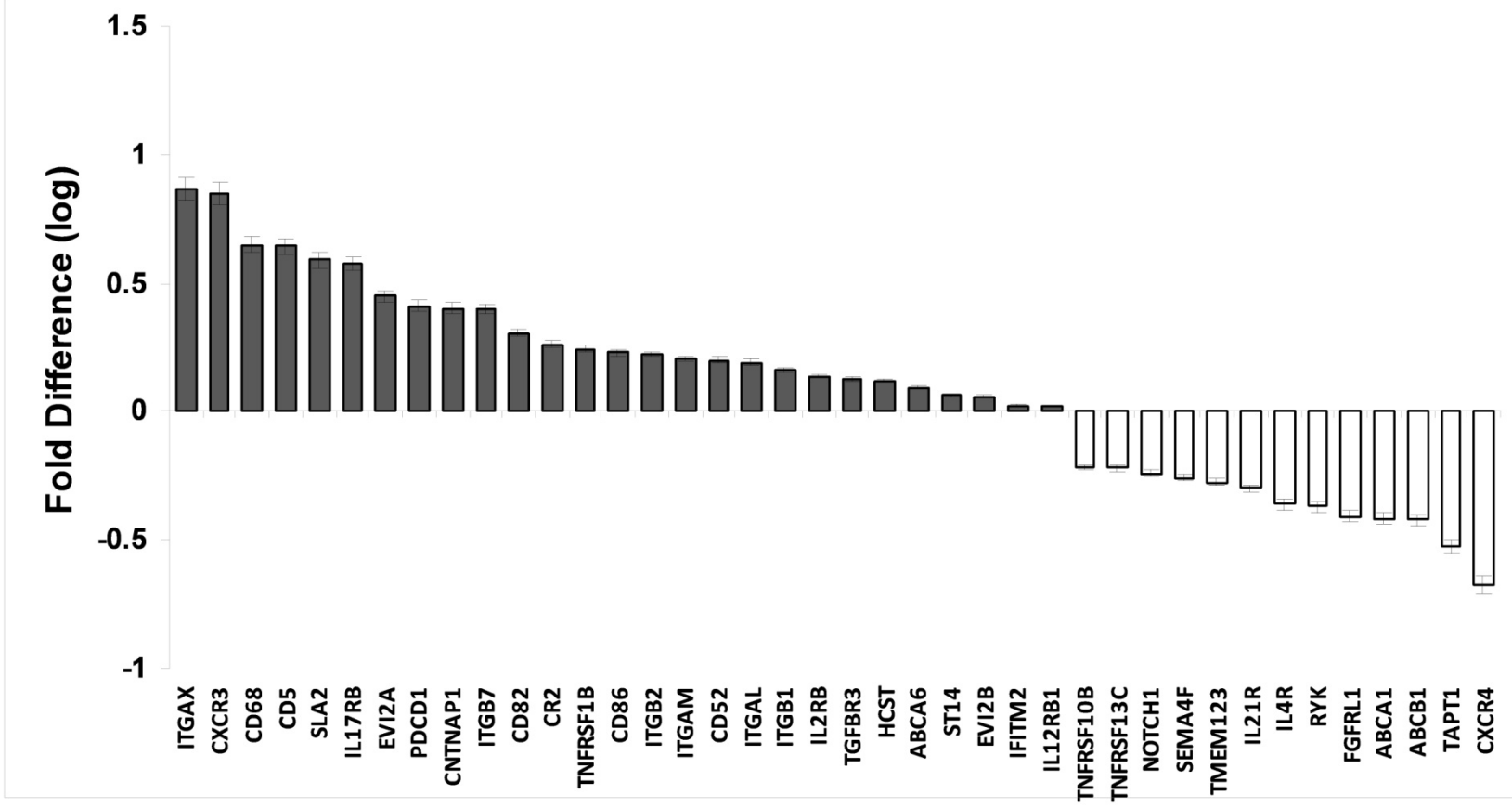


	CLL 189	CLL 321	CLL 331	CLL 355	CLL 452	CLL 546	CLL 569	CLL 606	CLL 625	CLL 701	CLL 753	CLL 822	CLL 875	CLL 931	CLL 1059
Maximum fraction of labeled cells observed	60,6%	45%	12,3%	28,8%	23,7%	27,7%	42,4%	11,9%	12,8%	31,9%	68,1%	57,7%	7,5%	18,7%	62,9%



Supplemental Figure Legends

Supplemental Figure 1. *In vivo* kinetics of CXCR4^{dim}CD5^{bright}, CXCR4^{int}CD5^{int} and CXCR4^{bright}CD5^{dim} fractions of each CLL patient's clone. Curves represent the fraction of labeled cells at the 2 time points studied (Figure 1E). Patients are displayed in numerical order. Note that a wide range of fraction of labeled cells (y axes) was observed among patients; for this reason, graphs have different scales. X axis represents time in days. Vertical dotted lines illustrate the end of ²H₂O consumption and vary based on the ²H₂O protocol followed by the patient. Note that for CLL 546 and CLL 606 we have only one time point measurement, a 1st and 2nd time point, respectively. In CLL 875, only CXCR4^{dim}CD5^{br} and CXCR4^{int}CD5^{int} fractions could be obtained. The box at the bottom indicates the calculated maximum fraction of labeled cells observed for each patient.

Supplemental Figure 2. *Real-time quantitative PCR analyses of selected genes differentially expressed in proliferative and resting fractions.* Plot shows the ratio of log transformed qRT-PCR values for genes in the two fractions. Black bars: genes higher in proliferative fraction; white bars: genes higher in resting fraction. ° $P < 0.05$, * $P < 0.01$, ** $P < 0.001$

Methodology. Total RNA from the sorted CXCR4/CD5 fractions was isolated by RNeasy Mini kit (Qiagen) and first-strand cDNA synthesis made using High-capacity cDNA Reverse Transcription Kit (Applied Biosystems, Carlsbad, CA). RT-PCR was performed with TaqMan Low-Density Array microfluidics cards (Applied Biosystems) and an ABI Prism 7900 HT Sequence Detection System (Applied Biosystems) with cycling for 2 min at 50°C and 10 min at 95°C, followed by 40 cycles of 30s at 97°C and 1 min at 59.7°C. GAPDH and HPRT1 housekeeping genes served as endogenous controls for normalization. MicroFluidicCards were analyzed with RQ documents and the RQ Manager Software (comparative CT method).

Supplemental Table 1

Complete list of genes found more expressed in Proliferative (A) and Resting (B) fractions of 9 CLL clones using a fold difference of >1.3 and a measure of difference of P < 0.01

Symbol	Fold Change	P value	Entrez Gene Name	Location	Type(s)
CD68	4.028	6.24E-05	CD68 molecule	Plasma Membrane	other
GPR183	3.621	2.17E-03	G protein-coupled receptor 183	Plasma Membrane	G-protein coupled receptor
LY96	3.478	8.95E-05	lymphocyte antigen 96	Plasma Membrane	other
CCND2	3.397	3.76E-04	cyclin D2	Nucleus	other
S100A4	3.217	1.63E-04	S100 calcium binding protein A4	Cytoplasm	other
ITGAX	3.166	4.31E-04	integrin, alpha X (complement component 3 receptor 4 subunit)	Plasma Membrane	other
CRIP1	3.094	1.71E-03	cysteine-rich protein 1 (intestinal)	Cytoplasm	other
GRN	2.989	4.58E-04	granulin	Extracellular Space	growth factor
RNASE6	2.947	2.15E-04	ribonuclease, RNase A family, k6	Extracellular Space	enzyme
ITGB7	2.894	2.32E-04	integrin, beta 7	Plasma Membrane	transmembrane receptor
EFCAB4A	2.881	2.76E-03	EF-hand calcium binding domain 4A	unknown	other
LGALS1	2.770	9.71E-05	lectin, galactoside-binding, soluble, 1	Extracellular Space	other
CD5	2.625	2.18E-04	CD5 molecule	Plasma Membrane	transmembrane receptor
CLECL1	2.590	2.25E-04	C-type lectin-like 1	Plasma Membrane	other
IL17RB	2.584	5.65E-04	interleukin 17 receptor B	Plasma Membrane	transmembrane receptor
LIME1	2.536	1.75E-04	Lck interacting transmembrane adaptor 1	Extracellular Space	other
RASSF2	2.439	1.81E-04	Ras association (RalGDS/AF-6) domain family member 2	Nucleus	other
GAPDH	2.424	5.27E-04	glyceraldehyde-3-phosphate dehydrogenase	Cytoplasm	enzyme
APIS2	2.366	2.77E-05	adaptor-related protein complex 1, sigma 2 subunit	Cytoplasm	transporter
CD82	2.361	3.40E-04	CD82 molecule	Plasma Membrane	other
ACP5	2.344	3.22E-04	acid phosphatase 5, tartrate resistant	Cytoplasm	phosphatase
PLEK	2.323	4.03E-04	pleckstrin	Cytoplasm	other
CPNE5	2.288	1.18E-04	copine V	Plasma Membrane	other
DUS2L	2.288	1.96E-05	dihydrouridine synthase 2-like, SMM1 homolog (S. cerevisiae)	Cytoplasm	other
CXCR3	2.285	2.36E-03	chemokine (C-X-C motif) receptor 3	Plasma Membrane	G-protein coupled receptor
RAC2	2.279	1.99E-04	ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2)	Cytoplasm	enzyme
CD27	2.251	1.08E-03	CD27 molecule	Plasma Membrane	transmembrane receptor
DPYSL2	2.236	1.31E-03	dihydropyrimidinase-like 2	Cytoplasm	enzyme
PPM1M	2.231	7.52E-04	protein phosphatase, Mg2+/Mn2+ dependent, 1M	Nucleus	phosphatase
LTB	2.176	3.75E-03	lymphotoxin beta (TNF superfamily, member 3)	Extracellular Space	cytokine
NPM3	2.171	3.19E-05	nucleophosmin/nucleoplasmin 3	Nucleus	other
LOC653888	2.167	1.99E-04	actin-related protein 2/3 complex subunit 1B-like	unknown	other
CISD1	2.158	1.28E-04	CDGSH iron sulfur domain 1	Cytoplasm	other
TAGLN2	2.144	1.49E-03	transgelin 2	Cytoplasm	other
TFDP1	2.144	4.52E-04	transcription factor Dp-1	Nucleus	transcription regulator
EVI2A	2.141	1.19E-03	ecotropic viral integration site 2A	Plasma Membrane	transmembrane receptor
ARHGAP44	2.137	4.79E-04	Rho GTPase activating protein 44	Cytoplasm	other
GPX1	2.133	3.41E-04	glutathione peroxidase 1	Cytoplasm	enzyme
C4orf48	2.114	7.60E-04	chromosome 4 open reading frame 48	unknown	other
NAPSA	2.108	1.69E-04	napsin A aspartic peptidase	Extracellular Space	peptidase
ACTG1	2.095	3.85E-03	actin, gamma 1	Cytoplasm	other
ADAP1	2.092	8.57E-03	ArfGAP with dual PH domains 1	Nucleus	other
ZBTB32	2.088	1.74E-03	zinc finger and BTB domain containing 32	Nucleus	transcription regulator
ITGB2	2.083	1.04E-03	integrin, beta 2 (complement component 3 receptor 3 and 4 subunit)	Plasma Membrane	other
PLBD1	2.078	2.35E-04	phospholipase B domain containing 1	Extracellular Space	other
DFNA5	2.075	2.65E-04	deafness, autosomal dominant 5	unknown	other
SUSD1	2.040	4.08E-03	sushi domain containing 1	unknown	other
PATL2	2.038	7.06E-04	protein associated with topoisomerase II homolog 2 (yeast)	Cytoplasm	other
CNN2	2.016	2.34E-04	calponin 2	Cytoplasm	other
AHCY	2.007	2.08E-04	adenosylhomocysteinase	Cytoplasm	enzyme
BIN1	2.003	3.44E-04	bridging integrator 1	Nucleus	other
MTHFD2	1.999	1.81E-04	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 2, methenyltetrahydrofolate cyclohydrolase	Cytoplasm	enzyme
HIST1H2BJ/ HIST1H2BK	1.996	3.55E-03	histone cluster 1, H2bk	Nucleus	other
SERPINF2	1.992	6.73E-04	serpin peptidase inhibitor, clade F (alpha-2 antiplasmin,	Extracellular Space	other

			pigment epithelium derived factor), member 2		
CMTM3	1.990	5.70E-03	CKLF-like MARVEL transmembrane domain containing 3	Extracellular Space	cytokine
PNOC	1.988	3.81E-04	prepronociceptin	Extracellular Space	other
LILRB4	1.985	1.63E-03	leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 4	unknown	other
SIGLEC10	1.985	4.51E-04	sialic acid binding Ig-like lectin 10	Plasma Membrane	other
TLR10	1.984	5.75E-03	toll-like receptor 10	Plasma Membrane	transmembrane receptor
OAS1	1.983	9.23E-04	2',5'-oligoadenylate synthetase 1, 40/46kDa	Cytoplasm	enzyme
RGS10	1.970	6.68E-04	regulator of G-protein signaling 10	Cytoplasm	other
SP140/SP140L	1.967	3.89E-04	SP140 nuclear body protein	Nucleus	transcription regulator
OBFC2A	1.965	2.28E-03	oligonucleotide/oligosaccharide-binding fold containing 2A	Nucleus	other
NCRNA00152	1.961	2.93E-03	non-protein coding RNA 152	unknown	other
AP2S1	1.959	2.56E-05	adaptor-related protein complex 2, sigma 1 subunit	Cytoplasm	transporter
PHFX	1.958	3.47E-04	phosphate regulating endopeptidase homolog, X-linked	Cytoplasm	peptidase
FERMT3	1.957	1.28E-04	fermitin family member 3	Cytoplasm	enzyme
TP53I3	1.924	6.40E-04	tumor protein p53 inducible protein 3	unknown	enzyme
TLR9	1.923	2.39E-04	toll-like receptor 9	Plasma Membrane	transmembrane receptor
MYO1G	1.922	3.54E-04	myosin 1G	Cytoplasm	other
TAGLN	1.920	2.14E-04	transgelin	Cytoplasm	other
APBB1IP	1.917	6.97E-04	amyloid beta (A4) precursor protein-binding, family B, member 1 interacting protein	Cytoplasm	other
PYCARD	1.917	1.32E-03	PYD and CARD domain containing	Cytoplasm	transcription regulator
NDUFB5	1.909	2.26E-03	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 5, 16kDa	Cytoplasm	enzyme
CASP4	1.906	2.55E-04	caspase 4, apoptosis-related cysteine peptidase	Cytoplasm	peptidase
TYMP	1.897	8.67E-05	thymidine phosphorylase	Extracellular Space	growth factor
SIDT2	1.886	4.09E-05	SID1 transmembrane family, member 2	Cytoplasm	other
SRGN	1.885	8.24E-04	serglycin	Extracellular Space	other
MLLT11	1.881	1.71E-03	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 11	unknown	other
LSP1	1.879	5.06E-04	lymphocyte-specific protein 1	Cytoplasm	other
ACYP2	1.878	1.07E-04	acylphosphatase 2, muscle type	Cytoplasm	enzyme
TRPV2	1.875	4.44E-05	transient receptor potential cation channel, subfamily V, member 2	Plasma Membrane	ion channel
PAPSS1	1.871	1.25E-04	3'-phosphoadenosine 5'-phosphosulfate synthase 1	Cytoplasm	enzyme
PTPN22	1.867	5.78E-04	protein tyrosine phosphatase, non-receptor type 22 (lymphoid)	Cytoplasm	phosphatase
RNH1	1.852	1.39E-03	ribonuclease/angiogenin inhibitor 1	Cytoplasm	other
SYTL1	1.851	4.94E-03	synaptotagmin-like 1	Cytoplasm	enzyme
TWF2	1.851	2.18E-04	twinfilin, actin-binding protein, homolog 2 (Drosophila)	Cytoplasm	kinase
FAM38A	1.842	5.42E-03	family with sequence similarity 38, member A	unknown	other
PARP3	1.836	7.28E-04	poly (ADP-ribose) polymerase family, member 3	Nucleus	enzyme
TPM3	1.833	2.06E-04	tropomyosin 3	Cytoplasm	other
IDH2	1.831	4.14E-05	isocitrate dehydrogenase 2 (NADP+), mitochondrial	Cytoplasm	enzyme
VDAC3	1.830	1.75E-03	voltage-dependent anion channel 3	Cytoplasm	ion channel
APEX1	1.826	3.59E-04	APEX nuclease (multifunctional DNA repair enzyme) 1	Nucleus	enzyme
CNTNAP1	1.826	3.45E-04	contactin associated protein 1	Plasma Membrane	other
ST14	1.822	5.56E-04	suppression of tumorigenicity 14 (colon carcinoma)	Plasma Membrane	peptidase
LPXN	1.817	2.59E-04	leupaxin	Cytoplasm	other
TKT	1.815	9.20E-06	transketolase	Cytoplasm	enzyme
RPS29	1.811	8.71E-04	ribosomal protein S29	Cytoplasm	other
C17orf91	1.808	1.56E-04	chromosome 17 open reading frame 91	unknown	other
MT1F	1.807	1.60E-03	metallothionein 1F	Cytoplasm	other
GLIPR2	1.802	1.67E-03	GLI pathogenesis-related 2	Cytoplasm	other
LCP1	1.800	2.44E-04	lymphocyte cytosolic protein 1 (L-plastin)	Cytoplasm	other
ARPC1B	1.798	1.53E-03	actin related protein 2/3 complex, subunit 1B, 41kDa	Cytoplasm	other
TGFBI	1.797	1.61E-03	transforming growth factor, beta-induced, 68kDa	Extracellular Space	other
GYPC	1.796	1.87E-03	glycophorin C (Gerbich blood group)	Plasma Membrane	other
TALDO1	1.795	1.77E-03	transaldolase 1	Cytoplasm	enzyme
CCDC50	1.794	3.70E-04	coiled-coil domain containing 50	Cytoplasm	other
COCH	1.793	1.80E-03	coagulation factor C homolog, cochlin (Limulus polyphemus)	Extracellular Space	other
KIAA0391	1.792	1.25E-04	KIAA0391	unknown	other
FAM113B	1.789	5.50E-04	family with sequence similarity 113, member B	unknown	other
CD99	1.786	1.91E-04	CD99 molecule	Plasma Membrane	other
EV12B	1.783	3.56E-04	ecotropic viral integration site 2B	Plasma Membrane	other
PDLIM1	1.778	1.38E-03	PDZ and LIM domain 1	Cytoplasm	transcription regulator
CLIC1	1.777	1.49E-04	chloride intracellular channel 1	Nucleus	ion channel
GCHFR	1.776	1.77E-04	GTP cyclohydrolase I feedback regulator	Cytoplasm	other
FGD2	1.772	3.51E-04	FYVE, RhoGEF and PH domain containing 2	Cytoplasm	other

