KMT5A, IL13RA2, KPNA3, MAP3K5, SH3GLB1, SNRPN, STX8, FBXO17, FAM118A, AIP, TAP1, FBXO15, ZBTB34, CHD1L, FBXO11, HIC1, TOM1L1, ARMCX1, STIM1, FRMD8, IAPP, SRSF5, IL6ST, KANK4, PFKFB4, MINDY1, FOXO6, CORO1A, KLC3, ESPNL, MBP, IGFBP7, CD300LD, ESRR, ZBTB18, TIA1, IFTAP, ATP8B2, AMBN, GFPT2, TNK1, ANKRD23, TNFRSF10C, TRAPPC9, CORO2B, GFAP, FBXO31, MFHAS1, MDM2, SPIRE1, MENT, CNTROB, SERINC3, LHX9, ALK, RNF13, MCM8, PTPN22, FHL5, ADAMTS4, PPP1R13L, ZNF649, TAGAP, PPP6R3, ITGAX, EMILIN1, RFC5, PLEKHG4, RFC3, CR1, ITGA3, RFC2, ASMTL, TRAF2, VPS37A, BPGM, KSR2, TSN, ZFP90, ARL4D, NPC1, SAPCD2, IL3RA, NAF1, EVL, DNAJC9, MTFR2, PRPS2, GTF3C2, CXXC1, PARD6G, TPTE, MESD, ZNRF3, VPS51, POLR2B, BAHD1, DNAJB4, SH3BP2, UBQLN1, ETRF1, NTRK1, CCDC59, SYT14, SEMA4G, MCOLN1, FBXL14, MAB21L3, CLEC2A, MFAP1, CDKN2AIPNL, ZNF618, NT5C1A, MAB21L1, CD244, DYNC2I2, VIPR1, C10ORF67, PKD2L1, NADSYN1, ZDHHC4, RPS6KA3, RUSC1, RPS6KA2, SPATA24, GOLGA1, ZNF844, DENR, FBXO6, SPA17, LGALS8, MYOZ2, IQCF3, ENTPD2, COG5, KRT3, ZFP2, KRT7, CSNK1D, THEG, SFRP4, GAREM1, BTK, PREB, CBLL2, ATP6V0D2, TBCEL, FOXG1, MTPP, UMOD, KLK3, MST1R, APCDD1, ZBTB5, PIK3R6, KRT33B, MMTAG2, PPRC1, SPATA5L1, SCAP, N4BP3, CLHC1, SIGLEC12, INTS3, SIGLEC10, NTAN1, NET1, COL9A1, INTS5, CD28, SPDYA, CORO6, INTS4, ARMC12, RCOR2, INTS12, ACY1, MSTN, CETN2, CCDC125, NKAP, PRL, HSCB, TFB1M, C8A, XPO4, GRIPAP1, CCDC115, SORCS1, SREBF2, COMMMD5, MLF2, GAK, HCK, PABPC3, HNRNPH2, FAM20A, CD47, PRMT9,</p>			
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		MAPRE2, ARHGEF5, TLR3, NPB, CCDC103, DOT1L, FAAP24, TMPRSS2, AKAP5, ZNF3, RAD54B, SCEL, MNT, SAMM50, SERTAD2, EXOSC8, EMC8, LAIR1, PAK4, GABRQ, GABBR2, MPP3, DMRT2, PCDHB14, SORBS2, ACTL8, MLH3, TTC8, ERG28, CD40LG, KRT17, KRT15, OTULIN, STAC2, VWC2, CFHR5, MPHOSPH8, RAB3GAP1, KLHL38, SPPL2B, YARS2, ARHGAP44, CCND1, TRAPPC14, TEK5, TGM5, ARID2, SH3GL2, TMEM14C, TGM2, GUCY1A2, PHYH, CD93, FBXW11, WNT5A, ADAM10, UBE4A, TSC1, KRT77, PROCR, PRPF4, ADAM17, DOK4, TIPRL, PPIH, DAPP1, ADRB2, NALCN, NID2, SYCE2, SCUBE3, SYCE1, FUT7, GRK7, NLRP5, ASIC2, ZC3H14, GAS2L2, ENKD1, CBX2, ESR1, DNAJC17, NR4A1, GCLC, PROC, NR4A3, MAN2B2, CNTN1, DEGS1, BMPR1B, MXD1, DYRK2, RTP3, MAST1, ATP2A3, TNFAIP2, C2ORF48, MYSM1, PITPNC1, TCHP, SNAPC1, MYBL2, HORMAD1, RBM5, SUN1, OLIG3, TBC1D9, DARS2, SENP2, ETV4, ARID1B, GCNA, C12ORF4, PSRC1, NDUFS7, ALDH1A1, PFDN1, LUC7L3, SPOPL, ITGB1BP2, CILK1, ABRAXAS1, DCTN1, CAMK2A, RNF4, USP19, AGPAT4, AURKA, RMND5A, TRA2A, TOGARAM1, ENTR1, CCDC185, CFAP20, GALNT6, PTC1, TCF7L1, USP21, CMTM6, YY1AP1, USF1, TTC17, CCS, NOPCHAP1, RPS6KB1, TNIP3, BRMS1L, TAF7, FAM98B			
GO:0017116	Single-stranded DNA-dependent ATP-dependent DNA helicase activity	RFC5, RFC3, CHTF8, MCM8, RFC2	0.70	0.004	7.24
GO:0051010	Microtubule plus-end binding	STIM1, DCTN1, FBXW11, MAST1, MAPRE2	0.70	0.006	6.58
