

Supplementary Information for

**Ultraviolet-induced photodegradation elevated the toxicity of polystyrene nanoplastics on
human lung epithelial A549 cells**

Qingying Shi^a, Jingchun Tang^{a,*}, Xiaomei Liu^a, Rutao Liu^b

^aKey Laboratory of Pollution Processes and Environmental Criteria (Ministry of Education), Tianjin Engineering Center of Environmental Diagnosis and Contamination Remediation, College of Environmental Science and Engineering, Nankai University, Tianjin 300350, China.

^bSchool of Environmental Science and Engineering, Shandong University, China-America CRC for Environment & Health, 72# Jimo Binhai Road, Qingdao, Shandong
266237, China

*Corresponding Authors: Jingchun Tang, E-mail: tangjch@nankai.edu.cn

Number of Pages: 33

Number of Text: 1

Number of Figures: 7

Number of Tables: 6

Text 1

ELISA analysis

Cell exposed to PS and UVPS2 treatment at 24 h were washed with PBS for three times. Then, the cells were collected in PBS and disrupted by sonication. The supernatants were collected after centrifugation at 3000 rpm for 20 min at 4 °C. Subsequently, the concentrations of DNA repair proteins XPC, RAD51, MSH6 were measured using the enzyme-linked immune sorbent assay (ELISA) kits (Enzyme Immune Industry Co., Ltd., Yancheng, China) according to the manufacturer's protocols. In briefly, extracted samples was mixed with reagents from the kit, washed five times, added with the chromogenic solution for 10 min, and finally treated with the stop solution. The value of optical density (OD) of each sample was determined with a microplate reader (Synergy H4, Bio-Tek, Vermont, USA) at 450 nm.

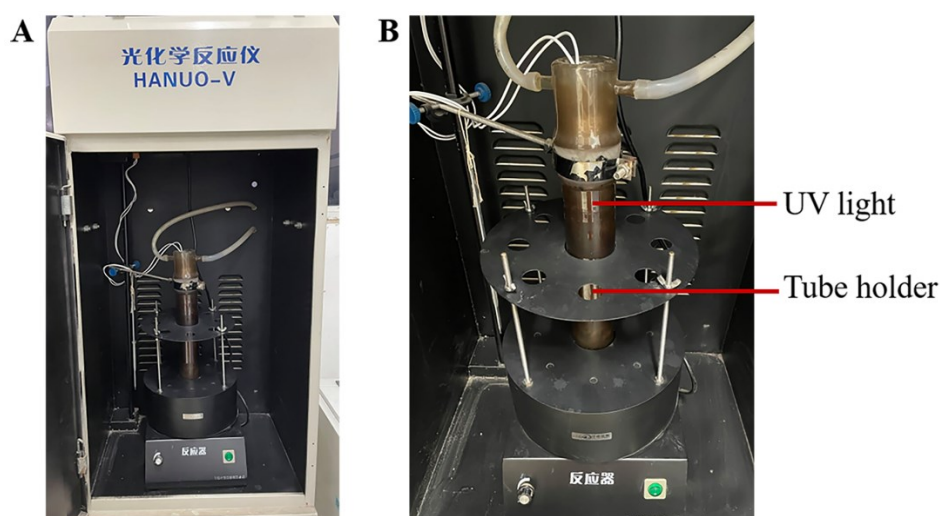


Fig. S1 The photochemical reactor used for UV-irradiation of PS NPs. (A) The photochemical reactor; (B) The interior of the photochemical reactor.

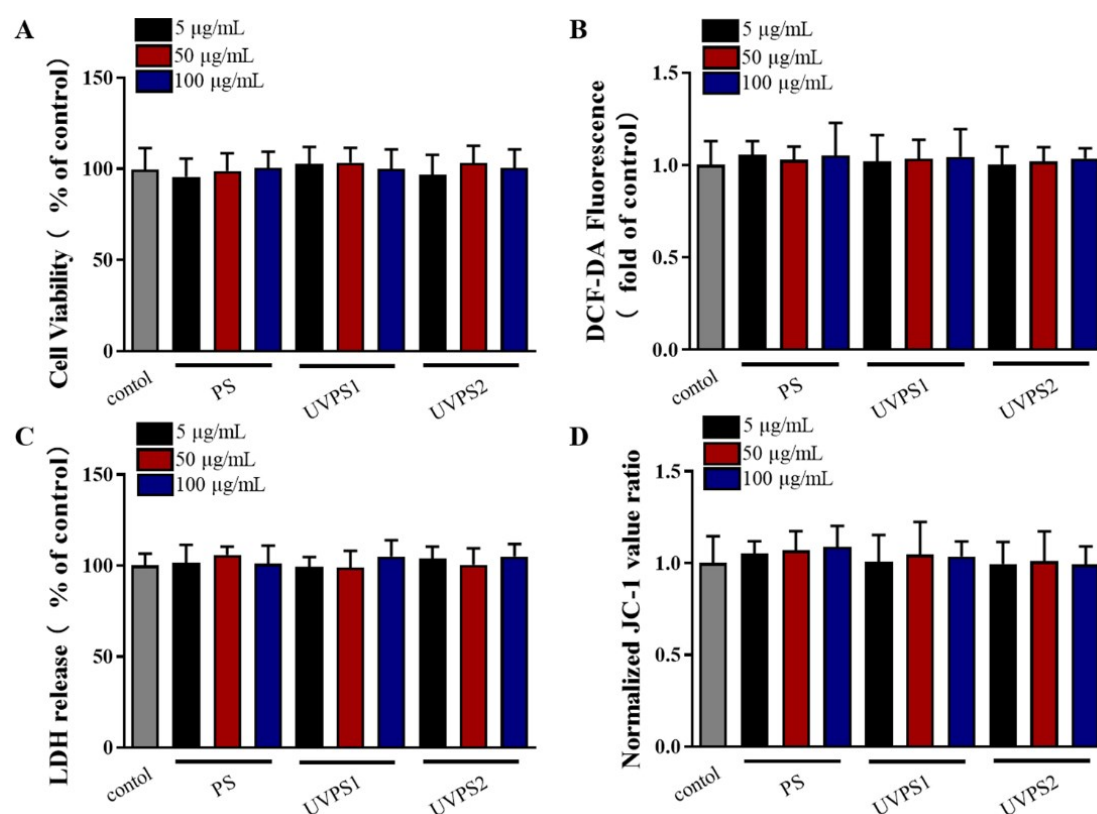


Fig. S2 The toxicity of leachates on A549 cells. (A) The effects of leachate from pristine PS, UVPS1 and UVPS2 on the cell vitality of A549 cells at 24 h; (B) The effects of leachate from pristine PS, UVPS1 and UVPS2 on the ROS generation of A549 cells at 24 h; (C) The effects of leachate from pristine PS, UVPS1 and UVPS2 on the LDH release of A549 cells at 24 h; (D) The effects of leachate from pristine PS, UVPS1 and UVPS2 on the mitochondrial membrane potential of A549 cells at 24 h. Data were expressed as mean $\pm$ SD.