RILPL2	1.772	1.32E-03	Rab interacting lysosomal protein-like 2	unknown	other
AIM2	1.770	2.12E-03	absent in melanoma 2	Cytoplasm	other
LDHB	1.769	2.80E-04	lactate dehydrogenase B	Cytoplasm	enzyme
DLEU1	1.765	8.95E-03	deleted in lymphocytic leukemia 1 (non-protein coding)	unknown	other
RHBDL1	1.765	8.67E-03	rhomboid, veinlet-like 1 (Drosophila)	Plasma Membrane	peptidase
TMED3	1.762	1.73E-04	transmembrane emp24 protein transport domain containing 3	Cytoplasm	transporter
IFITM2	1.760	1.03E-03	interferon induced transmembrane protein 2 (1-8D)	Plasma Membrane	other
GNAI2	1.759	4.98E-04	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2	Plasma Membrane	enzyme
GRAMD4	1.759	7.62E-04	GRAM domain containing 4	unknown	other
C1orf85	1.757	1.03E-04	chromosome 1 open reading frame 85	Extracellular Space	other
HCST	1.756	2.15E-03	hematopoietic cell signal transducer	Plasma Membrane	other
HMOX1	1.756	1.35E-04	heme oxygenase (decycling) 1	Cytoplasm	enzyme
SAMSN1	1.755	1.11E-03	SAM domain, SH3 domain and nuclear localization signals 1	Nucleus	other
HIGD2A	1.754	3.40E-06	HIG1 hypoxia inducible domain family, member 2A	Cytoplasm	other
PCCB	1.750	6.70E-05	propionyl CoA carboxylase, beta polypeptide	Cytoplasm	enzyme
GAPT	1.745	6.46E-03	GRB2-binding adaptor protein, transmembrane	unknown	other
CD52	1.744	2.31E-03	CD52 molecule	Plasma Membrane	other
CAPNS1	1.734	5.07E-04	calpain, small subunit 1	Cytoplasm	peptidase
CORO1B	1.734	6.32E-04	coronin, actin binding protein, 1B	Cytoplasm	other
VAMP8	1.721	3.03E-04	vesicle-associated membrane protein 8 (endobrevin)	Plasma Membrane	other
CD151	1.715	2.95E-03	CD151 molecule (Raph blood group)	Plasma Membrane	other
SYT11	1.712	6.08E-03	synaptotagmin XI	Cytoplasm	transporter
ABCA6	1.710	6.79E-04	ATP-binding cassette, sub-family A (ABC1), member 6	Plasma Membrane	transporter
FABP5	1.702	1.40E-04	fatty acid binding protein 5 (psoriasis-associated)	Cytoplasm	transporter
ALDH5A1	1.701	3.16E-04	aldehyde dehydrogenase 5 family, member A1	Cytoplasm	enzyme
IMMP2L	1.700	4.17E-04	IMP2 inner mitochondrial membrane peptidase-like (S. cerevisiae)	Cytoplasm	peptidase
NME1	1.698	1.95E-03	non-metastatic cells 1, protein (NM23A) expressed in	Nucleus	kinase
ITGAL	1.694	1.42E-04	integrin, alpha L (antigen CD11A (p180), lymphocyte function-associated antigen 1; alpha polypeptide)	Plasma Membrane	other
MXD4	1.694	5.24E-05	MAX dimerization protein 4	Nucleus	transcription regulator
G6PD	1.691	3.66E-04	glucose-6-phosphate dehydrogenase	Cytoplasm	enzyme
PFN1	1.689	5.82E-04	profilin 1	Cytoplasm	other
GMDS	1.688	1.07E-03	GDP-mannose 4,6-dehydratase	Cytoplasm	enzyme
SRGAP3	1.687	3.53E-05	SLIT-ROBO Rho GTPase activating protein 3	Cytoplasm	other
SGPP2	1.683	1.68E-03	sphingosine-1-phosphate phosphatase 2	Cytoplasm	phosphatase
C6orf129	1.682	3.37E-04	chromosome 6 open reading frame 129	unknown	other
UBE2E2	1.682	8.99E-04	ubiquitin-conjugating enzyme E2E 2 (UBC4/5 homolog, yeast)	Cytoplasm	enzyme
C2orf79	1.681	1.58E-04	chromosome 2 open reading frame 79	unknown	other
KYNU	1.681	9.20E-04	kynureninase	Cytoplasm	enzyme
CEACAM1 (includes others)	1.680	6.08E-03	carcinoembryonic antigen-related cell adhesion molecule 1 (biliary glycoprotein)	Plasma Membrane	transmembrane receptor
FAM89B	1.676	4.15E-04	family with sequence similarity 89, member B	unknown	other
CAPG	1.673	7.78E-05	capping protein (actin filament), gelsolin-like	Nucleus	other
PARVB	1.673	1.70E-03	parvin, beta	Cytoplasm	other
SPATS2L	1.671	7.93E-03	spermatogenesis associated, serine-rich 2-like	unknown	other
CTSZ	1.670	1.51E-03	cathepsin Z	Cytoplasm	peptidase
CYFIP1	1.669	1.45E-03	cytoplasmic FMR1 interacting protein 1	Cytoplasm	other
LAMTOR2	1.669	1.05E-04	late endosomal/lysosomal adaptor, MAPK and MTOR activator 2	Cytoplasm	other
PCK2	1.669	9.08E-05	phosphoenolpyruvate carboxykinase 2 (mitochondrial)	Cytoplasm	kinase
SLC35B2	1.668	2.58E-03	solute carrier family 35, member B2	Cytoplasm	transporter
ATL1	1.667	2.44E-03	atlastin GTPase 1	Cytoplasm	enzyme
CYBASC3	1.662	2.95E-03	cytochrome b, ascorbate dependent 3	unknown	other
hCG 27695	1.662	1.36E-03	ribosomal protein L13a pseudogene 20	unknown	other
TPI1	1.661	1.22E-04	triosephosphate isomerase 1	Cytoplasm	enzyme
COMMD8	1.660	2.24E-04	COMM domain containing 8	unknown	other
GBP2	1.658	8.83E-03	guanylate binding protein 2, interferon-inducible	Cytoplasm	enzyme
BZW2	1.657	8.09E-04	basic leucine zipper and W2 domains 2	Cytoplasm	translation regulator
C9orf46	1.655	6.41E-04	chromosome 9 open reading frame 46	Cytoplasm	other
IMPDH2	1.653	1.01E-04	IMP (inosine 5'-monophosphate) dehydrogenase 2	Cytoplasm	enzyme
IL18BP	1.651	3.18E-03	interleukin 18 binding protein	Extracellular Space	other
SH3BGR13	1.651	1.37E-03	SH3 domain binding glutamic acid-rich protein like 3	Nucleus	other
PDCD1	1.650	6.28E-04	programmed cell death 1	Plasma Membrane	phosphatase
TXN	1.650	1.19E-04	thioredoxin	Cytoplasm	enzyme
PECAM1	1.648	1.96E-03	platelet/endothelial cell adhesion molecule	Plasma Membrane	other
SERPINF1	1.647	4.11E-03	serpin peptidase inhibitor, clade F (alpha-2 antiplasmin, pigment epithelium derived factor), member 1	Extracellular Space	other
CTSA	1.646	1.51E-03	cathepsin A	Cytoplasm	peptidase

TRAPPC1	1.646	1.95E-03	trafficking protein particle complex 1	Cytoplasm	other
ENTPD1	1.645	5.78E-03	ectonucleoside triphosphate diphosphohydrolase 1	Plasma Membrane	enzyme
ETFB	1.645	1.85E-04	electron-transfer-flavoprotein, beta polypeptide	Cytoplasm	transporter
ITGB1	1.645	1.32E-03	integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)	Plasma Membrane	transmembrane receptor
PKM2	1.645	2.25E-03	pyruvate kinase, muscle	Cytoplasm	kinase
MAN2B1	1.644	4.36E-04	mannosidase, alpha, class 2B, member 1	Cytoplasm	enzyme
ANXA2	1.641	1.35E-03	annexin A2	Plasma Membrane	other
KIAA1949	1.637	2.18E-05	KIAA1949	unknown	other
APOBEC3G	1.635	1.12E-03	apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3G	Nucleus	enzyme
PEA15	1.627	2.65E-03	phosphoprotein enriched in astrocytes 15	Cytoplasm	transporter
NCF4	1.624	4.92E-04	neutrophil cytosolic factor 4, 40kDa	Cytoplasm	enzyme
TRIM69	1.624	4.99E-03	tripartite motif containing 69	unknown	other
SYBU	1.623	9.93E-04	syntabulin (syntaxin-interacting)	unknown	other
CUTA	1.622	1.95E-04	cutA divalent cation tolerance homolog (E. coli)	unknown	other
PGLS	1.622	4.86E-06	6-phosphogluconolactonase	Cytoplasm	enzyme
ADAM8	1.620	5.74E-04	ADAM metalloproteinase domain 8	Plasma Membrane	peptidase
IGBP1	1.620	3.16E-04	immunoglobulin (CD79A) binding protein 1	Cytoplasm	phosphatase
ITGAM	1.619	8.20E-03	integrin, alpha M (complement component 3 receptor 3 subunit)	Plasma Membrane	other
ATP5F1	1.617	3.13E-04	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit B1	Cytoplasm	transporter
FIBP	1.615	1.61E-03	fibroblast growth factor (acidic) intracellular binding protein	Nucleus	other
MAP4K1	1.615	1.97E-03	mitogen-activated protein kinase kinase kinase kinase 1	Cytoplasm	kinase
SH3BP1	1.614	1.31E-03	SH3-domain binding protein 1	unknown	other
MAPRE2	1.612	3.10E-03	microtubule-associated protein, RP/EB family, member 2	Cytoplasm	other
LOC388564	1.609	2.18E-04	hypothetical protein LOC388564	unknown	other
TMEM149	1.603	1.03E-03	transmembrane protein 149	unknown	other
BCAR3	1.601	1.47E-03	breast cancer anti-estrogen resistance 3	Cytoplasm	other
RPL34	1.600	4.13E-03	ribosomal protein L34	Cytoplasm	other
TGFBR3	1.599	4.17E-03	transforming growth factor, beta receptor III	Plasma Membrane	kinase
KIAA1407	1.598	5.81E-03	KIAA1407	unknown	other
C1orf186	1.596	5.45E-04	chromosome 1 open reading frame 186	unknown	other
S100A11	1.596	2.07E-03	S100 calcium binding protein A11	Cytoplasm	other
ATP6V1D	1.595	4.49E-04	ATPase, H+ transporting, lysosomal 34kDa, V1 subunit D	Cytoplasm	transporter
EPST11	1.595	4.16E-03	epithelial stromal interaction 1 (breast)	unknown	other
RGS19	1.595	2.02E-03	regulator of G-protein signaling 19	Cytoplasm	other
ADSL	1.593	4.40E-04	adenylosuccinate lyase	Cytoplasm	enzyme
LDHA	1.593	2.71E-04	lactate dehydrogenase A	Cytoplasm	enzyme
ASIP	1.592	1.84E-03	agouti signaling protein	Extracellular Space	other
C6orf108	1.592	9.35E-03	chromosome 6 open reading frame 108	Nucleus	other
CTSC	1.592	5.79E-04	cathepsin C	Cytoplasm	peptidase
ARID3A	1.590	6.35E-03	AT rich interactive domain 3A (BRIGHT-like)	Nucleus	transcription regulator
NCR3	1.590	1.80E-03	natural cytotoxicity triggering receptor 3	Plasma Membrane	transmembrane receptor
CAST	1.588	3.43E-05	calpastatin	Cytoplasm	peptidase
LAT2	1.587	8.47E-04	linker for activation of T cells family, member 2	Plasma Membrane	other
ARPC4	1.584	3.13E-04	actin related protein 2/3 complex, subunit 4, 20kDa	unknown	other
OSTF1	1.584	9.12E-04	osteoclast stimulating factor 1	Nucleus	transcription regulator
VIM	1.584	7.53E-04	vimentin	Cytoplasm	other
PGAM1	1.583	1.77E-03	phosphoglycerate mutase 1 (brain)	Cytoplasm	phosphatase
HLA-DPA1	1.582	1.11E-03	major histocompatibility complex, class II, DP alpha 1	Plasma Membrane	transmembrane receptor
CLEC4C	1.579	8.75E-03	C-type lectin domain family 4, member C	Plasma Membrane	other
HLA-DPB1	1.579	5.90E-03	major histocompatibility complex, class II, DP beta 1	Plasma Membrane	transmembrane receptor
NOP10	1.579	2.42E-04	NOP10 ribonucleoprotein homolog (yeast)	Nucleus	other
GLRX3	1.576	1.36E-03	glutaredoxin 3	Cytoplasm	enzyme
LRRC33	1.573	2.37E-03	leucine rich repeat containing 33	unknown	other
NME1-NME2	1.573	3.30E-04	NME1-NME2 readthrough	Cytoplasm	other
C17orf87	1.572	2.59E-04	chromosome 17 open reading frame 87	unknown	other
CR2	1.572	1.33E-03	complement component (3d/Epstein Barr virus) receptor 2	Plasma Membrane	transmembrane receptor
UCP2	1.572	2.52E-03	uncoupling protein 2 (mitochondrial, proton carrier)	Cytoplasm	transporter
VOPP1	1.572	6.08E-03	vesicular, overexpressed in cancer, prosurvival protein 1	Nucleus	other
TOX2	1.569	1.73E-03	TOX high mobility group box family member 2	Nucleus	transcription regulator
LTK	1.566	4.15E-03	leukocyte receptor tyrosine kinase	Plasma Membrane	kinase
RHOC	1.566	2.64E-03	ras homolog gene family, member C	Plasma Membrane	enzyme
VMP1	1.566	9.66E-03	vacuole membrane protein 1	Plasma Membrane	other
PGAM4	1.564	7.26E-04	phosphoglycerate mutase family member 4	unknown	phosphatase
GSTP1	1.559	3.24E-03	glutathione S-transferase pi 1	Cytoplasm	enzyme
HLA-DQA1	1.559	1.59E-03	major histocompatibility complex, class II, DQ alpha 1	Plasma Membrane	transmembrane

					receptor
TOP1MT	1.559	8.53E-04	topoisomerase (DNA) I, mitochondrial	Cytoplasm	enzyme
CYSLTR1	1.558	5.37E-03	cysteinyl leukotriene receptor 1	Plasma Membrane	G-protein coupled receptor
EC11	1.558	3.12E-04	enoyl-CoA delta isomerase 1	Cytoplasm	enzyme
OXA1L	1.556	9.79E-04	oxidase (cytochrome c) assembly 1-like	Cytoplasm	enzyme
PARVG	1.556	5.32E-03	parvin, gamma	Cytoplasm	other
CAT	1.555	7.24E-04	catalase	Cytoplasm	enzyme
FA2H	1.555	1.29E-03	fatty acid 2-hydroxylase	unknown	enzyme
CES4A	1.554	3.80E-04	carboxylesterase 4A	Extracellular Space	enzyme
HMGA1	1.554	4.95E-04	high mobility group AT-hook 1	Nucleus	transcription regulator
ABCA9	1.553	1.63E-03	ATP-binding cassette, sub-family A (ABC1), member 9	Cytoplasm	transporter
COMMD10	1.553	9.89E-04	COMM domain containing 10	unknown	other
HYAL3	1.553	8.00E-05	hyaluronoglucosaminidase 3	Cytoplasm	enzyme
C4orf14	1.551	7.33E-04	chromosome 4 open reading frame 14	Cytoplasm	other
DIAPH1	1.550	1.22E-04	diaphanous homolog 1 (Drosophila)	Cytoplasm	other
SASH3	1.550	7.16E-04	SAM and SH3 domain containing 3	Cytoplasm	other
MRPL51	1.548	2.79E-05	mitochondrial ribosomal protein L51	Cytoplasm	other
S100A6	1.547	8.04E-04	S100 calcium binding protein A6	Cytoplasm	transporter
GCLC	1.546	3.85E-04	glutamate-cysteine ligase, catalytic subunit	Cytoplasm	enzyme
AGMAT	1.545	3.43E-04	agmatine ureohydrolase (agmatinase)	Cytoplasm	enzyme
POLD4	1.545	2.32E-03	polymerase (DNA-directed), delta 4	Nucleus	enzyme
ECHS1	1.543	3.08E-03	enoyl CoA hydratase, short chain, 1, mitochondrial	Cytoplasm	enzyme
SERPINB8	1.543	1.26E-03	serpin peptidase inhibitor, clade B (ovalbumin), member 8	Cytoplasm	other
TSPO	1.543	1.21E-03	translocator protein (18kDa)	Cytoplasm	transmembrane receptor
PIGR	1.540	4.90E-03	polymeric immunoglobulin receptor	Plasma Membrane	transporter
BLMH	1.538	1.30E-06	bleomycin hydrolase	Cytoplasm	peptidase
C14orf159	1.538	6.79E-04	chromosome 14 open reading frame 159	Cytoplasm	other
ELMO1	1.536	4.57E-03	engulfment and cell motility 1	Cytoplasm	other
CSTB	1.535	3.61E-03	cystatin B (stefin B)	Cytoplasm	other
HINT1	1.535	1.35E-03	histidine triad nucleotide binding protein 1	Nucleus	enzyme
WSB2	1.535	3.53E-04	WD repeat and SOCS box containing 2	unknown	other
COMMD1	1.534	1.77E-04	copper metabolism (Murr1) domain containing 1	Nucleus	transporter
MGST2	1.534	8.57E-03	microsomal glutathione S-transferase 2	Cytoplasm	enzyme
BAX	1.531	3.75E-04	BCL2-associated X protein	Cytoplasm	other
C6orf115	1.528	4.22E-04	chromosome 6 open reading frame 115	unknown	other
APOBEC3H	1.527	1.04E-04	apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3H	Cytoplasm	other
C11orf1	1.527	1.03E-03	chromosome 11 open reading frame 1	Nucleus	other
SEPW1	1.527	2.11E-04	selenoprotein W, 1	Cytoplasm	enzyme
NINJ2	1.526	8.11E-04	ninjurin 2	Plasma Membrane	other
BTK	1.525	5.89E-03	Bruton agammaglobulinemia tyrosine kinase	Cytoplasm	kinase
HSPA8	1.525	5.78E-03	heat shock 70kDa protein 8	Cytoplasm	enzyme
TPP1	1.525	1.64E-03	tripeptidyl peptidase I	Cytoplasm	peptidase
EIF3M	1.524	1.47E-03	eukaryotic translation initiation factor 3, subunit M	unknown	other
PNPO	1.524	7.48E-05	pyridoxamine 5'-phosphate oxidase	Cytoplasm	enzyme
CSNK2A2	1.523	5.92E-04	casein kinase 2, alpha prime polypeptide	Cytoplasm	kinase
VCP	1.522	1.90E-03	valosin containing protein	Cytoplasm	enzyme
ACTB	1.521	6.18E-04	actin, beta	Cytoplasm	other
SDHD	1.520	6.37E-04	succinate dehydrogenase complex, subunit D, integral membrane protein	Cytoplasm	enzyme
COMMD4	1.518	4.17E-04	COMM domain containing 4	Cytoplasm	other
NHLRC2	1.518	4.97E-04	NHL repeat containing 2	unknown	enzyme
KIAA2013	1.517	1.60E-03	KIAA2013	unknown	other
ECH1	1.516	1.40E-03	enoyl CoA hydratase 1, peroxisomal	Cytoplasm	enzyme
SRD5A1	1.516	2.06E-05	steroid-5-alpha-reductase, alpha polypeptide 1 (3-oxo-5-alpha-steroid delta 4-dehydrogenase alpha 1)	Cytoplasm	enzyme
ERGIC3	1.515	1.02E-03	ERGIC and golgi 3	Cytoplasm	other
PAQR7	1.510	4.59E-04	progesterin and adipoQ receptor family member VII	unknown	other
SNRNP25	1.510	9.71E-04	small nuclear ribonucleoprotein 25kDa (U11/U12)	Nucleus	other
ERP29	1.509	3.56E-03	endoplasmic reticulum protein 29	Cytoplasm	transporter
MPEG1	1.508	3.81E-03	macrophage expressed 1	Cytoplasm	other
PPARGC1B	1.508	1.26E-04	peroxisome proliferator-activated receptor gamma, coactivator 1 beta	Nucleus	transcription regulator
PLP2	1.507	1.60E-03	proteolipid protein 2 (colonic epithelium-enriched)	Cytoplasm	transporter
APRT	1.506	9.82E-04	adenine phosphoribosyltransferase	Cytoplasm	enzyme
VCL	1.506	2.85E-03	vinculin	Plasma Membrane	enzyme
ZNF362	1.506	9.57E-05	zinc finger protein 362	unknown	other
ATG4C	1.504	2.35E-03	ATG4 autophagy related 4 homolog C (S. cerevisiae)	Cytoplasm	peptidase
MAPKAPK3	1.502	8.05E-04	mitogen-activated protein kinase-activated protein kinase 3	Nucleus	kinase
ENO1	1.501	8.97E-04	enolase 1, (alpha)	Cytoplasm	transcription regulator
ITM2C	1.501	3.72E-03	integral membrane protein 2C	Cytoplasm	other