GO:0005085	Guanyl-nucleotide exchange factor activity	PLEKHG4, GRIPAP1, PRPF38B, RIC1, ARHGEF37, RAB3IP, FGD2, NET1, TIAM2, RABGEF1, TAGAP, PLCE1, PREB, LAMTOR1, ARHGEF5, RAB3GAP1	2.25	0.018	1.95
GO:0004711	Ribosomal protein S6 kinase activity	RPS6KA3, RPS6KB1, RPS6KA2	0.42	0.022	12.41
GO:0017124	SH3 domain binding	TOM1L1, ADAM17, SYNJ1, DNAJC6, SH3BP2, ADAM10, EVL, PTPN22, ITGB1BP2, AKAP5	1.40	0.030	2.30
GO:0000287	Magnesium ion binding	PRPS2, GEN1, DYRK2, ATP8B2, MAST1, XYLT2, RPS6KA3, GCLC, NT5C1A, RPS6KA2, EXTL3, PI4K2A, CILK1, MAP3K5	2.11	0.031	1.87
GO:0004712	Protein serine/threonine/tyrosine kinase activity	ALK, NTRK1, ITK, DYRK2, MAST1, TNK1, CAMK2A, TESK1, CSNK1D, MST1R, KSR2, AURKA, GAK, HCK, RPS6KA3, RPS6KB1, TAOK1, RPS6KA2, NEK10, BTK, CILK1, CDKL1,	3.37	0.032	1.58

ID	Term	Genes	Gene ratio	P-value	Fold enrichment
GO:0070573	Metalloprotease activity	MAP3K5, PAK4 CPQ, DPEP2, ADAM10	0.42	0.036	9.65
GO:0004713	Protein tyrosine kinase activity	NTRK1, ALK, ITK, HCK, DYRK2, TNK1, BTK, TESK1, MST1R	1.26	0.040	2.33
GO:0004382	Guanosine-diphosphatase activity	ENTPD2, ENTPD6, ENTPD7	0.42	0.044	8.69
GO:0017111	Nucleoside-triphosphatase activity	ENTPD2, ENTPD6, ENTPD7	0.42	0.044	8.69
GO:0045134	Uridine-diphosphatase activity	ENTPD2, ENTPD6, ENTPD7	0.42	0.044	8.69
GO:0017110	Nucleoside-diphosphatase activity	ENTPD2, ENTPD6, ENTPD7	0.42	0.044	8.69
D, KEGG pathway					
hsa04610	Complement and coagulation cascades	PROCR, CR1, PROC, SERPINB2, ITGAX, CFHR5, KLKB1, C8A, C2	1.26	0.010	2.97
hsa04310	Wnt signaling pathway	APC2, TCF7L1, FBXW11, SERPINF1, CAMK2A, WNT5A, APCDD1, SENP2, SFRP4, PLCB3, ZNRF3, CCND1, CER1	1.83	0.016	2.17
hsa05207	Chemical carcinogenesis - receptor activation	ADCY4, AIP, EPHX3, ADRB2, ESR1, RPS6KA3, FGF8, CYP2B6, CCND1, RPS6KB1, RPS6KA2, UGT1A5, IKBKE, GSTT2B, KPNA3	2.11	0.017	2.01
hsa04020	Calcium signaling pathway	NTRK1, MYLK2, CAMK2A, ATP2A3, ADCY4, TACR3, MST1R, ADRB2, MCOLN1, GRIN2C, PLCB3, FGF8, STIM1, PLCE1, PLCD3, PLCD1	2.25	0.022	1.89
hsa05168	Herpes simplex virus 1 infection	ZNF23, ZFP82, ZNF3, ZFP30, ZNF429, ZNF528, ZNF649, ZNF569, ZNF546, IKBKE, ZNF100, ZNF680, ZNF181, ZNF10, TAP1, TSC1, TRAF2, HCFC2, ZFP90, ZNF33A, ZNF878, ZNF735, SRSF5, ZNF136, ZNF114, ZNF354C, ZNF674, TLR3	3.93	0.022	1.55
hsa00511	Other glycan degradation	MANBA, MAN2B2, MAN2C1, GBA2	0.56	0.024	6.31
hsa04919	Thyroid hormone signaling pathway	MED12, MED1, PLCB3, CCND1, MDM2, ATP2A3, PLCE1, PLCD3, ESR1, PLCD1	1.40	0.026	2.35
hsa00562	Inositol phosphate metabolism	PLCB3, MTMR3, SYNJ1, PLCE1, PLCD3, PI4K2A, PLCD1	0.98	0.042	2.72
hsa03430	Mismatch repair	RFC5, RFC3, RFC2, MLH3	0.56	0.045	4.94
hsa01212	Fatty acid metabolism	HADHB, ACOX1, PPT1, ELOVL7, ACSBG2, HACD2	0.84	0.049	2.99

GO, Gene Ontology; KEGG, Kyoto Encyclopedia of Genes and Genomes; ARID1A, AT-rich interacting domain-containing protein 1A.