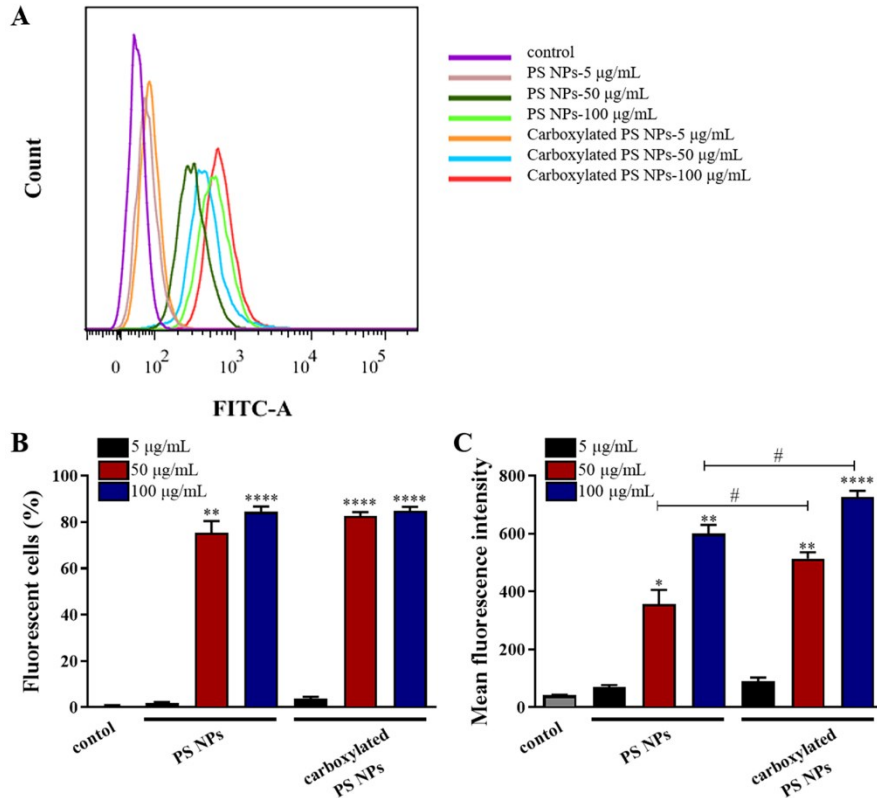


Fig. S3 The internalization of PS NPs by A549 cells after 24 h exposure analyzed by flow cytometry. (A) The representative of internalization detected using flow cytometry; (B) The percentage of fluorescent-positive cells over the total cell population in different treatments; (C) The mean fluorescence intensity of fluorescent-positive cells in different treatments. * indicates the significant difference between the treatment group and the control group, * $p<0.05$, ** $p<0.01$, **** $p<0.0001$; # indicates the significant difference between the carboxylated PS group and the pristine PS group, # $p<0.05$.

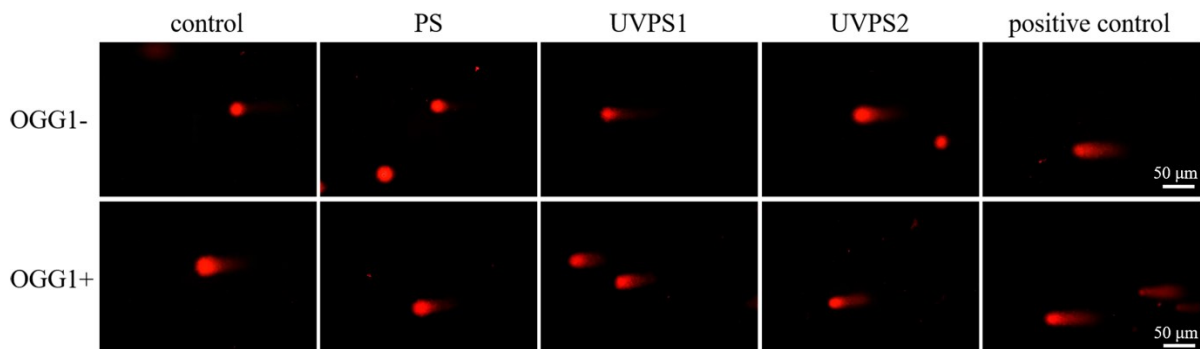


Fig. S4 The representative images of comet assay of cells treated with pristine PS, UVPS1 and UVPS2 at 100 µg/mL. 200 µM MMS and 5 mM KBrO₃ were used as positive controls for general genotoxic (OGG1-) and oxidative genotoxic damage (OGG1+).

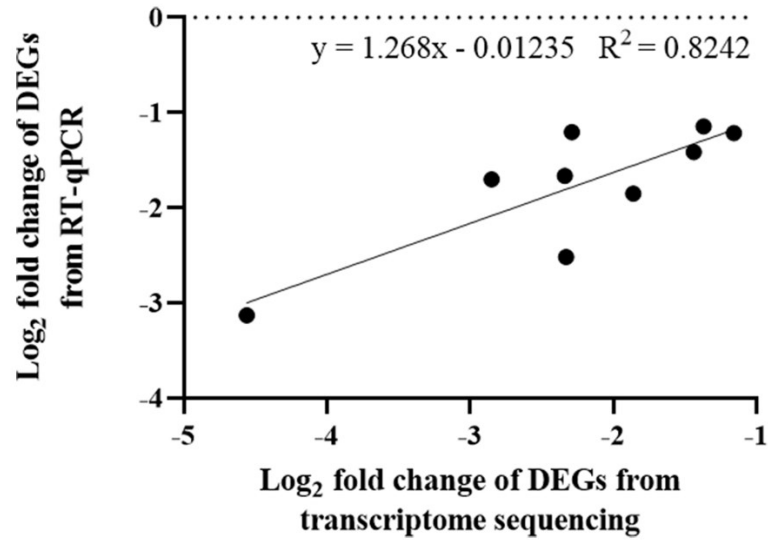


Fig. S5 RT-qPCR validation of differentially expressed gene (DEG). Correlation analysis of gene expression levels between transcriptome and RT-qPCR indicating the accuracy of the transcriptome sequencing analysis of DEGs ($R^2 = 0.8242$, $p < 0.05$).

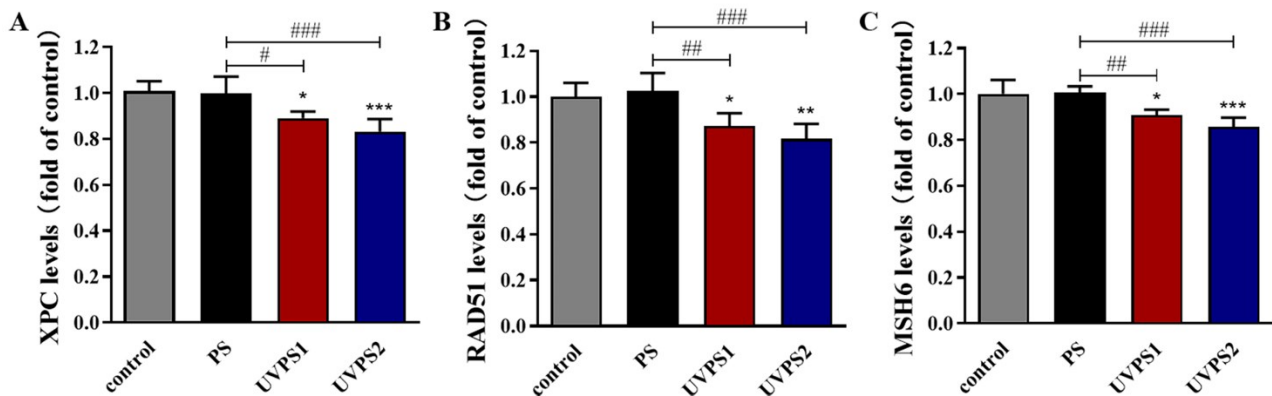


Fig. S6 Effects of pristine and aged NPs on DNA repair proteins based on ELISA after 24 h of treatment at 100 $\mu\text{g}/\text{mL}$. (A) The levels of DNA repair protein XPC; (B) The levels of DNA repair protein RAD51; (C) The levels of DNA repair protein MSH6. Data were expressed as mean $\pm$ SD. * indicates the significant difference between the treatment group and the control group. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; # indicates the significant difference between the aged PS group and the pristine PS group, # $p < 0.05$, ## $p < 0.01$, ### $p < 0.001$.