NDUFB2	1.501	1.04E-03	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 2, 8kDa	Cytoplasm	enzyme
BCAS4	1.499	7.87E-04	breast carcinoma amplified sequence 4	Cytoplasm	other
PTEN	1.498	3.82E-03	phosphatase and tensin homolog	Cytoplasm	phosphatase
ANKDD1A	1.497	3.02E-03	ankyrin repeat and death domain containing 1A	unknown	other
ANTXR2	1.497	7.69E-03	anthrax toxin receptor 2	Plasma Membrane	other
AP2M1	1.497	4.05E-03	adaptor-related protein complex 2, mu 1 subunit	Cytoplasm	transporter
SLC25A20	1.496	9.86E-04	solute carrier family 25 (carnitine/acylcarnitine translocase), member 20	Cytoplasm	transporter
PGD	1.495	1.08E-03	phosphogluconate dehydrogenase	Cytoplasm	enzyme
RNF130	1.495	3.99E-04	ring finger protein 130	Cytoplasm	peptidase
ANXA5	1.492	2.77E-04	annexin A5	Plasma Membrane	other
DEPDC5	1.491	1.94E-03	DEP domain containing 5	unknown	other
FKBP1A	1.491	1.64E-03	FK506 binding protein 1A, 12kDa	Cytoplasm	enzyme
OGDH	1.491	4.90E-04	oxoglutarate (alpha-ketoglutarate) dehydrogenase (lipoamide)	Cytoplasm	enzyme
SAMM50	1.491	1.97E-04	sorting and assembly machinery component 50 homolog (S. cerevisiae)	Cytoplasm	other
SERPINB1	1.491	4.86E-03	serpin peptidase inhibitor, clade B (ovalbumin), member 1	Cytoplasm	other
SRM	1.490	4.29E-03	spermidine synthase	Cytoplasm	enzyme
FMO4	1.489	1.51E-04	flavin containing monooxygenase 4	Cytoplasm	enzyme
TCEA1	1.489	3.40E-03	transcription elongation factor A (SII), 1	Nucleus	transcription regulator
TCEAL8	1.488	3.85E-05	transcription elongation factor A (SII)-like 8	unknown	other
LTA	1.487	1.55E-04	lymphotoxin alpha (TNF superfamily, member 1)	Extracellular Space	cytokine
PRCP	1.486	1.12E-03	prolylcarboxypeptidase (angiotensinase C)	Cytoplasm	peptidase
NT5DC3	1.484	2.30E-04	5'-nucleotidase domain containing 3	unknown	other
CTSB	1.483	5.40E-04	cathepsin B	Cytoplasm	peptidase
C1QBP	1.482	5.77E-04	complement component 1, q subcomponent binding protein	Cytoplasm	other
IFI27L2	1.482	1.88E-03	interferon, alpha-inducible protein 27-like 2	unknown	other
KIF15	1.482	2.14E-03	kinesin family member 15	Nucleus	other
TIGIT	1.482	1.39E-03	T cell immunoreceptor with Ig and ITIM domains	Plasma Membrane	other
ARPC5	1.480	2.72E-04	actin related protein 2/3 complex, subunit 5, 16kDa	Cytoplasm	other
NQO1	1.480	9.62E-04	NAD(P)H dehydrogenase, quinone 1	Cytoplasm	enzyme
PTPRCAP	1.480	4.98E-03	protein tyrosine phosphatase, receptor type, C-associated protein	Plasma Membrane	other
SLC25A5	1.480	3.98E-03	solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocator), member 5	Cytoplasm	transporter
APOBEC3C	1.479	5.47E-03	apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3C	unknown	enzyme
NDUFS4	1.479	1.18E-04	NADH dehydrogenase (ubiquinone) Fe-S protein 4, 18kDa (NADH-coenzyme Q reductase)	Cytoplasm	enzyme
ARPC3	1.478	2.26E-03	actin related protein 2/3 complex, subunit 3, 21kDa	Cytoplasm	other
CYB5A	1.478	4.23E-03	cytochrome b5 type A (microsomal)	Cytoplasm	enzyme
CCNE1	1.477	7.62E-03	cyclin E1	Nucleus	transcription regulator
IL2RB	1.477	1.17E-03	interleukin 2 receptor, beta	Plasma Membrane	transmembrane receptor
HMBS	1.476	2.53E-03	hydroxymethylbilane synthase	Cytoplasm	enzyme
UFC1	1.476	3.08E-04	ubiquitin-fold modifier conjugating enzyme 1	unknown	enzyme
MIF4GD	1.475	3.56E-04	MIF4G domain containing	unknown	other
SLA2	1.475	1.62E-03	Src-like-adaptor 2	Plasma Membrane	other
ARSD	1.474	1.38E-03	arylsulfatase D	Cytoplasm	enzyme
ATP5H	1.474	8.83E-04	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit d	unknown	enzyme
C1orf97	1.474	1.57E-03	chromosome 1 open reading frame 97	unknown	other
TMEM159	1.474	3.98E-04	transmembrane protein 159	unknown	other
ADAMTS6	1.473	3.03E-03	ADAM metallopeptidase with thrombospondin type 1 motif, 6	Extracellular Space	peptidase
GPR137B	1.471	7.46E-05	G protein-coupled receptor 137B	Plasma Membrane	other
HPCAL1	1.471	1.88E-04	hippocalcin-like 1	Cytoplasm	other
SYTL3	1.471	7.46E-04	synaptotagmin-like 3	Cytoplasm	other
TMEM14A	1.470	2.75E-03	transmembrane protein 14A	unknown	other
CKS2	1.469	9.89E-03	CDC28 protein kinase regulatory subunit 2	unknown	kinase
POLR1D	1.469	2.12E-05	polymerase (RNA) I polypeptide D, 16kDa	Nucleus	enzyme
TNFSF12	1.469	2.63E-03	tumor necrosis factor (ligand) superfamily, member 12	Extracellular Space	cytokine
SERF2	1.468	3.89E-03	small EDRK-rich factor 2	unknown	other
RAP1GDS1	1.466	5.07E-04	RAP1, GTP-GDP dissociation stimulator 1	unknown	other
HINT2	1.465	4.10E-04	histidine triad nucleotide binding protein 2	Cytoplasm	other
STAMBPL1	1.464	7.16E-03	STAM binding protein-like 1	unknown	other
MVP	1.463	5.22E-04	major vault protein	Nucleus	other
FKBP1C	1.461	3.48E-04	FK506 binding protein 1C	unknown	other
IRF5	1.461	1.76E-03	interferon regulatory factor 5	Nucleus	transcription regulator
SDF2	1.460	6.01E-04	stromal cell-derived factor 2	Extracellular Space	enzyme
TRAF3IP2	1.460	8.24E-05	TRAF3 interacting protein 2	unknown	other

ANO9	1.459	4.15E-03	anoctamin 9	unknown	other
SND1	1.459	4.22E-04	staphylococcal nuclease and tudor domain containing 1	Nucleus	enzyme
TLN1	1.459	5.19E-03	talin 1	Plasma Membrane	other
RPL23A	1.458	3.02E-05	ribosomal protein L23a	Cytoplasm	other
LCMT1	1.457	1.22E-05	leucine carboxyl methyltransferase 1	unknown	enzyme
RPS21	1.456	4.66E-04	ribosomal protein S21	Cytoplasm	other
ALDOA	1.455	7.13E-03	aldolase A, fructose-bisphosphate	Cytoplasm	enzyme
ATP6V0E1	1.453	7.59E-04	ATPase, H ⁺ transporting, lysosomal 9kDa, V0 subunit e1	Cytoplasm	transporter
MRPS11	1.453	1.65E-03	mitochondrial ribosomal protein S11	Cytoplasm	other
HEATR5B	1.452	3.13E-03	HEAT repeat containing 5B	unknown	other
SLC15A3	1.452	1.10E-03	solute carrier family 15, member 3	Cytoplasm	transporter
AKR1A1	1.450	8.24E-03	aldo-keto reductase family 1, member A1 (aldehyde reductase)	Cytoplasm	enzyme
PPA1	1.450	5.52E-03	pyrophosphatase (inorganic) 1	Cytoplasm	enzyme
ARPC2	1.449	5.81E-05	actin related protein 2/3 complex, subunit 2, 34kDa	Cytoplasm	other
LGALS9	1.449	1.53E-03	lectin, galactoside-binding, soluble, 9	Extracellular Space	other
ZDHHC12	1.449	1.69E-03	zinc finger, DHHC-type containing 12	unknown	other
GTF2H5	1.448	1.11E-03	general transcription factor IIIH, polypeptide 5	Nucleus	other
MRPL15	1.448	1.13E-03	mitochondrial ribosomal protein L15	Cytoplasm	other
LOC647000	1.446	5.89E-03	tubulin, beta pseudogene 2	unknown	other
NTHL1	1.445	2.82E-04	nth endonuclease III-like 1 (E. coli)	Nucleus	enzyme
PSMB2	1.445	8.26E-05	proteasome (prosome, macropain) subunit, beta type, 2	Cytoplasm	peptidase
RBM20	1.445	5.06E-03	RNA binding motif protein 20	unknown	other
UBL7	1.445	2.38E-04	ubiquitin-like 7 (bone marrow stromal cell-derived)	unknown	other
NCF2	1.444	2.85E-03	neutrophil cytosolic factor 2	Cytoplasm	enzyme
ATP5L	1.443	4.44E-03	ATP synthase, H ⁺ transporting, mitochondrial Fo complex, subunit G	Cytoplasm	transporter
ICAM3	1.442	9.14E-05	intercellular adhesion molecule 3	Plasma Membrane	other
DPH5	1.441	5.64E-04	DPH5 homolog (S. cerevisiae)	unknown	enzyme
GLB1	1.441	2.67E-04	galactosidase, beta 1	Cytoplasm	enzyme
GMFR2	1.440	9.89E-06	guanosine monophosphate reductase 2	Cytoplasm	enzyme
NMRAL1	1.440	1.97E-04	NmrA-like family domain containing 1	unknown	other
PFKP	1.440	9.27E-03	phosphofructokinase, platelet	Cytoplasm	kinase
DPAGT1	1.439	4.01E-04	dolichyl-phosphate (UDP-N-acetylglucosamine) N-acetylglucosaminophosphotransferase 1 (GlcNAc-1-P transferase)	Cytoplasm	enzyme
RINL	1.439	2.48E-04	Ras and Rab interactor-like	unknown	other
GUCY2C	1.438	1.86E-03	guanylate cyclase 2C (heat stable enterotoxin receptor)	Plasma Membrane	kinase
C15orf52	1.436	5.16E-03	chromosome 15 open reading frame 52	unknown	other
CORO1A	1.435	1.36E-03	coronin, actin binding protein, 1A	Cytoplasm	other
ACAP1	1.434	1.57E-03	ArfGAP with coiled-coil, ankyrin repeat and PH domains 1	Nucleus	other
DYNLL1	1.434	4.70E-03	dynein, light chain, LC8-type 1	Cytoplasm	other
EEF2K	1.434	1.59E-03	eukaryotic elongation factor-2 kinase	Cytoplasm	kinase
LDLRAP1	1.434	2.06E-03	low density lipoprotein receptor adaptor protein 1	Cytoplasm	transporter
ADCY3	1.433	8.53E-03	adenylate cyclase 3	Plasma Membrane	enzyme
TNFAIP8	1.433	4.01E-03	tumor necrosis factor, alpha-induced protein 8	Cytoplasm	other
NCRNA00188	1.432	2.36E-03	non-protein coding RNA 188	unknown	other
PPP2R5B	1.432	8.85E-03	protein phosphatase 2, regulatory subunit B', beta	Cytoplasm	phosphatase
RASSF5	1.432	2.78E-04	Ras association (RalGDS/AF-6) domain family member 5	Plasma Membrane	other
PPP1R7	1.431	1.13E-03	protein phosphatase 1, regulatory (inhibitor) subunit 7	Nucleus	phosphatase
ANXA6	1.430	5.16E-04	annexin A6	Plasma Membrane	other
C20orf72	1.428	1.31E-03	chromosome 20 open reading frame 72	Cytoplasm	other
CAPZB	1.428	1.65E-03	capping protein (actin filament) muscle Z-line, beta	Cytoplasm	other
DRAP1	1.428	6.04E-03	DR1-associated protein 1 (negative cofactor 2 alpha)	Nucleus	transcription regulator
ATP5G2	1.427	7.40E-04	ATP synthase, H ⁺ transporting, mitochondrial Fo complex, subunit C2 (subunit 9)	Cytoplasm	transporter
CAPRIN1	1.427	8.17E-04	cell cycle associated protein 1	Plasma Membrane	other
FAM174B	1.426	4.02E-03	family with sequence similarity 174, member B	Cytoplasm	other
PGM1	1.426	1.50E-04	phosphoglucomutase 1	Cytoplasm	enzyme
NUDT1	1.425	1.53E-03	nudix (nucleoside diphosphate linked moiety X)-type motif 1	Extracellular Space	phosphatase
TNFRSF1B	1.425	9.35E-04	tumor necrosis factor receptor superfamily, member 1B	Plasma Membrane	transmembrane receptor
CD86	1.424	3.30E-03	CD86 molecule	Plasma Membrane	transmembrane receptor
NDUFA10	1.423	8.67E-05	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 10, 42kDa	Cytoplasm	enzyme
SEC61B	1.423	4.06E-05	Sec61 beta subunit	Cytoplasm	transporter
LASP1	1.422	1.57E-03	LIM and SH3 protein 1	Cytoplasm	transporter
PRDX3	1.421	2.74E-03	peroxiredoxin 3	Cytoplasm	enzyme
MRPS33	1.420	2.09E-03	mitochondrial ribosomal protein S33	Cytoplasm	other