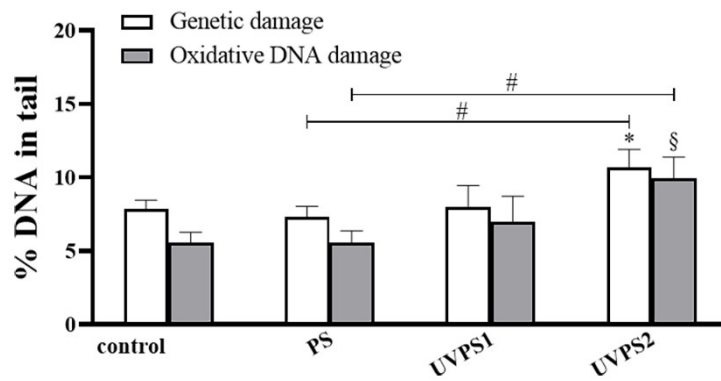


Fig. S7 The genotoxic damage and oxidative DNA damage of A549 cells after an extra 24-hours repair. Data were expressed as mean $\pm$ SD. * indicates the significant difference between the treatment group and the control group for genetic damage, * $p < 0.05$; § indicates the significant difference between the treatment group and the control group for oxidative DNA damage, § $p < 0.05$. # indicates the significant difference between the aged PS group and the pristine PS group, # $p < 0.05$.

Table S1. Primers sequences of targeted genes used for PCR.

Gene	Forward primer	Reverse primer
PCNA	ACACTAAGGGCCGAAGATAACG	ACAGCATCTCCAATATGGCTGA
FOS	CACTCCAAGCGGAGACAGAC	AGGTCATCAGGGATCTTGCGAG
CCNE1	AAGGAGCGGGACACCATGA	ACGGTCACGTTTGCCTTCC
CCND3	TACCCGCCATCCATGATCG	AGGCAGTCCACTTCAGTGC
MCM2	CCGTGACCTTCCACCATTTGA	GGTAGTCCCTTCCATGCCAT
RFC5	GAAGCAGACGCCATGACTCAG	GACCGAACCGAAACCTCGT
CDK1	AAACTACAGGTCAAGTGGTAGCC	TCCTGCATAAGCACATCCTGA
CDK2	GTACCTCCCCTGGATGAAGAT	CGAAATCCGCTTGTTAGGGTC
MAP3K8	ATGGAGTACATGAGCACTGGA	GCTGGCTCTTCACTTGCATAAAG
GAPDH	TGGTATCGTGGAAGGACTCA	CCAGTAGAGGCAGGGATGAT

Table S2. Atomic fraction variations for elemental composition obtained from XPS spectra of pristine and UV-aged NPs.

	C (%)	O (%)	O/C
PS	96.09	3.91	0.041
UVPS1	91.91	8.09	0.089
UVPS2	87.66	12.34	0.141

Table S3. Summary of sequencing results.

Sample	Raw reads	Raw bases	Clean reads	Clean bases	Error rate (%)	Q20(%)	Q30(%)	GC content (%)
Control-1	49509072	7.48E+09	49090832	7.23E+09	0.0244	98.28	94.8	51.12
Control-2	59371012	8.97E+09	58860834	8.65E+09	0.0238	98.5	95.37	51.14
Control-3	64425288	9.73E+09	63937814	9.44E+09	0.0238	98.49	95.35	50.88
PS-1	53276974	8.04E+09	52936802	7.84E+09	0.0238	98.5	95.38	50.5
PS-2	70996282	1.07E+10	70481908	1.04E+10	0.0239	98.46	95.3	50.93
PS-3	51992636	7.85E+09	51524394	7.58E+09	0.0242	98.35	94.99	51.35
UVPS2-1	56844978	8.58E+09	56336606	8.29E+09	0.0239	98.46	95.3	51.22
UVPS2-2	60824630	9.18E+09	60398568	8.97E+09	0.0238	98.5	95.38	51.15
UVPS2-3	66456318	1E+10	65894984	9.68E+09	0.0237	98.52	95.44	50.96

Table S4. The mapped ratio of the clean reads to the reference genome.

Sample	Total reads	Total mapped	Multiple mapped	Uniquely mapped
Control-1	49090832	47247521(96.25%)	1871586(3.81%)	45375935(92.43%)
Control-2	58860834	56930756(96.72%)	2051501(3.49%)	54879255(93.24%)
Control-3	63937814	61871588(96.77%)	2209360(3.46%)	59662228(93.31%)
PS-1	52936802	51062518(96.46%)	1749206(3.3%)	49313312(93.16%)
PS-2	70481908	68185638(96.74%)	2560646(3.63%)	65624992(93.11%)
PS-3	51524394	49822200(96.7%)	2036972(3.95%)	47785228(92.74%)
UVPS2-1	56336606	54651401(97.01%)	2555087(4.54%)	52096314(92.47%)
UVPS2-2	60398568	58631328(97.07%)	2164303(3.58%)	56467025(93.49%)
UVPS2-3	65894984	63874910(96.93%)	2448253(3.72%)	61426657(93.22%)

Table S5. DEGs in A549 cells from pristine PS NPs groups compared with the control.