VKORC1	1.418	2.51E-03	vitamin K epoxide reductase complex, subunit 1	Cytoplasm	enzyme
ACOT13	1.417	1.78E-03	acyl-CoA thioesterase 13	Cytoplasm	enzyme
UBE2L6	1.416	6.04E-04	ubiquitin-conjugating enzyme E2L 6	Cytoplasm	enzyme
COX5A	1.415	7.28E-05	cytochrome c oxidase subunit Va	Cytoplasm	enzyme
GPI	1.415	2.49E-04	glucose-6-phosphate isomerase	Extracellular Space	enzyme
GSTO1	1.415	1.27E-03	glutathione S-transferase omega 1	Cytoplasm	enzyme
STYXL1	1.415	9.79E-04	serine/threonine/tyrosine interacting-like 1	unknown	phosphatase
SH3KBP1	1.414	1.22E-04	SH3-domain kinase binding protein 1	Cytoplasm	other
VARS	1.414	7.40E-05	valyl-tRNA synthetase	Cytoplasm	enzyme
DCTPP1	1.413	1.04E-04	dCTP pyrophosphatase 1	Cytoplasm	enzyme
RTN3	1.412	2.53E-04	reticulon 3	Cytoplasm	other
HFC1R1	1.411	1.62E-03	host cell factor C1 regulator 1 (XPO1 dependent)	Nucleus	other
TRAPPC6A	1.411	1.35E-03	trafficking protein particle complex 6A	Cytoplasm	other
COTL1	1.410	8.38E-03	coactosin-like 1 (Dictyostelium)	Cytoplasm	other
GNG2	1.410	3.39E-03	guanine nucleotide binding protein (G protein), gamma 2	Plasma Membrane	enzyme
SSR2	1.410	2.85E-03	signal sequence receptor, beta (translocon-associated protein beta)	Cytoplasm	other
NLRC5	1.409	3.37E-04	NLR family, CARD domain containing 5	Cytoplasm	other
MIF	1.408	4.46E-03	macrophage migration inhibitory factor (glycosylation-inhibiting factor)	Extracellular Space	cytokine
PRDX2	1.408	5.78E-03	peroxiredoxin 2	Cytoplasm	enzyme
DHRS1	1.407	2.22E-03	dehydrogenase/reductase (SDR family) member 1	Cytoplasm	enzyme
CCT3	1.406	7.85E-03	chaperonin containing TCP1, subunit 3 (gamma)	Cytoplasm	other
LOC646817	1.406	3.94E-03	SET nuclear oncogene pseudogene	unknown	other
ADCK2	1.405	6.25E-04	aarF domain containing kinase 2	Cytoplasm	kinase
SPPL2A	1.405	1.17E-03	signal peptide peptidase-like 2A	Plasma Membrane	peptidase
MYL12B	1.404	2.26E-03	myosin, light chain 12B, regulatory	Cytoplasm	other
PTPRC	1.404	4.74E-03	protein tyrosine phosphatase, receptor type, C	Plasma Membrane	phosphatase
DECR1	1.403	1.14E-03	2,4-dienoyl CoA reductase 1, mitochondrial	Cytoplasm	enzyme
IQCG	1.403	9.16E-04	IQ motif containing G	unknown	other
SIL1	1.403	8.38E-05	SIL1 homolog, endoplasmic reticulum chaperone (S. cerevisiae)	Cytoplasm	transporter
NUDT5	1.402	2.25E-04	nudix (nucleoside diphosphate linked moiety X)-type motif 5	Cytoplasm	phosphatase
COPE	1.401	2.55E-03	coatomer protein complex, subunit epsilon	Cytoplasm	transporter
MACF1	1.401	3.46E-04	microtubule-actin crosslinking factor 1	Cytoplasm	other
NNT	1.400	2.45E-04	nicotinamide nucleotide transhydrogenase	Cytoplasm	enzyme
C20orf24	1.399	1.55E-03	chromosome 20 open reading frame 24	Cytoplasm	other
PMPCB	1.399	4.06E-03	peptidase (mitochondrial processing) beta	Cytoplasm	peptidase
DPY30	1.398	9.46E-04	dpy-30 homolog (C. elegans)	Nucleus	other
GSTZ1	1.398	6.73E-05	glutathione transferase zeta 1	Cytoplasm	enzyme
HLA-DRB3 (includes others)	1.397	3.68E-04	major histocompatibility complex, class II, DR beta 3	Plasma Membrane	other
RNASET2	1.396	1.99E-03	ribonuclease T2	Cytoplasm	enzyme
YBEY	1.396	1.38E-03	ybeY metallopeptidase (putative)	Cytoplasm	other
FOLR2	1.395	4.76E-03	folate receptor 2 (fetal)	Plasma Membrane	transporter
GSTK1	1.395	1.90E-03	glutathione S-transferase kappa 1	Cytoplasm	enzyme
ZNF581	1.395	1.80E-03	zinc finger protein 581	Nucleus	other
IL12RB1	1.394	4.20E-04	interleukin 12 receptor, beta 1	Plasma Membrane	transmembrane receptor
NDUFB7	1.394	5.87E-03	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 7, 18kDa	Cytoplasm	enzyme
AGPAT4	1.393	7.71E-03	1-acylglycerol-3-phosphate O-acyltransferase 4 (lysophosphatidic acid acyltransferase, delta)	Cytoplasm	enzyme
APIG2	1.393	8.67E-03	adaptor-related protein complex 1, gamma 2 subunit	Cytoplasm	transporter
CAP1	1.393	2.61E-03	CAP, adenylate cyclase-associated protein 1 (yeast)	Plasma Membrane	other
CHST7	1.393	5.93E-03	carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 7	Cytoplasm	enzyme
DHRS4	1.393	1.36E-03	dehydrogenase/reductase (SDR family) member 4	Cytoplasm	enzyme
MS4A1	1.393	3.63E-04	membrane-spanning 4-domains, subfamily A, member 1	Plasma Membrane	other
EIF4E2	1.392	1.73E-03	eukaryotic translation initiation factor 4E family member 2	unknown	other
KCNK12	1.392	5.37E-03	potassium channel, subfamily K, member 12	Plasma Membrane	ion channel
SPIB	1.392	2.89E-03	Spi-B transcription factor (Spi-1/PU.1 related)	Nucleus	transcription regulator
GPSM1	1.391	3.48E-03	G-protein signaling modulator 1	Cytoplasm	other
SCO2	1.391	7.93E-03	SCO cytochrome oxidase deficient homolog 2 (yeast)	Cytoplasm	other
BACE2	1.390	4.44E-03	beta-site APP-cleaving enzyme 2	Cytoplasm	peptidase
PDCD2	1.390	3.45E-03	programmed cell death 2	Nucleus	other
HLA-DQB1 (includes others)	1.389	3.22E-03	major histocompatibility complex, class II, DQ beta 1	Plasma Membrane	other
MRPL1	1.389	4.25E-03	mitochondrial ribosomal protein L1	Cytoplasm	other
PDXP	1.389	2.01E-03	pyridoxal (pyridoxine, vitamin B6) phosphatase	Plasma Membrane	enzyme

POTEKP	1.389	7.41E-04	POTE ankyrin domain family, member K, pseudogene	unknown	other
ATPAF1	1.388	6.89E-04	ATP synthase mitochondrial F1 complex assembly factor 1	Cytoplasm	other
PMVK	1.388	1.90E-04	phosphomevalonate kinase	Cytoplasm	kinase
ADCY4	1.387	4.55E-03	adenylate cyclase 4	Plasma Membrane	enzyme
AMY1A (includes others)	1.387	1.52E-03	amylase, alpha 1A (salivary)	Extracellular Space	enzyme
ATPIF1	1.387	2.59E-04	ATPase inhibitory factor 1	Cytoplasm	other
RNF135	1.387	1.82E-03	ring finger protein 135	Cytoplasm	enzyme
LRRK2	1.386	1.64E-03	leucine-rich repeat kinase 2	Cytoplasm	kinase
FBXO6	1.385	1.29E-03	F-box protein 6	Cytoplasm	enzyme
HENMT1	1.385	2.81E-03	HEN1 methyltransferase homolog 1 (Arabidopsis)	unknown	other
MYO5A	1.385	7.80E-03	myosin VA (heavy chain 12, myosin)	Cytoplasm	enzyme
PSMA5	1.385	1.84E-04	proteasome (prosome, macropain) subunit, alpha type, 5	Cytoplasm	peptidase
BEST4	1.384	4.55E-03	bestrophin 4	Plasma Membrane	other
C3orf10	1.384	4.52E-03	chromosome 3 open reading frame 10	unknown	other
DHRS4L1	1.384	2.96E-04	dehydrogenase/reductase (SDR family) member 4 like 1	unknown	other
PHACTR1	1.384	2.82E-03	phosphatase and actin regulator 1	Cytoplasm	other
ALOX5	1.383	2.08E-03	arachidonate 5-lipoxygenase	Cytoplasm	enzyme
REPS2	1.383	8.89E-03	RALBP1 associated Eps domain containing 2	Cytoplasm	other
CNIH	1.382	6.56E-03	cornichon homolog (Drosophila)	Plasma Membrane	other
RPS6KA1	1.382	1.98E-04	ribosomal protein S6 kinase, 90kDa, polypeptide 1	Cytoplasm	kinase
DUSP23	1.381	2.11E-03	dual specificity phosphatase 23	Cytoplasm	phosphatase
HSD17B8	1.381	5.70E-03	hydroxysteroid (17-beta) dehydrogenase 8	Cytoplasm	enzyme
ARL6IP5	1.380	1.12E-04	ADP-ribosylation-like factor 6 interacting protein 5	Cytoplasm	other
COMT	1.380	6.40E-04	catechol-O-methyltransferase	Cytoplasm	enzyme
PRKAG1	1.380	9.51E-03	protein kinase, AMP-activated, gamma 1 non-catalytic subunit	Nucleus	kinase
STX11	1.380	7.29E-03	syntaxin 11	Plasma Membrane	transporter
ABHD14A	1.379	1.39E-03	abhydrolase domain containing 14A	Cytoplasm	enzyme
ATP6V1F	1.379	3.57E-04	ATPase, H ⁺ transporting, lysosomal 14kDa, V1 subunit F	Cytoplasm	transporter
ATIC	1.378	3.33E-04	5-aminoimidazole-4-carboxamide ribonucleotide formyltransferase/IMP cyclohydrolase	Cytoplasm	enzyme
CRYZ	1.378	1.07E-03	crystallin, zeta (quinone reductase)	Cytoplasm	enzyme
PHPT1	1.378	4.38E-03	phosphohistidine phosphatase 1	Cytoplasm	phosphatase
CD37	1.377	7.41E-03	CD37 molecule	Plasma Membrane	other
ACN9	1.376	8.11E-04	ACN9 homolog (S. cerevisiae)	Cytoplasm	other
DYRK4	1.376	6.05E-03	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 4	Nucleus	kinase
TRAPPC5	1.376	5.82E-03	trafficking protein particle complex 5	Cytoplasm	other
ACY1	1.375	6.37E-03	aminoacylase 1	Cytoplasm	peptidase
HLA-G	1.375	5.20E-03	major histocompatibility complex, class I, G	Plasma Membrane	transmembrane receptor
SNX11	1.373	4.95E-04	sorting nexin 11	unknown	transporter
U2AF1L4	1.373	8.81E-03	U2 small nuclear RNA auxiliary factor 1-like 4	Nucleus	other
DDIT4	1.371	4.37E-03	DNA-damage-inducible transcript 4	Cytoplasm	other
QDPR	1.371	6.59E-03	quinoid dihydropteridine reductase	Cytoplasm	enzyme
EIF3I	1.370	5.40E-05	eukaryotic translation initiation factor 3, subunit I	Cytoplasm	translation regulator
PRDX5	1.370	5.40E-03	peroxiredoxin 5	Cytoplasm	enzyme
CSRP1	1.369	1.53E-03	cysteine and glycine-rich protein 1	Nucleus	other
GDI2	1.369	4.33E-03	GDP dissociation inhibitor 2	Cytoplasm	other
ISG15	1.368	6.84E-03	ISG15 ubiquitin-like modifier	Extracellular Space	other
LOC642954	1.368	4.82E-03	retinoblastoma binding protein 4 pseudogene	unknown	other
S100A10	1.368	7.50E-03	S100 calcium binding protein A10	Cytoplasm	other
PHTF1	1.367	1.62E-03	putative homeodomain transcription factor 1	Nucleus	transcription regulator
PSMD7	1.367	6.34E-03	proteasome (prosome, macropain) 26S subunit, non-ATPase, 7	Cytoplasm	other
MRPL37	1.366	7.00E-04	mitochondrial ribosomal protein L37	Cytoplasm	enzyme
SPAG7	1.366	8.93E-03	sperm associated antigen 7	Nucleus	other
PFKM	1.362	4.22E-03	phosphofructokinase, muscle	Cytoplasm	kinase
COX7C	1.359	2.43E-03	cytochrome c oxidase subunit VIIc	Cytoplasm	other
RCN1	1.359	3.18E-03	reticulocalbin 1, EF-hand calcium binding domain	Cytoplasm	other
TPST2	1.359	8.09E-03	tyrosylprotein sulfotransferase 2	Cytoplasm	enzyme
ARF3	1.358	1.72E-05	ADP-ribosylation factor 3	Cytoplasm	enzyme
ATP5J2	1.358	2.23E-03	ATP synthase, H ⁺ transporting, mitochondrial Fo complex, subunit F2	Cytoplasm	transporter
CDC123	1.358	8.18E-03	cell division cycle 123 homolog (S. cerevisiae)	Cytoplasm	other
DDT	1.358	1.56E-03	D-dopachrome tautomerase	Cytoplasm	enzyme
TNFSF9	1.358	7.26E-03	tumor necrosis factor (ligand) superfamily, member 9	Extracellular Space	cytokine
FILIP1L	1.357	6.07E-03	filamin A interacting protein 1-like	Nucleus	other
MPV17	1.357	3.52E-03	MpV17 mitochondrial inner membrane protein	Cytoplasm	other
NIPSNAP1	1.357	1.18E-03	nipsnap homolog 1 (C. elegans)	Cytoplasm	enzyme
SCO1	1.357	6.89E-03	SCO cytochrome oxidase deficient homolog 1 (yeast)	Cytoplasm	other

ABCC4	1.356	1.06E-04	ATP-binding cassette, sub-family C (CFTR/MRP), member 4	Plasma Membrane	transporter
NRAS	1.356	2.65E-04	neuroblastoma RAS viral (v-ras) oncogene homolog	Plasma Membrane	enzyme
RNF181	1.355	2.95E-03	ring finger protein 181	unknown	other
F8A1 (includes others)	1.354	5.52E-04	coagulation factor VIII-associated (intronic transcript) 1	Nucleus	other
PSTPIP1	1.354	3.96E-03	proline-serine-threonine phosphatase interacting protein 1	Cytoplasm	other
CKS1B	1.353	4.78E-04	CDC28 protein kinase regulatory subunit 1B	Cytoplasm	kinase
HRSP12	1.353	2.38E-03	heat-responsive protein 12	Cytoplasm	other
REC8	1.352	8.41E-03	REC8 homolog (yeast)	Nucleus	other
TSC22D1	1.352	3.37E-03	TSC22 domain family, member 1	Nucleus	transcription regulator
AP1M1	1.351	1.10E-03	adaptor-related protein complex 1, mu 1 subunit	Cytoplasm	transporter
C17orf62	1.351	8.36E-03	chromosome 17 open reading frame 62	unknown	other
PRKCD	1.351	4.09E-03	protein kinase C, delta	Cytoplasm	kinase
PSMC5	1.351	3.66E-03	proteasome (prosome, macropain) 26S subunit, ATPase, 5	Nucleus	transcription regulator
ST8SIA4	1.351	1.71E-03	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransferase 4	Cytoplasm	enzyme
ARHGAP15	1.350	7.74E-03	Rho GTPase activating protein 15	Cytoplasm	other
ARF5	1.349	5.42E-04	ADP-ribosylation factor 5	Cytoplasm	transporter
LBH	1.348	9.57E-04	limb bud and heart development homolog (mouse)	Nucleus	transcription regulator
MRPL34	1.348	1.26E-03	mitochondrial ribosomal protein L34	Cytoplasm	other
POMP	1.347	1.45E-03	proteasome maturation protein	Nucleus	other
SUMF2	1.347	5.56E-04	sulfatase modifying factor 2	Cytoplasm	other
AHNAK	1.346	7.71E-04	AHNAK nucleoprotein	Nucleus	other
HADHA	1.346	1.00E-04	hydroxyacyl-CoA dehydrogenase/3-ketoacyl-CoA thiolase/enoyl-CoA hydratase (trifunctional protein), alpha subunit	Cytoplasm	enzyme
NDUFA8	1.346	2.85E-03	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 8, 19kDa	Cytoplasm	enzyme
SP110	1.346	2.88E-03	SP110 nuclear body protein	Nucleus	other
UBE2A	1.346	6.71E-03	ubiquitin-conjugating enzyme E2A (RAD6 homolog)	Cytoplasm	enzyme
ZNF626	1.346	7.10E-03	zinc finger protein 626	unknown	other
CENPV	1.345	2.43E-03	centromere protein V	Nucleus	other
MARCH2	1.345	4.55E-03	membrane-associated ring finger (C3HC4) 2	Cytoplasm	enzyme
UQRFS1	1.345	1.04E-03	ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1	Cytoplasm	enzyme
COMTD1	1.344	4.60E-03	catechol-O-methyltransferase domain containing 1	Plasma Membrane	enzyme
DPEP2	1.344	7.46E-03	dipeptidase 2	Plasma Membrane	peptidase
ELOVL5	1.344	7.69E-03	ELOVL family member 5, elongation of long chain fatty acids (FEN1/Elo2, SUR4/Elo3-like, yeast)	Cytoplasm	enzyme
SLC35A4	1.344	4.79E-03	solute carrier family 35, member A4	unknown	transporter
LOC146880	1.343	1.30E-03	hypothetical LOC146880	unknown	other
BOLA3	1.342	5.30E-03	bolA homolog 3 (E. coli)	unknown	other
CHEK2	1.342	5.86E-04	CHK2 checkpoint homolog (S. pombe)	Nucleus	kinase
KPNA2	1.342	1.22E-03	karyopherin alpha 2 (RAG cohort 1, importin alpha 1)	Nucleus	transporter
PLSCR3	1.342	8.02E-03	phospholipid scramblase 3	Cytoplasm	enzyme
ILK	1.341	5.94E-05	integrin-linked kinase	Plasma Membrane	kinase
METTL7A	1.341	4.01E-03	methyltransferase like 7A	unknown	other
PAICS	1.341	3.56E-03	phosphoribosylaminoimidazole carboxylase, phosphoribosylaminoimidazole succinocarboxamide synthetase	Cytoplasm	enzyme
SLFN11	1.340	2.59E-03	schlafen family member 11	Nucleus	enzyme
C3orf75	1.339	9.12E-04	chromosome 3 open reading frame 75	unknown	other
HK1	1.338	5.83E-05	hexokinase 1	Cytoplasm	kinase
LIMS1	1.338	2.23E-03	LIM and senescent cell antigen-like domains 1	Cytoplasm	other
LOC401397	1.338	2.31E-03	hypothetical LOC401397	unknown	other
PRMT2	1.338	2.33E-03	protein arginine methyltransferase 2	Nucleus	enzyme
FLJ33630	1.337	1.76E-03	hypothetical LOC644873	unknown	other
MAGED1	1.337	3.07E-04	melanoma antigen family D, 1	Plasma Membrane	transcription regulator
TRAPPC4	1.337	1.77E-03	trafficking protein particle complex 4	Cytoplasm	other
ABHD14B	1.336	4.02E-03	abhydrolase domain containing 14B	Cytoplasm	enzyme
BCCIP	1.336	2.29E-03	BRCA2 and CDKN1A interacting protein	Nucleus	other
ALPK1	1.335	2.97E-03	alpha-kinase 1	unknown	kinase
LRRK1	1.335	2.92E-03	leucine-rich repeat kinase 1	Cytoplasm	kinase
FAM102A	1.333	8.89E-03	family with sequence similarity 102, member A	unknown	other
SMTN	1.333	4.60E-03	smoothelin	Extracellular Space	other
DCTN2	1.332	6.00E-05	dynactin 2 (p50)	Cytoplasm	other
SEC61G	1.332	4.69E-03	Sec61 gamma subunit	Cytoplasm	transporter
GGCT	1.331	2.23E-03	gamma-glutamylcyclotransferase	Cytoplasm	enzyme
HPS5	1.331	3.60E-03	Hermansky-Pudlak syndrome 5	Cytoplasm	other
S100BP	1.331	5.16E-03	S100P binding protein	Nucleus	other
MRPL27	1.330	5.75E-03	mitochondrial ribosomal protein L27	Cytoplasm	other
VDAC1	1.330	1.25E-03	voltage-dependent anion channel 1	Cytoplasm	ion channel