Gene ID	Gene name	Gene description	Fold change	p-adjust	Regulate
ENSG00000170345	fos	Fos proto-oncogene, AP-1 transcription factor subunit [Source:HGNC Symbol;Acc:HGNC:3796]	0.119	4.44E-53	down
ENSG00000125740	fosb	FosB proto-oncogene, AP-1 transcription factor subunit [Source:HGNC Symbol;Acc:HGNC:3797]	0.063	6.29E-47	down
ENSG00000113739	stc2	stanniocalcin 2 [Source:HGNC Symbol;Acc:HGNC:11374]	3.932	8.19E-45	up
ENSG00000168209	ddit4	DNA damage inducible transcript 4 [Source:HGNC Symbol;Acc:HGNC:24944]	3.246	1.5E-44	up
ENSG00000058085	lamc2	laminin subunit gamma 2 [Source:HGNC Symbol;Acc:HGNC:6493]	3.524	1.58E-42	up
ENSG00000070669	asns	asparagine synthetase (glutamine-hydrolyzing) [Source:HGNC Symbol;Acc:HGNC:753]	3.721	6.85E-37	up
ENSG00000144583	marchf4	membrane associated ring-CH-type finger 4 [Source:HGNC Symbol;Acc:HGNC:29269]	2.826	3.31E-30	up
ENSG00000171560	fga	fibrinogen alpha chain [Source:HGNC Symbol;Acc:HGNC:3661]	0.332	1.44E-27	down
ENSG00000123358	nr4a1	nuclear receptor subfamily 4 group A member 1 [Source:HGNC Symbol;Acc:HGNC:7980]	0.266	3.1E-26	down
ENSG00000135069	psat1	phosphoserine aminotransferase 1 [Source:HGNC Symbol;Acc:HGNC:19129]	2.557	1.48E-25	up
ENSG00000100889	pck2	phosphoenolpyruvate carboxykinase 2, mitochondrial [Source:HGNC Symbol;Acc:HGNC:8725]	2.667	4.15E-21	up
ENSG00000137673	mmp7	matrix metalloproteinase 7 [Source:HGNC Symbol;Acc:HGNC:7174]	0.431	1.45E-20	down
ENSG00000128965	chac1	ChaC glutathione specific gamma-glutamylcyclotransferase 1 [Source:HGNC Symbol;Acc:HGNC:28680]	4.124	1.56E-19	up
ENSG00000005884	itga3	integrin subunit alpha 3 [Source:HGNC Symbol;Acc:HGNC:6139]	2.164	1.68E-19	up
ENSG00000135318	nt5e	5'-nucleotidase ecto [Source:HGNC Symbol;Acc:HGNC:8021]	2.861	2.06E-19	up
ENSG00000145920	cplx2	complexin 2 [Source:HGNC Symbol;Acc:HGNC:2310]	0.349	4.63E-18	down
ENSG00000169213	rab3b	RAB3B, member RAS oncogene family [Source:HGNC Symbol;Acc:HGNC:9778]	2.413	1.92E-17	up
ENSG00000065911	mthfd2	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 2, methenyltetrahydrofolate cyclohydrolase [Source:HGNC Symbol;Acc:HGNC:7434]	2.063	1.8E-16	up
ENSG00000176153	gpx2	glutathione peroxidase 2 [Source:HGNC Symbol;Acc:HGNC:4554]	0.311	5.52E-16	down
ENSG00000171564	fgb	fibrinogen beta chain [Source:HGNC Symbol;Acc:HGNC:3662]	0.371	6.75E-16	down
ENSG00000160200	cbs	cystathionine beta-synthase [Source:HGNC Symbol;Acc:HGNC:1550]	2.115	4.66E-15	up
ENSG00000101255	trib3	tribbles pseudokinase 3 [Source:HGNC Symbol;Acc:HGNC:16228]	2.472	9.28E-15	up
ENSG00000165376	cldn2	claudin 2 [Source:HGNC Symbol;Acc:HGNC:2041]	0.467	1.85E-14	down
ENSG00000129353	slc44a2	solute carrier family 44 member 2 [Source:HGNC Symbol;Acc:HGNC:17292]	2.456	2.63E-14	up
ENSG00000060982	bcat1	branched chain amino acid transaminase 1 [Source:HGNC Symbol;Acc:HGNC:976]	3.12	3.91E-14	up
ENSG00000092621	phgdh	phosphoglycerate dehydrogenase [Source:HGNC Symbol;Acc:HGNC:8923]	2.513	5.21E-14	up
ENSG00000130766	sesn2	sestrin 2 [Source:HGNC Symbol;Acc:HGNC:20746]	2.33	9.98E-14	up
ENSG00000149948	hmg2	high mobility group AT-hook 2 [Source:HGNC Symbol;Acc:HGNC:5009]	2.407	1.41E-13	up
ENSG00000284707	ac079781.5	novel transcript	2.046	2.56E-13	up
ENSG00000115738	id2	inhibitor of DNA binding 2 [Source:HGNC Symbol;Acc:HGNC:5361]	0.415	3.45E-13	down
ENSG00000135842	niban1	niban apoptosis regulator 1 [Source:HGNC Symbol;Acc:HGNC:16784]	3.244	6.48E-13	up
ENSG00000064300	ngfr	nerve growth factor receptor [Source:HGNC Symbol;Acc:HGNC:7809]	9.314	8.62E-13	up
ENSG00000167772	angptl4	angiopoietin like 4 [Source:HGNC Symbol;Acc:HGNC:16039]	2.389	1.02E-12	up
ENSG00000169903	tm4sf4	transmembrane 4 L six family member 4 [Source:HGNC Symbol;Acc:HGNC:11856]	0.394	1.6E-12	down
ENSG00000136010	aldh1l2	aldehyde dehydrogenase 1 family member L2 [Source:HGNC Symbol;Acc:HGNC:26777]	3.836	1.67E-12	up
ENSG00000171557	fgg	fibrinogen gamma chain [Source:HGNC Symbol;Acc:HGNC:3694]	0.481	1.04E-11	down
ENSG00000111981	ulbp1	UL16 binding protein 1 [Source:HGNC Symbol;Acc:HGNC:14893]	2.804	1.27E-11	up
ENSG00000119686	flvcr2	FLVCR heme transporter 2 [Source:HGNC Symbol;Acc:HGNC:20105]	0.371	2.13E-11	down
ENSG00000165507	depp1	DEPP1 autophagy regulator [Source:HGNC Symbol;Acc:HGNC:23355]	0.186	4.5E-11	down
ENSG00000120217	cd274	CD274 molecule [Source:HGNC Symbol;Acc:HGNC:17635]	3.734	5.12E-11	up
ENSG00000163235	tgfa	transforming growth factor alpha [Source:HGNC Symbol;Acc:HGNC:11765]	2.009	7.8E-11	up
ENSG00000007944	myl1p	myosin regulatory light chain interacting protein [Source:HGNC Symbol;Acc:HGNC:21155]	0.307	1.07E-10	down
ENSG00000108375	rnf43	ring finger protein 43 [Source:HGNC Symbol;Acc:HGNC:18505]	0.389	1.22E-10	down
ENSG00000156113	kcnma1	potassium calcium-activated channel subfamily M alpha 1 [Source:HGNC Symbol;Acc:HGNC:6284]	2.11	1.44E-10	up
ENSG00000120738	egr1	early growth response 1 [Source:HGNC Symbol;Acc:HGNC:3238]	0.23	1.89E-10	down
ENSG00000129226	cd68	CD68 molecule [Source:HGNC Symbol;Acc:HGNC:1693]	2.275	2.78E-10	up
ENSG00000107957	sh3pxd2a	SH3 and PX domains 2A [Source:HGNC Symbol;Acc:HGNC:23664]	2.119	3.41E-10	up
ENSG00000103647	coro2b	coronin 2B [Source:HGNC Symbol;Acc:HGNC:2256]	2.626	4.2E-10	up
ENSG00000120211	insl4	insulin like 4 [Source:HGNC Symbol;Acc:HGNC:6087]	0.483	5.08E-10	down
ENSG00000128567	podxl	podocalyxin like [Source:HGNC Symbol;Acc:HGNC:9171]	2.16	5.08E-10	up
ENSG00000101280	angpt4	angiopoietin 4 [Source:HGNC Symbol;Acc:HGNC:487]	7.89	5.24E-10	up
ENSG00000154175	abi3bp	ABI family member 3 binding protein [Source:HGNC Symbol;Acc:HGNC:17265]	3.343	5.7E-10	up
ENSG00000168646	axin2	axin 2 [Source:HGNC Symbol;Acc:HGNC:904]	0.43	6.61E-10	down
ENSG00000242574	hla-dmb	major histocompatibility complex, class II, DM beta [Source:HGNC Symbol;Acc:HGNC:4935]	0.438	7.49E-10	down
ENSG00000156453	pcdh1	protocadherin 1 [Source:HGNC Symbol;Acc:HGNC:8655]	2.176	1.09E-09	up
ENSG00000131737	krt34	keratin 34 [Source:HGNC Symbol;Acc:HGNC:6452]	5.382	2.51E-09	up
ENSG00000262526	ac120057.2	novel protein	0.004	5.06E-09	down
ENSG00000236104	zbtb22	zinc finger and BTB domain containing 22 [Source:HGNC Symbol;Acc:HGNC:23610]	0.004	7.31E-09	down

ENSG00000100346	cacna1i	Symbol;Acc:HGNC:13085] calcium voltage-gated channel subunit alpha1 I [Source:HGNC Symbol;Acc:HGNC:1396]	0.293	2.02E-08	down
ENSG00000171227	tmem37	transmembrane protein 37 [Source:HGNC Symbol;Acc:HGNC:18216]	0.347	4E-08	down
ENSG00000211448	dio2	iodothyronine deiodinase 2 [Source:HGNC Symbol;Acc:HGNC:2884]	0.43	4.04E-08	down
ENSG00000108932	slc16a6	solute carrier family 16 member 6 [Source:HGNC Symbol;Acc:HGNC:10927]	2.773	6.52E-08	up
ENSG00000265972	txnip	thioredoxin interacting protein [Source:HGNC Symbol;Acc:HGNC:16952]	2.003	7.73E-08	up
ENSG00000139269	inhbe	inhibin subunit beta E [Source:HGNC Symbol;Acc:HGNC:24029]	5.305	8.1E-08	up
ENSG00000167680	sema6b	semaphorin 6B [Source:HGNC Symbol;Acc:HGNC:10739]	0.492	8.48E-08	down
ENSG00000170006	tmem154	transmembrane protein 154 [Source:HGNC Symbol;Acc:HGNC:26489]	3.739	1.03E-07	up
ENSG00000174951	fut1	fucosyltransferase 1 (H blood group) [Source:HGNC Symbol;Acc:HGNC:4012]	9.836	1.13E-07	up
ENSG00000091583	apoh	apolipoprotein H [Source:HGNC Symbol;Acc:HGNC:616]	0.312	1.75E-07	down
ENSG00000224831	tmem183b	transmembrane protein 183B [Source:HGNC Symbol;Acc:HGNC:33205]	0.089	1.84E-07	down
ENSG00000165449	slc16a9	solute carrier family 16 member 9 [Source:HGNC Symbol;Acc:HGNC:23520]	2.131	2.2E-07	up
ENSG00000169122	fam110b	family with sequence similarity 110 member B [Source:HGNC Symbol;Acc:HGNC:28587]	0.463	2.57E-07	down
ENSG00000172164	sntb1	syntrophin beta 1 [Source:HGNC Symbol;Acc:HGNC:11168]	2.386	2.83E-07	up
ENSG00000236404	vlidr-as1	VLDLR antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:49621]	4.566	3.49E-07	up
ENSG00000133067	lgr6	leucine rich repeat containing G protein-coupled receptor 6 [Source:HGNC Symbol;Acc:HGNC:19719]	0.365	3.67E-07	down
ENSG00000133083	dcik1	doublecortin like kinase 1 [Source:HGNC Symbol;Acc:HGNC:2700]	2.815	4.16E-07	up
ENSG00000160179	abcg1	ATP binding cassette subfamily G member 1 [Source:HGNC Symbol;Acc:HGNC:73]	0.271	6.31E-07	down
ENSG00000176678	foxl1	forkhead box L1 [Source:HGNC Symbol;Acc:HGNC:3817]	2.257	8.65E-07	up
ENSG00000173391	olr1	oxidized low density lipoprotein receptor 1 [Source:HGNC Symbol;Acc:HGNC:8133]	0.39	9.65E-07	down
ENSG00000073756	ptgs2	prostaglandin-endoperoxide synthase 2 [Source:HGNC Symbol;Acc:HGNC:9605]	0.439	1.12E-06	down
ENSG00000244128	linc01322	long intergenic non-protein coding RNA 1322 [Source:HGNC Symbol;Acc:HGNC:50528]	2.099	1.23E-06	up
ENSG00000183287	ccbe1	collagen and calcium binding EGF domains 1 [Source:HGNC Symbol;Acc:HGNC:29426]	2.064	1.29E-06	up
ENSG00000166250	clmp	CXADR like membrane protein [Source:HGNC Symbol;Acc:HGNC:24039]	2.23	1.3E-06	up
ENSG00000276077	cu633904.1	uncharacterized LOC102724951 [Source:NCBI gene (formerly Entrezgene);Acc:102724951]	2.157	1.79E-06	up
ENSG00000129354	ap1m2	adaptor related protein complex 1 subunit mu 2 [Source:HGNC Symbol;Acc:HGNC:558]	0.452	2.13E-06	down
ENSG00000170477	krt4	keratin 4 [Source:HGNC Symbol;Acc:HGNC:6441]	0.287	2.86E-06	down
ENSG00000158125	xdh	xanthine dehydrogenase [Source:HGNC Symbol;Acc:HGNC:12805]	2.195	3.13E-06	up
ENSG00000138347	mypn	myopalladin [Source:HGNC Symbol;Acc:HGNC:23246]	2.209	3.28E-06	up
ENSG00000259207	itgb3	integrin subunit beta 3 [Source:HGNC Symbol;Acc:HGNC:6156]	2.501	4.99E-06	up
ENSG00000127528	klf2	Kruppel like factor 2 [Source:HGNC Symbol;Acc:HGNC:6347]	0.471	5.43E-06	down
ENSG00000182324	kcnj14	potassium inwardly rectifying channel subfamily J member 14 [Source:HGNC Symbol;Acc:HGNC:6260]	0.013	6.42E-06	down
ENSG00000139926	frmd6	FERM domain containing 6 [Source:HGNC Symbol;Acc:HGNC:19839]	2.062	6.79E-06	up
ENSG00000116774	olfml3	olfactomedin like 3 [Source:HGNC Symbol;Acc:HGNC:24956]	0.186	6.91E-06	down
ENSG00000071242	rps6ka2	ribosomal protein S6 kinase A2 [Source:HGNC Symbol;Acc:HGNC:10431]	6.709	7.82E-06	up
ENSG00000112769	lama4	laminin subunit alpha 4 [Source:HGNC Symbol;Acc:HGNC:6484]	2.141	1.1E-05	up
ENSG00000166750	slfn5	schlafen family member 5 [Source:HGNC Symbol;Acc:HGNC:28286]	2.287	1.18E-05	up
ENSG00000137491	slco2b1	solute carrier organic anion transporter family member 2B1 [Source:HGNC Symbol;Acc:HGNC:10962]	0.42	1.27E-05	down
ENSG00000236095	al807757.2	novel transcript	0.31	1.35E-05	down
ENSG00000088002	sult2b1	sulfotransferase family 2B member 1 [Source:HGNC Symbol;Acc:HGNC:11459]	0.424	1.38E-05	down
ENSG00000135697	bco1	beta-carotene oxygenase 1 [Source:HGNC Symbol;Acc:HGNC:13815]	0.474	1.53E-05	down
ENSG00000168874	atoh8	atonal bHLH transcription factor 8 [Source:HGNC Symbol;Acc:HGNC:24126]	0.412	1.57E-05	down
ENSG00000168079	scara5	scavenger receptor class A member 5 [Source:HGNC Symbol;Acc:HGNC:28701]	0.383	1.72E-05	down
ENSG00000165795	ndrg2	NDRG family member 2 [Source:HGNC Symbol;Acc:HGNC:14460]	0.483	1.88E-05	down
ENSG00000103522	il21r	interleukin 21 receptor [Source:HGNC Symbol;Acc:HGNC:6006]	4.922	1.99E-05	up
ENSG00000091592	nlrp1	NLR family pyrin domain containing 1 [Source:HGNC Symbol;Acc:HGNC:14374]	5.481	2.06E-05	up
ENSG00000108387	septin4	septin 4 [Source:HGNC Symbol;Acc:HGNC:9165]	0.316	2.07E-05	down
ENSG00000170458	cd14	CD14 molecule [Source:HGNC Symbol;Acc:HGNC:1628]	0.373	2.35E-05	down
ENSG00000166825	anpep	alanyl aminopeptidase, membrane [Source:HGNC Symbol;Acc:HGNC:500]	2.431	2.36E-05	up
ENSG00000116852	kif21b	kinesin family member 21B [Source:HGNC Symbol;Acc:HGNC:29442]	2.105	2.76E-05	up
ENSG00000187634	samd11	sterile alpha motif domain containing 11 [Source:HGNC Symbol;Acc:HGNC:28706]	0.487	2.83E-05	down
ENSG00000275616	u2	U2 spliceosomal RNA [Source:RFAM;Acc:RF00004]	0.015	3.06E-05	down
ENSG00000222035	kiaa2012-as1	KIAA2012 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:41164]	0.145	3.13E-05	down
ENSG00000135636	dysf	dysferlin [Source:HGNC Symbol;Acc:HGNC:3097]	2.919	3.13E-05	up
ENSG00000053108	fstl4	follicle-stimulating hormone-like 4 [Source:HGNC Symbol;Acc:HGNC:21389]	0.467	3.31E-05	down
ENSG00000128262	pom121ip9	POM121 transmembrane nucleoporin like 9, pseudogene [Source:HGNC Symbol;Acc:HGNC:30080]	0.297	5.57E-05	down
ENSG00000213638	adat3	adenosine deaminase tRNA specific 3 [Source:HGNC Symbol;Acc:HGNC:25151]	0.429	7.34E-05	down
ENSG00000159399	hk2	hexokinase 2 [Source:HGNC Symbol;Acc:HGNC:4923]	2.84	7.85E-05	up
ENSG00000100253	miox	myo-inositol oxygenase [Source:HGNC Symbol;Acc:HGNC:14522]	3.69	8.48E-05	up
ENSG00000198624	ccdc69	coiled-coil domain containing 69 [Source:HGNC Symbol;Acc:HGNC:24487]	0.49	9.15E-05	down
ENSG00000085552	igsf9	immunoglobulin superfamily member 9 [Source:HGNC Symbol;Acc:HGNC:18132]	0.296	9.93E-05	down
ENSG00000269929	mirlet7a1hg	miRlet-7a-1/let-7f-1/let-7d cluster host gene [Source:HGNC Symbol;Acc:HGNC:53970]	0.449	0.000106	down