ATP5B	1.329	2.72E-03	ATP synthase, H ⁺ transporting, mitochondrial F1 complex, beta polypeptide	Cytoplasm	transporter
CLYBL	1.328	7.76E-03	citrate lyase beta like	Cytoplasm	enzyme
NIP7	1.328	3.68E-03	nuclear import 7 homolog (<i>S. cerevisiae</i>)	Nucleus	other
NIPSNAP3A	1.328	2.86E-03	nipsnap homolog 3A (<i>C. elegans</i>)	Cytoplasm	other
RAB4A	1.327	1.51E-03	RAB4A, member RAS oncogene family	Cytoplasm	enzyme
TARS	1.327	9.16E-04	threonyl-tRNA synthetase	Nucleus	enzyme
PPP1CA	1.326	2.28E-03	protein phosphatase 1, catalytic subunit, alpha isozyme	Cytoplasm	phosphatase
SLC7A5	1.326	2.12E-03	solute carrier family 7 (cationic amino acid transporter, y ⁺ system), member 5	Plasma Membrane	transporter
DDX19B	1.324	7.59E-04	DEAD (Asp-Glu-Ala-As) box polypeptide 19B	Nucleus	enzyme
HCLS1	1.324	1.88E-03	hematopoietic cell-specific Lyn substrate 1	Nucleus	transcription regulator
REM2	1.324	4.81E-04	RAS (RAD and GEM)-like GTP binding 2	Plasma Membrane	enzyme
BRP44	1.323	1.39E-04	brain protein 44	Plasma Membrane	other
C11orf10	1.323	1.04E-03	chromosome 11 open reading frame 10	unknown	other
RTN4	1.323	1.52E-03	reticulon 4	Cytoplasm	other
SPI1	1.323	1.86E-03	spleen focus forming virus (SFFV) proviral integration oncogene spi1	Nucleus	transcription regulator
FXYD5	1.321	1.01E-04	FXYD domain containing ion transport regulator 5	Plasma Membrane	ion channel
PSMG2	1.321	4.20E-03	proteasome (prosome, macropain) assembly chaperone 2	Nucleus	other
WDR12	1.321	2.72E-03	WD repeat domain 12	Cytoplasm	other
CCDC90A	1.320	2.44E-03	coiled-coil domain containing 90A	unknown	other
LOC729708	1.320	4.85E-03	triosephosphate isomerase 1 pseudogene 1	unknown	enzyme
PSMB7	1.320	1.46E-03	proteasome (prosome, macropain) subunit, beta type, 7	Cytoplasm	peptidase
CBX6	1.319	1.97E-03	chromobox homolog 6	Nucleus	other
CSNK2B	1.319	4.71E-03	casein kinase 2, beta polypeptide	Cytoplasm	kinase
DPP3	1.319	1.00E-04	dipeptidyl-peptidase 3	Cytoplasm	peptidase
GRSF1	1.319	2.92E-04	G-rich RNA sequence binding factor 1	Cytoplasm	other
NIT2	1.319	2.45E-03	nitrilase family, member 2	Cytoplasm	enzyme
NUCB1	1.319	9.27E-03	nucleobindin 1	Cytoplasm	other
RUVBL1	1.319	6.82E-04	RuvB-like 1 (<i>E. coli</i>)	Nucleus	transcription regulator
SIRT5	1.319	2.24E-03	sirtuin 5	Cytoplasm	enzyme
CAPN1	1.318	1.75E-03	calpain 1, (mu/I) large subunit	Cytoplasm	peptidase
CYB5D2	1.318	3.77E-04	cytochrome b5 domain containing 2	unknown	other
DNAJC15	1.318	4.23E-05	DnaJ (Hsp40) homolog, subfamily C, member 15	Cytoplasm	other
MYL12A	1.318	1.21E-03	myosin, light chain 12A, regulatory, non-sarcomeric	unknown	other
NSMCE2	1.318	1.08E-03	non-SMC element 2, MMS21 homolog (<i>S. cerevisiae</i>)	Nucleus	other
PTGES2	1.318	9.06E-03	prostaglandin E synthase 2	Cytoplasm	transcription regulator
FGGY	1.317	1.98E-03	FGGY carbohydrate kinase domain containing	unknown	other
MTHFD1L	1.317	6.81E-03	methylenetetrahydrofolate dehydrogenase (NADP ⁺ dependent) 1-like	Cytoplasm	enzyme
TXNRD1	1.317	4.12E-04	thioredoxin reductase 1	Cytoplasm	enzyme
BPGM	1.316	1.39E-03	2,3-bisphosphoglycerate mutase	unknown	phosphatase
COX5B	1.315	3.21E-03	cytochrome c oxidase subunit Vb	Cytoplasm	other
ARPC5L	1.314	3.08E-03	actin related protein 2/3 complex, subunit 5-like	unknown	other
C14orf2	1.314	5.45E-04	chromosome 14 open reading frame 2	unknown	other
FUCA2	1.314	8.75E-04	fucosidase, alpha-L-2, plasma	Extracellular Space	enzyme
BRE	1.313	5.64E-04	brain and reproductive organ-expressed (TNFRSF1A modulator)	Cytoplasm	other
MAPK1	1.313	3.32E-03	mitogen-activated protein kinase 1	Cytoplasm	kinase
MT1A	1.313	1.45E-03	metallothionein 1A	Cytoplasm	other
LILRA4	1.312	9.38E-03	leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 4	Plasma Membrane	other
PXMP2	1.312	4.45E-04	peroxisomal membrane protein 2, 22kDa	Cytoplasm	other
ST7	1.312	1.40E-03	suppression of tumorigenicity 7	unknown	other
CHRNB1	1.311	9.66E-04	cholinergic receptor, nicotinic, beta 1 (muscle)	Plasma Membrane	transmembrane receptor
DEF6	1.311	9.57E-03	differentially expressed in FDCP 6 homolog (mouse)	Extracellular Space	other
PARK7	1.311	1.32E-03	Parkinson disease (autosomal recessive, early onset) 7	Nucleus	enzyme
TRIB3	1.311	3.12E-03	tribbles homolog 3 (<i>Drosophila</i>)	Nucleus	kinase
IAH1	1.310	6.95E-04	isoamyl acetate-hydrolyzing esterase 1 homolog (<i>S. cerevisiae</i>)	unknown	other
MRPL12	1.310	3.43E-03	mitochondrial ribosomal protein L12	Cytoplasm	other
MT1X	1.310	7.67E-04	metallothionein 1X	unknown	other
MRPL55	1.309	6.53E-03	mitochondrial ribosomal protein L55	Cytoplasm	other
NCKAP1L	1.309	1.88E-03	NCK-associated protein 1-like	Plasma Membrane	other
NEU1	1.308	8.28E-03	sialidase 1 (lysosomal sialidase)	Cytoplasm	enzyme
RCAN1	1.308	1.26E-03	regulator of calcineurin 1	Nucleus	transcription regulator
GALNT1	1.307	1.03E-04	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 1 (GalNAc-T1)	Cytoplasm	enzyme
LAMP2	1.307	1.14E-03	lysosomal-associated membrane protein 2	Plasma Membrane	enzyme
MCTS1	1.307	2.58E-03	malignant T cell amplified sequence 1	Cytoplasm	other
NICN1	1.307	1.76E-03	nicolin 1	Nucleus	other
PHACTR2	1.307	3.04E-03	phosphatase and actin regulator 2	unknown	other

PYROXD2	1.307	3.09E-03	pyridine nucleotide-disulphide oxidoreductase domain 2	unknown	other
SH3GLB1	1.307	8.32E-03	SH3-domain GRB2-like endophilin B1	Cytoplasm	enzyme
WAS	1.307	1.48E-03	Wiskott-Aldrich syndrome (eczema-thrombocytopenia)	Cytoplasm	other
GM2A	1.306	6.03E-03	GM2 ganglioside activator	Cytoplasm	enzyme
ENDOG	1.305	2.95E-03	endonuclease G	Cytoplasm	enzyme
SNX8	1.305	6.64E-03	sorting nexin 8	unknown	transporter
ATP5C1	1.304	7.16E-03	ATP synthase, H ⁺ transporting, mitochondrial F1 complex, gamma polypeptide 1	Cytoplasm	transporter
CFL1	1.304	2.22E-03	cofilin 1 (non-muscle)	Nucleus	other
GNG5	1.304	1.27E-03	guanine nucleotide binding protein (G protein), gamma 5	Plasma Membrane	other
NIPAL3	1.304	8.43E-05	NIPA-like domain containing 3	unknown	other
SEPT11	1.304	2.39E-03	septin 11	Nucleus	other
SIT1	1.304	3.66E-04	signaling threshold regulating transmembrane adaptor 1	Plasma Membrane	other
TBCB	1.304	2.72E-03	tubulin folding cofactor B	Cytoplasm	other
TRAF4	1.304	8.93E-04	TNF receptor-associated factor 4	Cytoplasm	other
ATP1B3	1.303	9.35E-03	ATPase, Na ⁺ /K ⁺ transporting, beta 3 polypeptide	Plasma Membrane	transporter
DNASE1L1	1.303	4.06E-03	deoxyribonuclease I-like 1	Cytoplasm	enzyme
UQCRH	1.303	8.87E-03	ubiquinol-cytochrome c reductase hinge protein	Cytoplasm	enzyme
CS	1.302	1.60E-03	citrate synthase	Cytoplasm	enzyme
DHRS4L2	1.302	3.51E-05	dehydrogenase/reductase (SDR family) member 4 like 2	unknown	other
GSR	1.302	1.66E-03	glutathione reductase	Cytoplasm	enzyme
TBCK	1.302	8.55E-03	TBC1 domain containing kinase	unknown	kinase
ZNHIT1	1.302	4.76E-04	zinc finger, HIT-type containing 1	unknown	other
COX15	1.301	2.07E-03	COX15 homolog, cytochrome c oxidase assembly protein (yeast)	Cytoplasm	enzyme
LSMD1	1.301	6.18E-04	LSM domain containing 1	unknown	other
SSR4	1.301	5.18E-04	signal sequence receptor, delta (translocon-associated protein delta)	Cytoplasm	other
STARD7	1.301	5.48E-03	Star-related lipid transfer (START) domain containing 7	unknown	other

B.

Symbol	Fold Change	P value	Entrez Gene Name	Location	Type(s)
BACH2	-3.802	8.04E-05	BTB and CNC homology 1, basic leucine zipper transcription factor 2	Nucleus	transcription regulator
CXCR4	-3.534	3.00E-04	chemokine (C-X-C motif) receptor 4	Plasma Membrane	G-protein coupled receptor
ADARB1	-2.703	7.69E-04	adenosine deaminase, RNA-specific, B1	Nucleus	enzyme
RHPN2	-2.653	2.30E-04	rhophilin, Rho GTPase binding protein 2	Cytoplasm	other
RXRA	-2.558	8.41E-03	retinoid X receptor, alpha	Nucleus	ligand-dependent nuclear receptor
ABCA1	-2.421	8.99E-04	ATP-binding cassette, sub-family A (ABC1), member 1	Plasma Membrane	transporter
ZC3H12B	-2.404	3.96E-04	zinc finger CCCH-type containing 12B	unknown	other
ARID5B	-2.336	2.78E-03	AT rich interactive domain 5B (MRF1-like)	Nucleus	transcription regulator
BCL6	-2.273	4.82E-05	B-cell CLL/lymphoma 6	Nucleus	transcription regulator
HRK	-2.198	3.63E-03	harakiri, BCL2 interacting protein (contains only BH3 domain)	Cytoplasm	other
TCFL5	-2.092	4.92E-04	transcription factor-like 5 (basic helix-loop-helix)	Nucleus	transcription regulator
FOXO1	-2.053	1.25E-03	forkhead box O1	Nucleus	transcription regulator
RAB37	-2.045	1.10E-03	RAB37, member RAS oncogene family	Cytoplasm	enzyme
IL4R	-2.004	5.53E-04	interleukin 4 receptor	Plasma Membrane	transmembrane receptor
H1FX	-1.992	1.52E-03	H1 histone family, member X	Nucleus	other
IRS2	-1.984	1.68E-03	insulin receptor substrate 2	Cytoplasm	other
C7orf50	-1.931	1.25E-03	chromosome 7 open reading frame 50	unknown	other
LRRC32	-1.927	8.36E-03	leucine rich repeat containing 32	Plasma Membrane	other
MDK	-1.887	4.01E-03	midkine (neurite growth-promoting factor 2)	Extracellular Space	growth factor
TESC	-1.876	2.31E-03	tescalcin	Cytoplasm	other
MMP11	-1.869	9.40E-04	matrix metalloproteinase 11 (stromelysin 3)	Extracellular Space	peptidase
IL23A	-1.855	2.42E-03	interleukin 23, alpha subunit p19	Extracellular Space	cytokine
KLF11	-1.848	8.07E-04	Kruppel-like factor 11	Nucleus	transcription regulator
VEZF1	-1.842	1.23E-03	vascular endothelial zinc finger 1	Nucleus	transcription regulator
MLLT6	-1.825	2.07E-03	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 6	Nucleus	transcription regulator
FAM3C	-1.815	4.18E-04	family with sequence similarity 3, member C	Extracellular Space	cytokine
FBXO21	-1.808	6.93E-05	F-box protein 21	unknown	enzyme
ST3GAL1	-1.808	2.01E-04	ST3 beta-galactoside alpha-2,3-sialyltransferase 1	Cytoplasm	enzyme
CSNK1E	-1.799	2.96E-03	casein kinase 1, epsilon	Cytoplasm	kinase
ZNF721	-1.773	9.35E-06	zinc finger protein 721	unknown	other
RSBN1	-1.770	1.84E-04	round spermatid basic protein 1	Nucleus	other
FCRL5	-1.754	8.24E-03	Fc receptor-like 5	unknown	other
HERC5	-1.754	2.73E-03	hect domain and RLD 5	Cytoplasm	enzyme
FOXO3	-1.751	7.52E-04	forkhead box O3	Nucleus	transcription regulator
TMEM123	-1.751	7.23E-03	transmembrane protein 123	Plasma Membrane	other
CLEC2D	-1.748	2.40E-03	C-type lectin domain family 2, member D	Plasma Membrane	transmembrane receptor
NCK2	-1.742	4.90E-03	NCK adaptor protein 2	Cytoplasm	kinase
FLJ20444	-1.739	7.85E-04	hypothetical protein FLJ20444	unknown	other
RBM12	-1.736	9.93E-04	RNA binding motif protein 12	Nucleus	other
RGS2	-1.736	9.62E-04	regulator of G-protein signaling 2, 24kDa	Nucleus	other
TXNDC5	-1.733	2.19E-03	thioredoxin domain containing 5 (endoplasmic reticulum)	Cytoplasm	enzyme
KLHL5	-1.727	8.67E-05	kelch-like 5 (Drosophila)	unknown	other
SMAD5	-1.727	3.40E-04	SMAD family member 5	Nucleus	transcription regulator
PPAPDC1B	-1.721	6.70E-04	phosphatidic acid phosphatase type 2 domain containing 1B	unknown	other
ZSWIM4	-1.715	6.95E-04	zinc finger, SWIM-type containing 4	unknown	other
PLEKHA2	-1.712	1.87E-03	pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 2	Cytoplasm	other
TPD52	-1.712	6.43E-04	tumor protein D52	Cytoplasm	other
FCAR	-1.704	1.44E-03	Fc fragment of IgA, receptor for	Plasma Membrane	other