ENSG00000204767	insyn2b	inhibitory synaptic factor family member 2B [Source:HGNC Symbol;Acc:HGNC:37271]	2.135	0.000116	up
ENSG00000264175	mir3189	microRNA 3189 [Source:HGNC Symbol;Acc:HGNC:38307]	0.311	0.000139	down
ENSG00000169436	col22a1	collagen type XXII alpha 1 chain [Source:HGNC Symbol;Acc:HGNC:22989]	2.436	0.000139	up
ENSG00000267519	ac020916.1	novel transcript	0.444	0.000171	down
ENSG00000166922	scg5	secretogranin V [Source:HGNC Symbol;Acc:HGNC:10816]	2.291	0.000174	up
ENSG00000116661	fbxo2	F-box protein 2 [Source:HGNC Symbol;Acc:HGNC:13581]	0.434	0.000191	down
ENSG00000261526	ac012615.1	novel transcript	0.407	0.000203	down
ENSG00000023902	plekho1	pleckstrin homology domain containing O1 [Source:HGNC Symbol;Acc:HGNC:24310]	0.48	0.000209	down
ENSG00000283228	ac068547.1	novel transcript	0.353	0.000217	down
ENSG00000106927	ambp	alpha-1-microglobulin/bikunin precursor [Source:HGNC Symbol;Acc:HGNC:453]	0.316	0.00026	down
ENSG00000105409	atp1a3	ATPase Na+/K+ transporting subunit alpha 3 [Source:HGNC Symbol;Acc:HGNC:801]	0.497	0.00026	down
ENSG00000185745	ifit1	interferon induced protein with tetratricopeptide repeats 1 [Source:HGNC Symbol;Acc:HGNC:5407]	0.442	0.000279	down
ENSG00000184156	kcnq3	potassium voltage-gated channel subfamily Q member 3 [Source:HGNC Symbol;Acc:HGNC:6297]	2.524	0.00028	up
ENSG00000172346	csdc2	cold shock domain containing C2 [Source:HGNC Symbol;Acc:HGNC:30359]	0.43	0.000291	down
ENSG00000269951	ac090181.2	novel transcript, sense intronic to TSPAN3	0.208	0.00032	down
ENSG00000145362	ank2	ankyrin 2 [Source:HGNC Symbol;Acc:HGNC:493]	2.573	0.000342	up
ENSG00000204381	layn	layilin [Source:HGNC Symbol;Acc:HGNC:29471]	0.44	0.000346	down
ENSG00000249199	ac026785.3	novel transcript	0.35	0.000349	down
ENSG00000116183	pappalysin 2	pappalysin 2 [Source:HGNC Symbol;Acc:HGNC:14615]	21.854	0.000392	up
ENSG00000189001	sbsn	suprabasin [Source:HGNC Symbol;Acc:HGNC:24950]	4.599	0.000402	up
ENSG00000261641	al031600.3	novel transcript, antisense to CLCN7	0.016	0.000422	down
ENSG000000002079	myh16	myosin heavy chain 16 pseudogene [Source:HGNC Symbol;Acc:HGNC:31038]	2.796	0.000432	up
ENSG00000182700	igip	IgA inducing protein [Source:HGNC Symbol;Acc:HGNC:33847]	2.048	0.000445	up
ENSG00000135960	edar	ectodysplasin A receptor [Source:HGNC Symbol;Acc:HGNC:2895]	0.362	0.000463	down
ENSG00000258602	linc01629	long intergenic non-protein coding RNA 1629 [Source:HGNC Symbol;Acc:HGNC:52260]	3.422	0.000469	up
ENSG00000164125	gask1b	golgi associated kinase 1B [Source:HGNC Symbol;Acc:HGNC:25312]	0.488	0.000477	down
ENSG00000197467	col13a1	collagen type XIII alpha 1 chain [Source:HGNC Symbol;Acc:HGNC:2190]	3.007	0.000497	up
ENSG00000188293	igf1	IGF like family member 1 [Source:HGNC Symbol;Acc:HGNC:24093]	2.418	0.000545	up
ENSG00000185633	ndufa4l2	NDUFA4 mitochondrial complex associated like 2 [Source:HGNC Symbol;Acc:HGNC:29836]	3.308	0.000602	up
ENSG00000143320	crabp2	cellular retinoic acid binding protein 2 [Source:HGNC Symbol;Acc:HGNC:2339]	0.47	0.000662	down
ENSG00000136167	lcp1	lymphocyte cytosolic protein 1 [Source:HGNC Symbol;Acc:HGNC:6528]	29.116	0.000729	up
ENSG00000257335	mgam	maltase-glucoamylase [Source:HGNC Symbol;Acc:HGNC:7043]	0.486	0.000769	down
ENSG00000128564	vgf	VGF nerve growth factor inducible [Source:HGNC Symbol;Acc:HGNC:12684]	2.321	0.000814	up
ENSG00000268530	ac008403.2	novel transcript, antisense to KCNJ14	0.034	0.000834	down
ENSG00000213412	hnnpa1p33	heterogeneous nuclear ribonucleoprotein A1 pseudogene 33 [Source:HGNC Symbol;Acc:HGNC:44990]	0.268	0.000855	down
ENSG00000249839	ac011330.1	histidine acid phosphatase domain containing 2A (HISPPD2A) pseudogene	4.904	0.000917	up
ENSG00000155961	rab39b	RAB39B, member RAS oncogene family [Source:HGNC Symbol;Acc:HGNC:16499]	2.271	0.000919	up
ENSG00000115008	il1a	interleukin 1 alpha [Source:HGNC Symbol;Acc:HGNC:5991]	4.229	0.000939	up
ENSG00000273129	pacerr	PTGS2 antisense NFKB1 complex-mediated expression regulator RNA [Source:HGNC Symbol;Acc:HGNC:50552]	0.109	0.000963	down
ENSG00000154310	tnik	TRAF2 and NCK interacting kinase [Source:HGNC Symbol;Acc:HGNC:30765]	2.129	0.000985	up
ENSG00000261200	ac136944.2	novel transcript	2.739	0.001077	up
ENSG00000162595	diras3	DIRAS family GTPase 3 [Source:HGNC Symbol;Acc:HGNC:687]	0.472	0.001095	down
ENSG00000109705	nkx3-2	NK3 homeobox 2 [Source:HGNC Symbol;Acc:HGNC:951]	0.38	0.001108	down
ENSG00000085563	abcb1	ATP binding cassette subfamily B member 1 [Source:HGNC Symbol;Acc:HGNC:40]	0.475	0.001243	down
ENSG00000276087	ac008073.3	novel transcript	2.201	0.001274	up
ENSG00000146592	creb5	cAMP responsive element binding protein 5 [Source:HGNC Symbol;Acc:HGNC:16844]	2.203	0.001291	up
ENSG00000267580	ac008738.3	novel transcript	0.152	0.001306	down
ENSG00000186472	pclo	piccolo presynaptic cytomatrix protein [Source:HGNC Symbol;Acc:HGNC:13406]	2.233	0.001309	up
ENSG00000012124	cd22	CD22 molecule [Source:HGNC Symbol;Acc:HGNC:1643]	4.312	0.001366	up
ENSG00000187867	palm3	paralemmin 3 [Source:HGNC Symbol;Acc:HGNC:33274]	0.482	0.001386	down
ENSG00000121858	tnfsf10	TNF superfamily member 10 [Source:HGNC Symbol;Acc:HGNC:11925]	0.359	0.00142	down
ENSG00000049192	adamts6	ADAM metalloproteinase with thrombospondin type 1 motif 6 [Source:HGNC Symbol;Acc:HGNC:222]	2.508	0.001424	up
ENSG00000249319	ac068533.4	novel protein	6.405	0.001491	up
ENSG00000285505	ac010616.1	novel protein, ATP1A3-RABAC1 readthrough	2.832	0.001513	up
ENSG00000272145	nfyc-as1	NFYC antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:49451]	0.277	0.001537	down
ENSG00000127129	endothelin 2	endothelin 2 [Source:HGNC Symbol;Acc:HGNC:3177]	0.498	0.001544	down
ENSG00000137880	gchfr	GTP cyclohydrolase I feedback regulator [Source:HGNC Symbol;Acc:HGNC:4194]	0.482	0.001681	down
ENSG00000274213	ac015912.3	novel transcript	0.486	0.0017	down
ENSG00000274175	ac133551.1	TP53-target gene 3 protein [Source:NCBI gene (formerly Entrezgene);Acc:102723655]	36.66	0.001732	up
ENSG00000260269	ac105036.3	novel transcript	0.204	0.001763	down
ENSG00000141668	cblln2	cerebellin 2 precursor [Source:HGNC Symbol;Acc:HGNC:1544]	0.449	0.001965	down
ENSG00000228363	ac015971.1	novel transcript	0.341	0.002076	down
ENSG00000137878	gcom1	GRINL1A complex locus 1 [Source:HGNC Symbol;Acc:HGNC:26424]	2.094	0.002216	up
ENSG00000158055	grhl3	grainyhead like transcription factor 3 [Source:HGNC Symbol;Acc:HGNC:25839]	0.41	0.00233	down
ENSG00000101203	col20a1	collagen type XX alpha 1 chain [Source:HGNC Symbol;Acc:HGNC:14670]	2.007	0.002368	up

ENSG00000228649	snhg26	small nucleolar RNA host gene 26 [Source:HGNC Symbol;Acc:HGNC:53131]	0.476	0.002396	down
ENSG00000250634	linc01182	long intergenic non-protein coding RNA 1182 [Source:HGNC Symbol;Acc:HGNC:49564]	0.383	0.00247	down
ENSG00000267952	ac008878.1	novel transcript	0.461	0.002669	down
ENSG00000197608	znf841	zinc finger protein 841 [Source:HGNC Symbol;Acc:HGNC:27611]	2.082	0.002671	up
ENSG00000064787	bcas1	brain enriched myelin associated protein 1 [Source:HGNC Symbol;Acc:HGNC:974]	0.389	0.002732	down
ENSG00000204362	linc02783	long intergenic non-protein coding RNA 2783 [Source:HGNC Symbol;Acc:HGNC:54303]	2.39	0.002734	up
ENSG00000105642	kcnk1	potassium calcium-activated channel subfamily N member 1 [Source:HGNC Symbol;Acc:HGNC:6290]	0.42	0.002746	down
ENSG00000249007	al691482.3	novel transcript	0.342	0.003021	down
ENSG00000164488	dact2	dishevelled binding antagonist of beta catenin 2 [Source:HGNC Symbol;Acc:HGNC:21231]	0.377	0.003077	down
ENSG00000143473	kcnh1	potassium voltage-gated channel subfamily H member 1 [Source:HGNC Symbol;Acc:HGNC:6250]	2.27	0.003107	up
ENSG00000221949	linc01465	long intergenic non-protein coding RNA 1465 [Source:HGNC Symbol;Acc:HGNC:26364]	0.472	0.003116	down
ENSG00000172771	efcab12	EF-hand calcium binding domain 12 [Source:HGNC Symbol;Acc:HGNC:28061]	0.414	0.003146	down
ENSG00000126500	flrt1	fibronectin leucine rich transmembrane protein 1 [Source:HGNC Symbol;Acc:HGNC:3760]	2.759	0.003189	up
ENSG00000116039	atp6v1b1	ATPase H+ transporting V1 subunit B1 [Source:HGNC Symbol;Acc:HGNC:853]	0.263	0.003346	down
ENSG00000165029	abca1	ATP binding cassette subfamily A member 1 [Source:HGNC Symbol;Acc:HGNC:29]	0.386	0.003589	down
ENSG00000135116	hrk	harakiri, BCL2 interacting protein [Source:HGNC Symbol;Acc:HGNC:5185]	2.514	0.003796	up
ENSG00000164794	kcnv1	potassium voltage-gated channel modifier subfamily V member 1 [Source:HGNC Symbol;Acc:HGNC:18861]	0.189	0.003896	down
ENSG00000206073	serpinb4	serpin family B member 4 [Source:HGNC Symbol;Acc:HGNC:10570]	0.194	0.003927	down
ENSG00000178460	mcmdc2	minichromosome maintenance domain containing 2 [Source:HGNC Symbol;Acc:HGNC:26368]	2.705	0.003939	up
ENSG00000213886	ubd	ubiquitin D [Source:HGNC Symbol;Acc:HGNC:18795]	0.338	0.00405	down
ENSG00000263244	ac087190.3	novel transcript, 3' overlapping chromosome 16 open reading frame 72	2.066	0.004114	up
ENSG00000172201	id4	inhibitor of DNA binding 4, HLH protein [Source:HGNC Symbol;Acc:HGNC:5363]	0.196	0.004115	down
ENSG00000214435	as3mt	arsenite methyltransferase [Source:HGNC Symbol;Acc:HGNC:17452]	0.343	0.004121	down
ENSG00000215417	mir17hg	miR-17-92a-1 cluster host gene [Source:HGNC Symbol;Acc:HGNC:23564]	0.416	0.004434	down
ENSG00000258377	al139099.1	novel transcript	0.388	0.004464	down
ENSG00000257596	scat2	S-phase cancer associated transcript 2 [Source:HGNC Symbol;Acc:HGNC:53976]	0.311	0.004481	down
ENSG00000287553	ac090617.10	novel transcript, antisense to DPH1	0.267	0.004564	down
ENSG00000273443	al645608.8	novel transcript	2.695	0.004743	up
ENSG00000200343	rna5s8	RNA, 5S ribosomal 8 [Source:HGNC Symbol;Acc:HGNC:34369]	0.031	0.004875	down
ENSG00000205457	tp53tg3c	TP53 target 3C [Source:HGNC Symbol;Acc:HGNC:42962]	0.067	0.004908	down
ENSG00000230109	linc02643	long intergenic non-protein coding RNA 2643 [Source:HGNC Symbol;Acc:HGNC:54126]	0.161	0.004909	down
ENSG00000286724	al732509.1	novel transcript, antisense to ADGRG2and PHKA2	5.281	0.005128	up
ENSG00000228049	polr2j2	RNA polymerase II subunit J2 [Source:HGNC Symbol;Acc:HGNC:23208]	0.068	0.005332	down
ENSG00000154764	wnt7a	Wnt family member 7A [Source:HGNC Symbol;Acc:HGNC:12786]	3.304	0.005352	up
ENSG00000284874	ac000093.1	novel transcript	0.46	0.005586	down
ENSG00000122035	rasl11a	RAS like family 11 member A [Source:HGNC Symbol;Acc:HGNC:23802]	0.482	0.005798	down
ENSG00000075407	znf37a	zinc finger protein 37A [Source:HGNC Symbol;Acc:HGNC:13102]	2.044	0.005824	up
ENSG00000224259	linc01133	long intergenic non-protein coding RNA 1133 [Source:HGNC Symbol;Acc:HGNC:49447]	2.535	0.006026	up
ENSG00000272657	ap000317.2	novel transcript	0.429	0.006065	down
ENSG00000286078	al391056.2	novel transcript	28.386	0.006215	up
ENSG00000182575	nxph3	neurexophilin 3 [Source:HGNC Symbol;Acc:HGNC:8077]	0.125	0.006247	down
ENSG00000166407	lmo1	LIM domain only 1 [Source:HGNC Symbol;Acc:HGNC:6641]	0.498	0.00627	down
ENSG00000211451	gnrhr2	gonadotropin releasing hormone receptor 2 (pseudogene) [Source:HGNC Symbol;Acc:HGNC:16341]	2.789	0.006465	up
ENSG00000248235	ac037459.1	novel protein	0.445	0.006957	down
ENSG00000274021	ac024909.1	novel transcript, antisense to DUSP6	0.235	0.006969	down
ENSG00000136404	tm6sf1	transmembrane 6 superfamily member 1 [Source:HGNC Symbol;Acc:HGNC:11860]	5.043	0.00708	up
ENSG00000183798	emilin3	elastin microfibril interfacer 3 [Source:HGNC Symbol;Acc:HGNC:16123]	0.409	0.007096	down
ENSG00000167157	prrx2	paired related homeobox 2 [Source:HGNC Symbol;Acc:HGNC:21338]	0.437	0.0073	down
ENSG00000227963	rbm15-as1	RBM15 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:53636]	0.106	0.007444	down
ENSG00000283663	ac008687.8	novel transcript	0.038	0.007646	down
ENSG00000101670	lipg	lipase G, endothelial type [Source:HGNC Symbol;Acc:HGNC:6623]	2.113	0.007899	up
ENSG00000100285	nefh	neurofilament heavy [Source:HGNC Symbol;Acc:HGNC:7737]	0.038	0.007954	down
ENSG00000267493	cirbp-as1	CIRBP antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:28588]	0.343	0.007969	down
ENSG00000159224	gip	gastric inhibitory polypeptide [Source:HGNC Symbol;Acc:HGNC:4270]	0.499	0.008562	down
ENSG00000166432	zmat1	zinc finger matrin-type 1 [Source:HGNC Symbol;Acc:HGNC:29377]	2.514	0.008592	up
ENSG00000121005	crispd1	cysteine rich secretory protein LCCL domain containing 1 [Source:HGNC Symbol;Acc:HGNC:18206]	0.401	0.008714	down
ENSG00000077935	smc1b	structural maintenance of chromosomes 1B [Source:HGNC Symbol;Acc:HGNC:11112]	4.005	0.00877	up
ENSG00000272078	al139423.1	novel transcript, antisense to CASZ1	8.454	0.008944	up
ENSG00000197646	pdc1lg2	programmed cell death 1 ligand 2 [Source:HGNC Symbol;Acc:HGNC:18731]	2.63	0.009086	up
ENSG00000213860	rpl21p75	ribosomal protein L21 pseudogene 75 [Source:HGNC Symbol;Acc:HGNC:36460]	0.133	0.009209	down
ENSG00000141086	ctrl	chymotrypsin like [Source:HGNC Symbol;Acc:HGNC:2524]	0.388	0.00926	down
ENSG00000286269	ac092661.1	novel transcript	0.229	0.009586	down