MCART1	-1.701	5.56E-03	mitochondrial carrier triple repeat 1	Cytoplasm	other
NLRP8	-1.701	3.93E-03	NLR family, pyrin domain containing 8	unknown	other
FXR1	-1.695	1.07E-04	fragile X mental retardation, autosomal homolog 1	Cytoplasm	other
PRPF3	-1.695	1.32E-04	PRP3 pre-mRNA processing factor 3 homolog (S. cerevisiae)	Nucleus	other
RCBTB2	-1.692	2.00E-04	regulator of chromosome condensation (RCC1) and BTB (POZ) domain containing protein 2	unknown	other
TXNIP	-1.692	8.05E-04	thioredoxin interacting protein	Cytoplasm	other
FLJ32255	-1.689	1.33E-03	hypothetical LOC643977	unknown	other
HIC2	-1.684	1.92E-04	hypermethylated in cancer 2	Nucleus	other
PER2	-1.684	2.12E-04	period homolog 2 (Drosophila)	Nucleus	other
ZNF331	-1.684	1.21E-03	zinc finger protein 331	Nucleus	other
TNFRSF13C	-1.681	2.49E-04	tumor necrosis factor receptor superfamily, member 13C	Plasma Membrane	transmembrane receptor
AUTS2	-1.678	5.38E-03	autism susceptibility candidate 2	unknown	other
SEMA3E	-1.675	7.94E-03	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3E	Extracellular Space	other
DMC1	-1.672	3.95E-03	DMC1 dosage suppressor of mck1 homolog, meiosis-specific homologous recombination (yeast)	Nucleus	enzyme
BIRC3	-1.669	2.30E-03	baculoviral IAP repeat containing 3	Cytoplasm	enzyme
IL17RD	-1.658	2.66E-03	interleukin 17 receptor D	Cytoplasm	other
WDR19	-1.658	4.88E-04	WD repeat domain 19	Extracellular Space	other
DBNDD2	-1.656	2.62E-04	dysbindin (dystrobrevin binding protein 1) domain containing 2	Cytoplasm	other
FAM46C	-1.656	8.93E-03	family with sequence similarity 46, member C	Extracellular Space	other
ALPP/ALPPL2	-1.653	3.16E-03	alkaline phosphatase, placental	Plasma Membrane	phosphatase
LOC648852	-1.653	1.17E-03	T cell receptor gamma variable 5	unknown	other
RELB	-1.653	9.20E-04	v-rel reticuloendotheliosis viral oncogene homolog B	Nucleus	transcription regulator
ZNF682	-1.653	2.54E-03	zinc finger protein 682	Nucleus	other
FKBP14	-1.650	8.83E-03	FK506 binding protein 14, 22 kDa	Cytoplasm	enzyme
GMEB2	-1.650	3.59E-05	glucocorticoid modulatory element binding protein 2	Nucleus	transcription regulator
BCL2	-1.647	9.95E-03	B-cell CLL/lymphoma 2	Cytoplasm	other
IFT57	-1.645	1.01E-03	intraflagellar transport 57 homolog (Chlamydomonas)	Cytoplasm	other
TCL1B	-1.645	2.41E-03	T-cell leukemia/lymphoma 1B	unknown	other
ZNF14	-1.642	6.49E-03	zinc finger protein 14	Nucleus	transcription regulator
B4GALT5	-1.639	4.82E-04	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 5	Cytoplasm	enzyme
PDS5B	-1.639	4.56E-04	PDS5, regulator of cohesion maintenance, homolog B (S. cerevisiae)	Nucleus	other
ZNF549	-1.639	4.19E-03	zinc finger protein 549	unknown	other
DUSP19	-1.637	1.38E-03	dual specificity phosphatase 19	Cytoplasm	phosphatase
UBASH3B	-1.631	6.82E-03	ubiquitin associated and SH3 domain containing B	unknown	enzyme
DNAJC30	-1.626	1.38E-03	DnaJ (Hsp40) homolog, subfamily C, member 30	Cytoplasm	other
MEF2C	-1.626	1.01E-03	myocyte enhancer factor 2C	Nucleus	transcription regulator
ABCB1	-1.621	3.86E-03	ATP-binding cassette, sub-family B (MDR/TAP), member 1	Plasma Membrane	transporter
COL9A3	-1.621	1.51E-03	collagen, type IX, alpha 3	Extracellular Space	other
KBTBD2	-1.618	6.12E-04	kelch repeat and BTB (POZ) domain containing 2	unknown	other
ZNF394	-1.618	5.02E-03	zinc finger protein 394	Nucleus	transcription regulator
LCMT2	-1.616	9.93E-05	leucine carboxyl methyltransferase 2	unknown	enzyme
MAGT1	-1.616	4.06E-03	magnesium transporter 1	Plasma Membrane	enzyme
SEPN1	-1.616	4.15E-03	selenoprotein N, 1	Cytoplasm	other
SHROOM4	-1.616	8.04E-03	shroom family member 4	Plasma Membrane	other
GATS	-1.613	1.18E-03	GATS, stromal antigen 3 opposite strand	unknown	other
GNA12	-1.610	4.24E-03	guanine nucleotide binding protein (G protein) alpha 12	Plasma Membrane	enzyme
LPP	-1.610	1.65E-03	LIM domain containing preferred translocation partner in lipoma	Nucleus	other
TIGD5	-1.610	3.71E-03	tigger transposable element derived 5	unknown	other
ABR	-1.605	2.74E-04	active BCR-related gene	Cytoplasm	other
QSOX2	-1.603	2.36E-04	quiescin Q6 sulfhydryl oxidase 2	unknown	enzyme
ZNF577	-1.603	1.63E-03	zinc finger protein 577	unknown	other
FOXP4	-1.600	2.53E-03	forkhead box P4	Nucleus	transcription regulator
KIAA1751	-1.600	4.05E-03	KIAA1751	unknown	other
SPTLC1	-1.600	3.59E-03	serine palmitoyltransferase, long chain base subunit 1	Cytoplasm	enzyme
USP49	-1.597	3.06E-03	ubiquitin specific peptidase 49	unknown	peptidase

CHRNA5	-1.595	5.89E-03	cholinergic receptor, nicotinic, alpha 5	Plasma Membrane	transmembrane receptor
FLJ39653	-1.592	7.28E-04	hypothetical FLJ39653	unknown	other
IL21R	-1.592	3.90E-03	interleukin 21 receptor	Plasma Membrane	transmembrane receptor
TCF3	-1.592	1.60E-03	transcription factor 3 (E2A immunoglobulin enhancer binding factors E12/E47)	Nucleus	transcription regulator
RYBP	-1.587	2.94E-03	RING1 and YY1 binding protein	Nucleus	transcription regulator
SCMH1	-1.587	3.15E-04	sex comb on midleg homolog 1 (Drosophila)	Nucleus	transcription regulator
FAM73A	-1.585	5.48E-03	family with sequence similarity 73, member A	unknown	other
LYSMD4	-1.585	1.47E-04	LysM, putative peptidoglycan-binding, domain containing 4	unknown	other
XPNPEP3	-1.585	4.68E-03	X-prolyl aminopeptidase (aminopeptidase P) 3, putative	Cytoplasm	peptidase
ZNF69	-1.585	4.60E-03	zinc finger protein 69	Nucleus	other
ACVR1B	-1.582	2.45E-04	activin A receptor, type IB	Plasma Membrane	kinase
C14orf153	-1.580	5.56E-03	chromosome 14 open reading frame 153	Cytoplasm	other
C21orf2	-1.575	3.46E-04	chromosome 21 open reading frame 2	unknown	other
GNG7	-1.575	1.56E-03	guanine nucleotide binding protein (G protein), gamma 7	Plasma Membrane	enzyme
LMOD3	-1.575	4.52E-03	leiomodoin 3 (fetal)	unknown	other
METTL21A	-1.572	3.26E-03	methyltransferase like 21A	unknown	other
PHF12	-1.572	2.36E-05	PHD finger protein 12	Nucleus	transcription regulator
PRR24	-1.572	8.57E-04	proline rich 24	unknown	other
C7orf55	-1.570	3.77E-03	chromosome 7 open reading frame 55	Cytoplasm	other
SELM	-1.570	5.46E-04	selenoprotein M	Cytoplasm	other
TCF20	-1.570	4.28E-05	transcription factor 20 (AR1)	Nucleus	transcription regulator
CREB1	-1.567	9.31E-03	cAMP responsive element binding protein 1	Nucleus	transcription regulator
AHCTF1	-1.565	8.32E-05	AT hook containing transcription factor 1	Nucleus	transcription regulator
C9orf130	-1.565	2.30E-03	chromosome 9 open reading frame 130	unknown	other
SESN1	-1.565	3.61E-03	sestrin 1	Nucleus	other
SPEN	-1.565	5.90E-04	spen homolog, transcriptional regulator (Drosophila)	Nucleus	transcription regulator
LOC400657	-1.562	1.34E-03	hypothetical LOC400657	unknown	other
NOXA1	-1.562	2.29E-04	NADPH oxidase activator 1	unknown	other
C3orf34	-1.560	4.02E-03	chromosome 3 open reading frame 34	unknown	other
CATSPER2	-1.560	5.65E-03	cation channel, sperm associated 2	Plasma Membrane	ion channel
RGPD5 (includes others)	-1.560	7.00E-03	RANBP2-like and GRIP domain containing 5	Nucleus	other
TDP1	-1.560	6.31E-03	tyrosyl-DNA phosphodiesterase 1	Nucleus	enzyme
ZNF548	-1.560	6.47E-04	zinc finger protein 548	unknown	other
C15orf63	-1.558	4.34E-03	chromosome 15 open reading frame 63	unknown	other
EPB41L5	-1.558	4.72E-04	erythrocyte membrane protein band 4.1 like 5	Plasma Membrane	other
ZNF532	-1.558	4.18E-04	zinc finger protein 532	Nucleus	other
ANKRD6	-1.555	4.24E-04	ankyrin repeat domain 6	Nucleus	transcription regulator
RTTN	-1.555	2.76E-04	rotatin	unknown	other
SULT1A1	-1.555	8.00E-03	sulfotransferase family, cytosolic, 1A, phenol-preferring, member 1	Cytoplasm	enzyme
CRK	-1.553	1.66E-03	v-crk sarcoma virus CT10 oncogene homolog (avian)	Cytoplasm	other
CSF2RA	-1.553	2.74E-03	colony stimulating factor 2 receptor, alpha, low-affinity (granulocyte-macrophage)	Plasma Membrane	transmembrane receptor
KCNH6	-1.553	5.01E-03	potassium voltage-gated channel, subfamily H (eag-related), member 6	Plasma Membrane	ion channel
RNF216	-1.553	8.02E-05	ring finger protein 216	Cytoplasm	other
LOC440345	-1.546	1.85E-03	nuclear pore complex interacting protein-like	unknown	other
NUAK2	-1.543	1.29E-04	NUAK family, SNF1-like kinase, 2	unknown	kinase
ETS1	-1.541	2.09E-03	v-ets erythroblastosis virus E26 oncogene homolog 1 (avian)	Nucleus	transcription regulator
KHNYN	-1.541	8.93E-04	KH and NYN domain containing	unknown	other
RHBDL2	-1.541	3.33E-03	rhomboid, veinlet-like 2 (Drosophila)	unknown	peptidase
NUBPL	-1.538	3.79E-03	nucleotide binding protein-like	Extracellular Space	other
MYST3	-1.536	1.94E-04	MYST histone acetyltransferase (monocytic leukemia) 3	Nucleus	enzyme
LHFPL2	-1.534	8.67E-03	lipoma HMGIC fusion partner-like 2	unknown	enzyme
ZNF223	-1.531	5.97E-03	zinc finger protein 223	Nucleus	other
LYST	-1.529	3.33E-04	lysosomal trafficking regulator	Cytoplasm	transporter
NCRNA00114	-1.529	4.44E-03	non-protein coding RNA 114	unknown	other

BRPF3	-1.524	1.85E-03	bromodomain and PHD finger containing, 3	Cytoplasm	other
IL6ST	-1.524	1.50E-03	interleukin 6 signal transducer (gp130, oncostatin M receptor)	Plasma Membrane	transmembrane receptor
UNK	-1.524	1.29E-04	unkempt homolog (Drosophila)	Nucleus	transporter
FAM65A	-1.522	8.57E-03	family with sequence similarity 65, member A	unknown	other
FBRSL1	-1.522	1.61E-03	fibrosin-like 1	unknown	other
HSD17B7	-1.522	4.57E-03	hydroxysteroid (17-beta) dehydrogenase 7	Cytoplasm	enzyme
NPIPL1 (includes others)	-1.522	7.23E-05	nuclear pore complex interacting protein-like 1	unknown	other
PPP1R10	-1.522	4.43E-03	protein phosphatase 1, regulatory (inhibitor) subunit 10	Nucleus	other
RYK	-1.522	1.57E-04	RYK receptor-like tyrosine kinase	Plasma Membrane	kinase
MARCH6	-1.520	6.12E-03	membrane-associated ring finger (C3HC4) 6	Cytoplasm	enzyme
PPA2	-1.520	7.18E-03	pyrophosphatase (inorganic) 2	Cytoplasm	enzyme
ZBTB4	-1.520	1.02E-03	zinc finger and BTB domain containing 4	Nucleus	other
ZNF483	-1.520	5.40E-04	zinc finger protein 483	Nucleus	transcription regulator
ZNF614	-1.520	7.21E-03	zinc finger protein 614	unknown	other
C2orf64	-1.517	9.16E-06	chromosome 2 open reading frame 64	Cytoplasm	other
FGFRL1	-1.517	8.22E-04	fibroblast growth factor receptor-like 1	Plasma Membrane	transmembrane receptor
PRKCE	-1.517	2.32E-03	protein kinase C, epsilon	Cytoplasm	kinase
TNFSF15	-1.517	1.83E-03	tumor necrosis factor (ligand) superfamily, member 15	Extracellular Space	cytokine
RGS12	-1.515	5.09E-03	regulator of G-protein signaling 12	Nucleus	other
HELQ	-1.513	6.58E-04	helicase, POLQ-like	Nucleus	enzyme
ZNF470	-1.513	2.54E-05	zinc finger protein 470	Nucleus	other
ANKRD12	-1.508	1.11E-03	ankyrin repeat domain 12	Nucleus	other
ICA1	-1.508	7.55E-03	islet cell autoantigen 1, 69kDa	Cytoplasm	other
MCM8	-1.508	5.01E-03	minichromosome maintenance complex component 8	Nucleus	enzyme
NOTCH1	-1.508	7.89E-03	notch 1	Plasma Membrane	transcription regulator
ZNF274	-1.508	6.37E-05	zinc finger protein 274	Nucleus	transcription regulator
HNRNPU	-1.506	5.70E-03	heterogeneous nuclear ribonucleoprotein U (scaffold attachment factor A)	Nucleus	transporter
NUP205	-1.506	1.11E-04	nucleoporin 205kDa	Nucleus	other
SECISBP2	-1.506	1.16E-05	SECIS binding protein 2	Cytoplasm	translation regulator
LEMD3	-1.504	4.63E-04	LEM domain containing 3	Nucleus	other
STIM2	-1.502	5.87E-03	stromal interaction molecule 2	Plasma Membrane	transporter
TAPT1	-1.502	8.79E-04	transmembrane anterior posterior transformation 1	Plasma Membrane	G-protein coupled receptor
ZNF333	-1.502	7.03E-05	zinc finger protein 333	Nucleus	other
EIF2C2	-1.499	1.84E-03	eukaryotic translation initiation factor 2C, 2	Cytoplasm	translation regulator
ERAP2	-1.499	9.40E-03	endoplasmic reticulum aminopeptidase 2	Cytoplasm	peptidase
PPFIA1	-1.499	1.14E-04	protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting protein (liprin), alpha 1	Plasma Membrane	phosphatase
WWC3	-1.499	2.58E-03	WWC family member 3	unknown	other
H3F3A/H3F3B	-1.497	1.47E-03	H3 histone, family 3B (H3.3B)	Nucleus	other
C5orf28	-1.495	2.07E-03	chromosome 5 open reading frame 28	unknown	other
PNPT1	-1.495	3.89E-03	polyribonucleotide nucleotidyltransferase 1	Cytoplasm	enzyme
SLC35E1	-1.495	5.81E-03	solute carrier family 35, member E1	unknown	other
DFNB31	-1.493	6.92E-04	deafness, autosomal recessive 31	Plasma Membrane	other
HAUS2	-1.493	7.11E-03	HAUS augmin-like complex, subunit 2	Cytoplasm	other
JARID2	-1.493	2.54E-03	jumonji, AT rich interactive domain 2	Nucleus	transcription regulator
IRF1	-1.490	1.04E-03	interferon regulatory factor 1	Nucleus	transcription regulator
SIRT1	-1.490	5.60E-04	sirtuin 1	Nucleus	transcription regulator
CHPT1	-1.488	2.63E-04	choline phosphotransferase 1	unknown	enzyme
KLF12	-1.488	1.89E-03	Kruppel-like factor 12	Nucleus	transcription regulator
YRDC	-1.488	2.65E-04	yrdC domain containing (E. coli)	unknown	other
ZNF324/ZNF324 B	-1.488	6.35E-04	zinc finger protein 324	Nucleus	other
DTWD2	-1.486	8.63E-03	DTW domain containing 2	unknown	other
TCTN1	-1.486	1.18E-03	tectonic family member 1	Extracellular Space	other
TESK2	-1.486	1.73E-03	testis-specific kinase 2	Nucleus	kinase
ANKRD30B	-1.484	5.69E-03	ankyrin repeat domain 30B	unknown	other

ARL16	-1.484	6.58E-03	ADP-ribosylation factor-like 16	unknown	other
CCDC130	-1.484	2.32E-04	coiled-coil domain containing 130	unknown	other
BLZF1	-1.481	9.35E-04	basic leucine zipper nuclear factor 1	Cytoplasm	transcription regulator
HTRA4	-1.481	5.01E-03	HtrA serine peptidase 4	unknown	other
USP42	-1.479	2.02E-04	ubiquitin specific peptidase 42	unknown	peptidase
DYRK1A	-1.477	1.47E-03	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 1A	Nucleus	kinase
HSD17B12	-1.477	4.12E-04	hydroxysteroid (17-beta) dehydrogenase 12	Cytoplasm	enzyme
ZNF665 (includes others)	-1.477	5.57E-04	zinc finger protein 665	Nucleus	other
GJC1	-1.475	5.47E-03	gap junction protein, gamma 1, 45kDa	Plasma Membrane	transporter
PLDN	-1.475	2.02E-03	pallidin homolog (mouse)	Cytoplasm	other
TRIB1	-1.475	5.83E-03	tribbles homolog 1 (Drosophila)	Cytoplasm	kinase
ADAM28	-1.473	7.85E-03	ADAM metallopeptidase domain 28	Plasma Membrane	peptidase
GNA11	-1.473	1.38E-03	guanine nucleotide binding protein (G protein), alpha 11 (Gq class)	Plasma Membrane	enzyme
TUG1	-1.473	3.89E-04	taurine upregulated 1 (non-protein coding)	unknown	other
AHI1	-1.471	5.70E-04	Abelson helper integration site 1	unknown	other
APBB3	-1.471	2.32E-03	amyloid beta (A4) precursor protein-binding, family B, member 3	Cytoplasm	other
CDK9	-1.471	1.15E-03	cyclin-dependent kinase 9	Nucleus	kinase
EPM2AIP1	-1.471	1.24E-04	EPM2A (laforin) interacting protein 1	Cytoplasm	other
TCL6	-1.471	8.11E-03	T-cell leukemia/lymphoma 6 (non-protein coding)	unknown	other
TDRD1	-1.471	4.63E-03	tudor domain containing 1	Cytoplasm	other
DDX51	-1.468	4.61E-03	DEAD (Asp-Glu-Ala-Asp) box polypeptide 51	unknown	enzyme
LMO4	-1.468	1.32E-03	LIM domain only 4	Nucleus	transcription regulator
PHAX	-1.468	8.43E-04	phosphorylated adaptor for RNA export	Cytoplasm	other
ZNF786	-1.468	9.14E-03	zinc finger protein 786	Nucleus	other
B3GALTL	-1.466	5.07E-03	beta 1,3-galactosyltransferase-like	unknown	other
ATHL1	-1.464	1.58E-04	ATH1, acid trehalase-like 1 (yeast)	unknown	other
C20orf195	-1.464	1.78E-03	chromosome 20 open reading frame 195	unknown	other
NUP88	-1.464	7.89E-05	nucleoporin 88kDa	Nucleus	transporter
ZBED5	-1.462	1.31E-03	zinc finger, BED-type containing 5	Nucleus	other
EIF2AK4	-1.460	6.49E-03	eukaryotic translation initiation factor 2 alpha kinase 4	Cytoplasm	kinase
FAM123B	-1.460	2.90E-04	family with sequence similarity 123B	unknown	other
HIVEP1	-1.460	1.27E-04	human immunodeficiency virus type I enhancer binding protein 1	Nucleus	transcription regulator
N4BP2	-1.460	3.35E-03	NEDD4 binding protein 2	Cytoplasm	kinase
APH1B	-1.458	5.85E-04	anterior pharynx defective 1 homolog B (C. elegans)	Plasma Membrane	peptidase
MAP6D1	-1.458	7.62E-04	MAP6 domain containing 1	Cytoplasm	other
C14orf28	-1.453	7.18E-05	chromosome 14 open reading frame 28	unknown	other
DNAJB2	-1.453	9.14E-04	DnaJ (Hsp40) homolog, subfamily B, member 2	Nucleus	other
TRIM13	-1.453	1.71E-03	tripartite motif containing 13	Cytoplasm	enzyme
WDR74	-1.453	2.30E-03	WD repeat domain 74	Nucleus	other
ZNF627	-1.453	9.64E-04	zinc finger protein 627	unknown	other
BCDIN3D	-1.451	5.19E-04	BCDIN3 domain containing	unknown	other
C16orf48	-1.451	6.32E-03	chromosome 16 open reading frame 48	unknown	other
MAGOHB	-1.451	6.04E-04	magi-nashi homolog B (Drosophila)	Nucleus	other
MBTD1	-1.451	3.97E-03	mbt domain containing 1	unknown	other
MTMR3	-1.451	1.38E-04	myotubularin related protein 3	Cytoplasm	phosphatase
RAB11FIP2	-1.451	8.57E-05	RAB11 family interacting protein 2 (class I)	Cytoplasm	other
SLC25A28	-1.451	2.58E-04	solute carrier family 25, member 28	Cytoplasm	other
TMEM8B	-1.451	2.12E-04	transmembrane protein 8B	Plasma Membrane	other
ZNF433	-1.451	1.08E-03	zinc finger protein 433	Nucleus	other
PLA2G2D	-1.449	4.54E-03	phospholipase A2, group IID	Extracellular Space	enzyme
ANGEL2	-1.447	1.43E-03	angel homolog 2 (Drosophila)	Nucleus	other
KLF9	-1.447	1.24E-03	Kruppel-like factor 9	Nucleus	transcription regulator
LEP	-1.447	3.51E-03	leptin	Extracellular Space	growth factor
NCOA5	-1.447	2.15E-03	nuclear receptor coactivator 5	Nucleus	other
C3orf37	-1.445	6.64E-03	chromosome 3 open reading frame 37	unknown	other
NAA16	-1.445	1.08E-04	N(alpha)-acetyltransferase 16, NatA auxiliary subunit	Nucleus	enzyme
CTC1	-1.443	2.89E-03	CTS telomere maintenance complex component 1	Nucleus	other
FUBP3	-1.443	7.21E-03	far upstream element (FUSE) binding protein 3	Nucleus	transcription regulator
TM2D3	-1.443	8.97E-04	TM2 domain containing 3	unknown	other
ZNF264/ZNF805	-1.443	6.21E-03	zinc finger protein 264	Nucleus	other

AFF4	-1.441	1.79E-04	AF4/FMR2 family, member 4	Nucleus	transcription regulator
C5orf41	-1.441	8.47E-03	chromosome 5 open reading frame 41	unknown	other
CEP135	-1.441	1.73E-05	centrosomal protein 135kDa	Cytoplasm	other
PDE4C	-1.441	4.98E-03	phosphodiesterase 4C, cAMP-specific	Cytoplasm	enzyme
TRIM39	-1.439	5.96E-04	tripartite motif containing 39	unknown	other
USP7	-1.439	3.08E-03	ubiquitin specific peptidase 7 (herpes virus-associated)	Nucleus	peptidase
ZNF653	-1.439	6.34E-04	zinc finger protein 653	unknown	other
ANKRD11	-1.437	5.47E-04	ankyrin repeat domain 11	Nucleus	other
PRIC285	-1.437	3.60E-03	peroxisomal proliferator-activated receptor A interacting complex 285	Nucleus	transcription regulator
ZNF337	-1.437	4.76E-05	zinc finger protein 337	Nucleus	other
IL18	-1.435	2.38E-03	interleukin 18 (interferon-gamma-inducing factor)	Extracellular Space	cytokine
PPM1A	-1.435	1.34E-03	protein phosphatase, Mg ²⁺ /Mn ²⁺ dependent, 1A	Cytoplasm	phosphatase
SAV1	-1.435	1.78E-04	salvador homolog 1 (Drosophila)	Cytoplasm	other
TNFSF14	-1.435	6.75E-03	tumor necrosis factor (ligand) superfamily, member 14	Extracellular Space	cytokine
UBXN4	-1.435	1.60E-03	UBX domain protein 4	Extracellular Space	other
GABPB2	-1.433	5.00E-03	GA binding protein transcription factor, beta subunit 2	Nucleus	transcription regulator
AIRE	-1.431	2.99E-03	autoimmune regulator	Nucleus	transcription regulator
ASXL2	-1.431	2.19E-03	additional sex combs like 2 (Drosophila)	unknown	other
MPHOSPH8	-1.431	1.38E-05	M-phase phosphoprotein 8	Nucleus	transcription regulator
PCDHB9	-1.431	5.12E-03	protocadherin beta 9	Plasma Membrane	other
RPS6KB1	-1.431	1.87E-03	ribosomal protein S6 kinase, 70kDa, polypeptide 1	Cytoplasm	kinase
TTC21A	-1.431	6.28E-03	tetratricopeptide repeat domain 21A	unknown	other
IP6K1	-1.429	3.68E-03	inositol hexakisphosphate kinase 1	Cytoplasm	kinase
OGFR	-1.429	6.95E-03	opioid growth factor receptor	Plasma Membrane	other
SPIN4	-1.429	2.60E-03	spindlin family, member 4	unknown	other
ZNF430	-1.429	6.55E-03	zinc finger protein 430	Nucleus	other
AGBL5	-1.427	9.55E-04	ATP/GTP binding protein-like 5	Cytoplasm	peptidase
KIAA1875	-1.427	1.00E-03	KIAA1875	unknown	other
LIN54	-1.427	1.32E-04	lin-54 homolog (C. elegans)	unknown	other
ILF3	-1.425	4.88E-03	interleukin enhancer binding factor 3, 90kDa	Nucleus	transcription regulator
RBM17	-1.425	4.30E-05	RNA binding motif protein 17	Nucleus	other
SDHAL1	-1.425	7.48E-03	succinate dehydrogenase complex, subunit A, flavoprotein pseudogene 1	unknown	other
SMAD4	-1.425	1.35E-03	SMAD family member 4	Nucleus	transcription regulator
ELP2	-1.422	1.10E-03	elongation protein 2 homolog (S. cerevisiae)	Cytoplasm	other
ITFG2	-1.422	3.38E-03	integrin alpha FG-GAP repeat containing 2	unknown	other
LONP1	-1.422	1.85E-03	lon peptidase 1, mitochondrial	Cytoplasm	peptidase
MEPCE	-1.422	1.30E-03	methylphosphate capping enzyme	unknown	enzyme
BCLAF1	-1.420	4.43E-05	BCL2-associated transcription factor 1	Nucleus	transcription regulator
LOC221442	-1.420	3.17E-04	adenylate cyclase 10 pseudogene	unknown	other
PURB	-1.418	1.30E-03	purine-rich element binding protein B	Nucleus	transcription regulator
CTRL	-1.416	2.23E-03	chymotrypsin-like	Extracellular Space	peptidase
HSPA5	-1.416	2.00E-03	heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa)	Cytoplasm	other
KLHL24	-1.416	2.55E-03	kelch-like 24 (Drosophila)	unknown	other
MKLN1	-1.416	4.80E-05	muskelin 1, intracellular mediator containing kelch motifs	Cytoplasm	other
CAPN7	-1.414	1.43E-03	calpain 7	Cytoplasm	peptidase
CCNT2	-1.414	2.20E-04	cyclin T2	Nucleus	transcription regulator
POFUT2	-1.414	1.97E-05	protein O-fucosyltransferase 2	Cytoplasm	enzyme
CBX7	-1.412	3.94E-03	chromobox homolog 7	Nucleus	other
FAM63A	-1.412	4.92E-03	family with sequence similarity 63, member A	unknown	other
TSC22D2	-1.412	1.13E-03	TSC22 domain family, member 2	unknown	other
ARRDC2	-1.410	1.31E-03	arrestin domain containing 2	unknown	other
FAM20B	-1.410	5.52E-03	family with sequence similarity 20, member B	Extracellular Space	enzyme
FAM45A	-1.410	1.61E-03	family with sequence similarity 45, member A	unknown	other
PPP6R3	-1.410	1.33E-03	protein phosphatase 6, regulatory subunit 3	unknown	other
C10orf58	-1.408	3.34E-03	chromosome 10 open reading frame 58	Extracellular Space	other
CD47	-1.408	4.84E-04	CD47 molecule	Plasma	other

				Membrane	
UNKL	-1.408	3.65E-03	unkempt homolog (Drosophila)-like	unknown	other
SNORD31	-1.406	1.52E-03	small nucleolar RNA, C/D box 31	unknown	other
PRDM4	-1.404	2.12E-04	PR domain containing 4	Nucleus	transcription regulator
AHR	-1.403	6.85E-03	aryl hydrocarbon receptor	Nucleus	ligand-dependent nuclear receptor
CLK1	-1.403	2.27E-04	CDC-like kinase 1	Nucleus	kinase
DNAJC27	-1.403	2.56E-04	DnaJ (Hsp40) homolog, subfamily C, member 27	Cytoplasm	enzyme
NCOA1	-1.403	9.46E-04	nuclear receptor coactivator 1	Nucleus	transcription regulator
SNAPC1	-1.403	4.37E-03	small nuclear RNA activating complex, polypeptide 1, 43kDa	Nucleus	other
DMWD	-1.401	4.83E-04	dystrophia myotonica, WD repeat containing	Nucleus	other
DNAJC28	-1.401	1.52E-03	DnaJ (Hsp40) homolog, subfamily C, member 28	unknown	other
FANCE	-1.401	5.89E-04	Fanconi anemia, complementation group E	Nucleus	other
SLC7A1	-1.401	1.25E-03	solute carrier family 7 (cationic amino acid transporter, y+ system), member 1	Plasma Membrane	transporter
C6orf170	-1.399	1.31E-03	chromosome 6 open reading frame 170	unknown	other
DDHD2	-1.399	1.78E-04	DDHD domain containing 2	Cytoplasm	other
IL12A	-1.399	2.90E-03	interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte maturation factor 1, p35)	Extracellular Space	cytokine
MAFF	-1.399	9.64E-03	v-maf musculoaponeurotic fibrosarcoma oncogene homolog F (avian)	Nucleus	transcription regulator
MSH3	-1.399	9.95E-03	mutS homolog 3 (E. coli)	Nucleus	enzyme
MTMR9	-1.399	6.00E-05	myotubularin related protein 9	Cytoplasm	phosphatase
POMT2	-1.399	3.17E-05	protein-O-mannosyltransferase 2	Cytoplasm	enzyme
ZSWIM6	-1.399	2.09E-04	zinc finger, SWIM-type containing 6	unknown	other
LOC100240735	-1.397	1.41E-03	hypothetical LOC100240735	unknown	other
MYOM1	-1.397	1.71E-03	myomesin 1, 185kDa	Cytoplasm	other
NFE2L2	-1.397	9.35E-03	nuclear factor (erythroid-derived 2)-like 2	Nucleus	transcription regulator
TRMT2B	-1.397	5.58E-03	TRM2 tRNA methyltransferase 2 homolog B (S. cerevisiae)	Cytoplasm	enzyme
PTGR2	-1.395	5.64E-03	prostaglandin reductase 2	Cytoplasm	enzyme
TSC1	-1.395	3.43E-04	tuberous sclerosis 1	Cytoplasm	other
VAPA	-1.395	1.55E-03	VAMP (vesicle-associated membrane protein)-associated protein A, 33kDa	Plasma Membrane	other
DRAM1	-1.393	5.83E-03	DNA-damage regulated autophagy modulator 1	unknown	other
HIST1H2AH	-1.393	1.97E-03	histone cluster 1, H2ah	Nucleus	other
RAB43	-1.393	5.32E-04	RAB43, member RAS oncogene family	unknown	other
RNF103	-1.393	1.36E-03	ring finger protein 103	Cytoplasm	enzyme
TAF4	-1.393	2.37E-03	TAF4 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 135kDa	Nucleus	transcription regulator
UBE2Q1	-1.393	4.72E-03	ubiquitin-conjugating enzyme E2Q family member 1	unknown	enzyme
WDR20	-1.393	1.24E-04	WD repeat domain 20	unknown	other
MSH6	-1.391	8.11E-06	mutS homolog 6 (E. coli)	Nucleus	enzyme
SLC6A16	-1.391	4.47E-03	solute carrier family 6, member 16	Plasma Membrane	transporter
ZMYND11	-1.391	1.14E-04	zinc finger, MYND-type containing 11	Nucleus	other
ZNF791	-1.391	8.09E-03	zinc finger protein 791	unknown	other
BMP8B	-1.389	4.90E-03	bone morphogenetic protein 8b	Extracellular Space	growth factor
GCFC1	-1.389	7.48E-05	GC-rich sequence DNA-binding factor 1	Nucleus	other
ZFP82	-1.389	5.66E-04	zinc finger protein 82 homolog (mouse)	Nucleus	other
ZNF529	-1.389	6.46E-04	zinc finger protein 529	unknown	other
CHD7	-1.387	2.14E-04	chromodomain helicase DNA binding protein 7	Nucleus	enzyme
DYNC1L2	-1.387	6.04E-04	dynein, cytoplasmic 1, light intermediate chain 2	Cytoplasm	other
RPGR	-1.385	5.21E-03	retinitis pigmentosa GTPase regulator	Cytoplasm	other
SHCBP1	-1.385	5.42E-03	SHC SH2-domain binding protein 1	unknown	other
TJAP1	-1.385	1.27E-03	tight junction associated protein 1 (peripheral)	Plasma Membrane	other
ZNF480	-1.385	4.74E-03	zinc finger protein 480	Nucleus	other
BANP	-1.383	1.12E-04	BTG3 associated nuclear protein	Nucleus	other
LEMD2	-1.383	1.56E-03	LEM domain containing 2	Nucleus	other
MLL5	-1.383	7.48E-05	myeloid/lymphoid or mixed-lineage leukemia 5 (trithorax homolog, Drosophila)	Nucleus	enzyme
ZNF395	-1.383	5.22E-03	zinc finger protein 395	Cytoplasm	other
SPG7	-1.381	3.96E-03	spastic paraplegia 7 (pure and complicated autosomal recessive)	Cytoplasm	peptidase
TACC1	-1.379	7.87E-04	transforming, acidic coiled-coil containing protein 1	Nucleus	other
FYTTD1	-1.377	8.67E-03	forty-two-three domain containing 1	Nucleus	other
SERINC5	-1.377	9.48E-03	serine incorporator 5	Plasma Membrane	transporter
UBL3	-1.377	1.91E-03	ubiquitin-like 3	Cytoplasm	other
CCDC117	-1.376	5.16E-03	coiled-coil domain containing 117	unknown	other
DCUN1D5	-1.376	3.36E-04	DCN1, defective in cullin neddylation 1, domain containing 5 (S. cerevisiae)	unknown	other

ICK	-1.376	5.96E-03	intestinal cell (MAK-like) kinase	Cytoplasm	kinase
SPDYE2 (includes others)	-1.376	4.03E-03	speedy homolog E2 (<i>Xenopus laevis</i>)	unknown	other
VPS41	-1.376	7.45E-03	vacuolar protein sorting 41 homolog (<i>S. cerevisiae</i>)	Cytoplasm	transporter
CAPRN2	-1.374	8.11E-04	caprin family member 2	Cytoplasm	other
CDK2	-1.374	1.42E-03	cyclin-dependent kinase 2	Nucleus	kinase
ARIH2	-1.372	1.90E-04	ariadne homolog 2 (<i>Drosophila</i>)	Nucleus	enzyme
PHF1	-1.372	2.67E-03	PHD finger protein 1	Nucleus	transcription regulator
C19orf25	-1.370	7.18E-03	chromosome 19 open reading frame 25	unknown	other
CTHF18	-1.370	3.91E-04	CTF18, chromosome transmission fidelity factor 18 homolog (<i>S. cerevisiae</i>)	unknown	other
CNO	-1.370	1.16E-03	cappuccino homolog (mouse)	Cytoplasm	other
SRSF7	-1.370	2.07E-05	serine/arginine-rich splicing factor 7	Nucleus	other
ZNF407	-1.370	1.59E-04	zinc finger protein 407	Nucleus	other
EBLN2	-1.368	6.30E-03	endogenous Borna-like N element-2	unknown	other
TSPYL2	-1.368	6.11E-04	TSPY-like 2	Nucleus	other
TUBA1B	-1.368	3.73E-03	tubulin, alpha 1b	Cytoplasm	other
ULK1	-1.368	7.73E-04	unc-51-like kinase 1 (<i>C. elegans</i>)	Cytoplasm	kinase
ZHX2	-1.368	3.64E-03	zinc fingers and homeoboxes 2	Nucleus	transcription regulator
ZNF451	-1.368	4.98E-03	zinc finger protein 451	Nucleus	other
FLYWCH1	-1.366	3.69E-04	FLYWCH-type zinc finger 1	unknown	other
PCF11	-1.366	4.74E-03	PCF11, cleavage and polyadenylation factor subunit, homolog (<i>S. cerevisiae</i>)	Nucleus	other
PIGA	-1.366	2.21E-03	phosphatidylinositol glycan anchor biosynthesis, class A	Cytoplasm	enzyme
ZNF318	-1.366	1.85E-03	zinc finger protein 318	Nucleus	other
APPL2	-1.364	1.19E-04	adaptor protein, phosphotyrosine interaction, PH domain and leucine zipper containing 2	Cytoplasm	other
BTBD7	-1.364	7.60E-05	BTB (POZ) domain containing 7	unknown	other
ELF2	-1.364	7.66E-05	E74-like factor 2 (ets domain transcription factor)	Nucleus	transcription regulator
FKTN	-1.364	6.98E-03	fukutin	Extracellular Space	other
ZNF518B	-1.364	3.56E-03	zinc finger protein 518B	unknown	other
ZYG11B	-1.362	3.17E-03	zyg-11 homolog B (<i>C. elegans</i>)	unknown	other
OCRL	-1.361	1.82E-03	oculocerebrorenal syndrome of Lowe	Cytoplasm	phosphatase
SLC27A1	-1.361	6.31E-03	solute carrier family 27 (fatty acid transporter), member 1	Plasma Membrane	transporter
ANKFY1	-1.359	1.83E-04	ankyrin repeat and FYVE domain containing 1	Nucleus	transcription regulator
POFUT1	-1.359	7.06E-03	protein O-fucosyltransferase 1	Cytoplasm	enzyme
PTP4A2	-1.359	7.21E-03	protein tyrosine phosphatase type IVA, member 2	Plasma Membrane	phosphatase
UCKL1	-1.359	7.74E-05	uridine-cytidine kinase 1-like 1	Cytoplasm	kinase
ZSCAN18	-1.359	2.76E-03	zinc finger and SCAN domain containing 18	unknown	other
ARID4B	-1.357	9.57E-03	AT rich interactive domain 4B (RBP1-like)	Nucleus	other
CLCN6	-1.357	2.00E-03	chloride channel 6	Plasma Membrane	ion channel
FKRP	-1.357	4.35E-04	fukutin related protein	Cytoplasm	other
MTX3	-1.357	6.61E-04	metaxin 3	unknown	other
SLC25A34	-1.357	8.17E-04	solute carrier family 25, member 34	Cytoplasm	other
DPP9	-1.355	1.35E-03	dipeptidyl-peptidase 9	Cytoplasm	peptidase
HNRNPM	-1.355	1.38E-04	heterogeneous nuclear ribonucleoprotein M	Nucleus	other
ZCCHC7	-1.355	1.29E-03	zinc finger, CCHC domain containing 7	unknown	other
APPBP2	-1.353	1.87E-03	amyloid beta precursor protein (cytoplasmic tail) binding protein 2	Cytoplasm	other
GAB1	-1.353	2.74E-03	GRB2-associated binding protein 1	Cytoplasm	other
MAP3K4	-1.353	2.09E-04	mitogen-activated protein kinase kinase kinase 4	Cytoplasm	kinase
NUCKS1	-1.353	5.85E-03	nuclear casein kinase and cyclin-dependent kinase substrate 1	Nucleus	kinase
QRICH1	-1.353	1.04E-04	glutamine-rich 1	unknown	other
SSTR2	-1.353	8.79E-03	somatostatin receptor 2	Plasma Membrane	G-protein coupled receptor
CSNK1G3	-1.351	7.91E-03	casein kinase 1, gamma 3	Cytoplasm	kinase
IQCB1	-1.351	2.00E-03	IQ motif containing B1	Extracellular Space	other
PAQR3	-1.351	5.61E-04	progesterin and adipoQ receptor family member III	Cytoplasm	other
SEMA4F	-1.351	8.93E-04	sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 4F	Plasma Membrane	other
TMEM70	-1.351	1.65E-03	transmembrane protein 70	Cytoplasm	other
TRIM33	-1.351	6.90E-04	tripartite motif containing 33	Nucleus	transcription regulator
BRPF1	-1.350	8.43E-04	bromodomain and PHD finger containing, 1	Nucleus	transporter
FBXO11	-1.350	2.36E-04	F-box protein 11	Cytoplasm	enzyme
FOXO4	-1.350	1.06E-03	forkhead box O4	Nucleus	transcription regulator

NPIP (includes others)	-1.350	1.65E-04	nuclear pore complex interacting protein	Nucleus	other
PAFAH1B1	-1.350	2.92E-03	platelet-activating factor acetylhydrolase 1b, regulatory subunit 1 (45kDa)	Cytoplasm	enzyme
P14KAP2	-1.350	6.58E-04	phosphatidylinositol 4-kinase, catalytic, alpha pseudogene 2	unknown	other
REV1	-1.350	6.11E-05	REV1 homolog (S. cerevisiae)	Nucleus	enzyme
TAF1C	-1.350	1.14E-04	TATA box binding protein (TBP)-associated factor, RNA polymerase I, C, 110kDa	Nucleus	transcription regulator
ZNF302	-1.350	7.45E-04	zinc finger protein 302	Nucleus	other
ZNF500	-1.350	7.36E-03	zinc finger protein 500	Nucleus	other
ZZEF1	-1.350	2.04E-03	zinc finger, ZZ-type with EF-hand domain 1	unknown	other
CHKB	-1.348	6.95E-03	choline kinase beta	unknown	kinase
PELI2	-1.348	4.80E-03	pellino homolog 2 (Drosophila)	Cytoplasm	other
PIGU	-1.348	5.26E-03	phosphatidylinositol glycan anchor biosynthesis, class U	Cytoplasm	enzyme
UTP14C	-1.348	1.61E-03	UTP14, U3 small nucleolar ribonucleoprotein, homolog C (yeast)	Nucleus	other
MDC1	-1.346	2.22E-03	mediator of DNA-damage checkpoint 1	Nucleus	other
NKTR	-1.346	2.92E-03	natural killer-tumor recognition sequence	Plasma Membrane	other
PLAC8	-1.346	5.92E-03	placenta-specific 8	Nucleus	other
PLCL2	-1.346	1.33E-03	phospholipase C-like 2	Cytoplasm	enzyme
SLC9A8	-1.346	2.45E-03	solute carrier family 9 (sodium/hydrogen exchanger), member 8	Cytoplasm	transporter
ZNF136	-1.346	5.70E-04	zinc finger protein 136	Nucleus	transcription regulator
ZNF17	-1.346	3.06E-04	zinc finger protein 17	Nucleus	other
CCDC104	-1.344	2.04E-03	coiled-coil domain containing 104	unknown	other
CDK5RAP2	-1.344	7.36E-04	CDK5 regulatory subunit associated protein 2	Cytoplasm	other
RERE	-1.344	5.22E-03	arginine-glutamic acid dipeptide (RE) repeats	Nucleus	other
BTG2	-1.342	7.11E-04	BTG family, member 2	Nucleus	transcription regulator
CYB5R1	-1.342	3.36E-04	cytochrome b5 reductase 1	Cytoplasm	enzyme
MYLIP	-1.342	2.55E-03	myosin regulatory light chain interacting protein	Cytoplasm	enzyme
SETD1A	-1.342	2.35E-03	SET domain containing 1A	Nucleus	ion channel
BRMS1L	-1.340	7.05E-04	breast cancer metastasis-suppressor 1-like	unknown	other
KIAA0355	-1.340	3.10E-03	KIAA0355	unknown	other
NASP	-1.340	2.54E-03	nuclear autoantigenic sperm protein (histone-binding)	Nucleus	other
USP6NL	-1.340	1.36E-04	USP6 N-terminal like	Plasma Membrane	other
C10orf12	-1.339	4.15E-03	chromosome 10 open reading frame 12	unknown	other
EPN2	-1.339	1.91E-03	epsin 2	Cytoplasm	other
KIAA1147	-1.339	2.37E-03	KIAA1147	unknown	other
PILRB	-1.339	4.22E-03	paired immunoglobulin-like type 2 receptor beta	Plasma Membrane	other
SLC44A4	-1.339	9.91E-03	solute carrier family 44, member 4	Plasma Membrane	other
ZNF33B	-1.339	4.12E-03	zinc finger protein 33B	Nucleus	transcription regulator
TCF12	-1.337	1.72E-03	transcription factor 12	Nucleus	transcription regulator
TMEM38B	-1.337	2.62E-03	transmembrane protein 38B	Nucleus	other
XRN1	-1.337	2.13E-03	5'-3' exoribonuclease 1	Cytoplasm	enzyme
ACACB	-1.335	3.46E-04	acetyl-CoA carboxylase beta	Cytoplasm	enzyme
BCOR	-1.335	3.18E-03	BCL6 corepressor	Nucleus	transcription regulator
C6orf192	-1.335	9.51E-03	chromosome 6 open reading frame 192	unknown	other
CCDC45	-1.335	1.59E-03	coiled-coil domain containing 45	unknown	other
MEX3C	-1.335	3.37E-03	mex-3 homolog C (C. elegans)	unknown	other
ZNF217	-1.335	8.45E-03	zinc finger protein 217	Nucleus	transcription regulator
ZNF559	-1.335	6.44E-03	zinc finger protein 559	Nucleus	other
ZNF669	-1.335	2.25E-03	zinc finger protein 669	unknown	other
CDAN1	-1.333	7.10E-03	congenital dyserythropoietic anemia, type I	Nucleus	other
RASSF6	-1.333	7.74E-03	Ras association (RalGDS/AF-6) domain family member 6	unknown	other
TRRAP	-1.333	4.21E-03	transformation/transcription domain-associated protein	Nucleus	transcription regulator
CHSY1	-1.332	2.56E-03	chondroitin sulfate synthase 1	Cytoplasm	enzyme
DCAF16	-1.332	1.45E-03	DDB1 and CUL4 associated factor 16	unknown	other
DSTYK	-1.332	6.84E-04	dual serine/threonine and tyrosine protein kinase	Cytoplasm	kinase
FBXO38	-1.332	4.15E-03	F-box protein 38	Nucleus	other
RNF114	-1.332	2.15E-03	ring finger protein 114	unknown	other
WAPAL	-1.332	7.85E-03	wings apart-like homolog (Drosophila)	Nucleus	other
FAM89A	-1.330	4.06E-03	family with sequence similarity 89, member A	unknown	other
FLJ10120	-1.330	3.54E-03	leucine rich repeat containing 37, member A4 (pseudogene)	unknown	other
FUS	-1.330	2.47E-03	fused in sarcoma	Nucleus	transcription regulator
ICOSLG	-1.330	2.64E-03	inducible T-cell co-stimulator ligand	Plasma	other

				Membrane	
LMNB2	-1.330	8.53E-03	lamin B2	Nucleus	other
PHF3	-1.330	5.75E-04	PHD finger protein 3	Nucleus	other
RCHY1	-1.328	1.37E-04	ring finger and CHY zinc finger domain containing 1	Nucleus	enzyme
SLC37A3	-1.328	1.22E-03	solute carrier family 37 (glycerol-3-phosphate transporter), member 3	unknown	transporter
VAMP4	-1.328	1.41E-04	vesicle-associated membrane protein 4	Cytoplasm	other
ZFYVE20	-1.328	4.21E-05	zinc finger, FYVE domain containing 20	Cytoplasm	other
GUCA1B	-1.326	5.77E-04	guanylate cyclase activator 1B (retina)	Cytoplasm	other
SPHK2	-1.326	5.71E-03	sphingosine kinase 2	Cytoplasm	kinase
TAF7	-1.326	5.25E-03	TAF7 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 55kDa	Nucleus	transcription regulator
CIC	-1.325	1.35E-03	capicua homolog (Drosophila)	unknown	other
EML4	-1.325	5.32E-03	echinoderm microtubule associated protein like 4	Cytoplasm	other
UNC50	-1.325	7.76E-05	unc-50 homolog (C. elegans)	Cytoplasm	other
USP9X	-1.325	5.11E-03	ubiquitin specific peptidase 9, X-linked	Plasma Membrane	peptidase
SAP30L	-1.323	5.81E-03	SAP30-like	unknown	other
SLC16A12	-1.323	7.06E-03	solute carrier family 16, member 12 (monocarboxylic acid transporter 12)	unknown	other
CNOT6	-1.321	5.60E-03	CCR4-NOT transcription complex, subunit 6	Nucleus	other
LOC100510692 / NAIP	-1.321	2.13E-03	NLR family, apoptosis inhibitory protein	unknown	other
MLL	-1.321	2.64E-03	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila)	Nucleus	transcription regulator
ZNF20	-1.321	4.03E-03	zinc finger protein 20	Nucleus	other
C18orf25	-1.319	8.75E-04	chromosome 18 open reading frame 25	unknown	other
CHD6	-1.319	5.22E-03	chromodomain helicase DNA binding protein 6	Nucleus	enzyme
GUSBP1	-1.319	7.96E-03	glucuronidase, beta pseudogene 1	unknown	other
LOC94431	-1.319	6.19E-04	RNA polymerase I transcription factor homolog (S. cerevisiae) pseudogene 1	unknown	other
ZNF350	-1.319	4.88E-03	zinc finger protein 350	Nucleus	transcription regulator
ZNF544	-1.319	6.18E-04	zinc finger protein 544	Nucleus	other
DMTF1	-1.318	1.17E-03	cyclin D binding myb-like transcription factor 1	Nucleus	transcription regulator
MGC13098	-1.318	1.63E-03	polymerase (RNA) II (DNA directed) polypeptide J4, pseudogene	unknown	other
RPL7L1	-1.318	4.35E-03	ribosomal protein L7-like 1	Cytoplasm	transcription regulator
SRRT	-1.318	4.05E-03	serrate RNA effector molecule homolog (Arabidopsis)	Nucleus	other
YTHDC1	-1.318	4.41E-05	YTH domain containing 1	Cytoplasm	other
GALNT3	-1.316	2.47E-03	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 3 (GalNAc-T3)	Cytoplasm	enzyme
L3MBTL3	-1.316	1.91E-03	l(3)mbl-like 3 (Drosophila)	Nucleus	other
NFATC3	-1.316	2.90E-03	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3	Nucleus	transcription regulator
RBM25	-1.316	2.36E-04	RNA binding motif protein 25	Nucleus	other
RRAGA	-1.316	1.06E-04	Ras-related GTP binding A	Cytoplasm	enzyme
SETD3	-1.316	6.24E-04	SET domain containing 3	unknown	other
SYAP1	-1.316	2.79E-03	synapse associated protein 1	Nucleus	other
WDR73	-1.316	9.20E-04	WD repeat domain 73	Extracellular Space	other
AGPHD1	-1.314	4.62E-03	aminoglycoside phosphotransferase domain containing 1	unknown	other
TSEN34	-1.314	1.04E-03	tRNA splicing endonuclease 34 homolog (S. cerevisiae)	Nucleus	enzyme
FAM39DP	-1.312	4.38E-04	WAS protein family homolog 3 pseudogene	Plasma Membrane	other
GALC	-1.312	4.88E-04	galactosylceramidase	Cytoplasm	enzyme
MGEA5	-1.312	1.46E-04	meningioma expressed antigen 5 (hyaluronidase)	Cytoplasm	enzyme
NAE1	-1.312	6.11E-05	NEDD8 activating enzyme E1 subunit 1	Cytoplasm	enzyme
SLC5A8	-1.312	8.79E-03	solute carrier family 5 (iodide transporter), member 8	Plasma Membrane	transporter
ZIK1	-1.312	1.62E-04	zinc finger protein interacting with K protein 1 homolog (mouse)	unknown	other
ANKRD44	-1.311	2.56E-03	ankyrin repeat domain 44	unknown	other
C11orf63	-1.311	3.16E-03	chromosome 11 open reading frame 63	unknown	other
KIAA1267	-1.311	3.60E-04	KIAA1267	Nucleus	other
LOC440704	-1.311	5.24E-04	hypothetical LOC440704	unknown	other
N4BP2L1	-1.311	3.94E-03	NEDD4 binding protein 2-like 1	unknown	other
PAPOLA	-1.311	2.24E-04	poly(A) polymerase alpha	Nucleus	enzyme
PGRMC2	-1.311	7.24E-04	progesterone receptor membrane component 2	Nucleus	ligand-dependent nuclear receptor
SGK494	-1.311	4.68E-03	uncharacterized serine/threonine-protein kinase Sgk494	unknown	kinase
UBE3C	-1.311	3.84E-03	ubiquitin protein ligase E3C	Nucleus	enzyme
USPL1	-1.311	1.82E-04	ubiquitin specific peptidase like 1	unknown	other
VAMP2	-1.311	5.21E-03	vesicle-associated membrane protein 2 (synaptobrevin 2)	Plasma Membrane	other

BBX	-1.309	1.35E-03	bobby sox homolog (Drosophila)	Nucleus	other
EID3	-1.309	1.38E-03	EP300 interacting inhibitor of differentiation 3	Cytoplasm	other
HS3ST1	-1.309	7.93E-03	heparan sulfate (glucosamine) 3-O-sulfotransferase 1	Cytoplasm	enzyme
PNPLA2	-1.309	2.64E-03	patatin-like phospholipase domain containing 2	Cytoplasm	enzyme
SP2	-1.309	3.26E-03	Sp2 transcription factor	Nucleus	transcription regulator
WDSUB1	-1.309	5.87E-03	WD repeat, sterile alpha motif and U-box domain containing 1	unknown	other
ZNF281	-1.309	3.21E-03	zinc finger protein 281	Nucleus	transcription regulator
CDKN1B	-1.307	8.13E-04	cyclin-dependent kinase inhibitor 1B (p27, Kip1)	Nucleus	other
E4F1	-1.307	2.02E-04	E4F transcription factor 1	Nucleus	transcription regulator
EXOSC2	-1.307	1.02E-03	exosome component 2	Nucleus	enzyme
LEPROTL1	-1.307	2.12E-03	leptin receptor overlapping transcript-like 1	Plasma Membrane	other
RBM26	-1.307	8.38E-05	RNA binding motif protein 26	unknown	other
SNX27	-1.307	2.22E-03	sorting nexin family member 27	unknown	other
ZRSR2	-1.307	7.06E-04	zinc finger (CCCH type), RNA-binding motif and serine/arginine rich 2	Nucleus	other
DNAJB6	-1.305	5.83E-05	DnaJ (Hsp40) homolog, subfamily B, member 6	Nucleus	transcription regulator
LOC286437	-1.305	2.23E-03	hypothetical protein LOC286437	unknown	other
C16orf58	-1.304	1.95E-03	chromosome 16 open reading frame 58	unknown	other
ZNF146	-1.304	9.40E-03	zinc finger protein 146	Nucleus	other
C12orf41	-1.302	8.34E-05	chromosome 12 open reading frame 41	unknown	other
MAN1C1	-1.302	1.24E-04	mannosidase, alpha, class 1C, member 1	Cytoplasm	enzyme
MYO3B	-1.302	1.95E-03	myosin IIIB	unknown	kinase
PPIG	-1.302	3.30E-03	peptidylprolyl isomerase G (cyclophilin G)	Nucleus	enzyme
SNORD14A	-1.302	6.76E-03	small nucleolar RNA, C/D box 14A	unknown	other