ENSG00000134259	ngf	nerve growth factor [Source:HGNC Symbol;Acc:HGNC:7808]	2.18	0.009612	up
ENSG00000226440	lama4-as1	LAMA4 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:40333]	2.776	0.009618	up
ENSG00000255036	stra6lp	STRA6 like, pseudogene [Source:HGNC Symbol;Acc:HGNC:53830]	2.347	0.009833	up
ENSG00000197561	elane	elastase, neutrophil expressed [Source:HGNC Symbol;Acc:HGNC:3309]	0.125	0.01042	down
ENSG00000271895	al109811.2	novel transcript, antisense to MASP2	0.35	0.010803	down
ENSG00000170075	gpr371l	G protein-coupled receptor 37 like 1 [Source:HGNC Symbol;Acc:HGNC:14923]	0.344	0.011436	down
ENSG00000124466	lypd3	LY6/PLAUR domain containing 3 [Source:HGNC Symbol;Acc:HGNC:24880]	0.395	0.01152	down
ENSG00000204611	znf616	zinc finger protein 616 [Source:HGNC Symbol;Acc:HGNC:28062]	2.197	0.01183	up
ENSG00000285444	al162377.3	novel transcript	0.03	0.011879	down
ENSG00000134533	rergr	RAS like estrogen regulated growth inhibitor [Source:HGNC Symbol;Acc:HGNC:15980]	0.5	0.011886	down
ENSG00000261468	ac096921.2	novel transcript	0.335	0.012438	down
ENSG00000280096	ac015967.2	TEC	0.04	0.012503	down
ENSG00000260537	ac012184.2	novel protein, DDX19B and DDX19A readthrough	2.218	0.013063	up
ENSG00000267633	ac008686.1	novel transcript, antisense to MR1	26.99	0.013094	up
ENSG00000235989	morc2-as1	MORC2 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:26662]	0.136	0.013224	down
ENSG00000254501	ap003068.1	novel transcript	0.079	0.013237	down
ENSG00000148082	shc3	SHC adaptor protein 3 [Source:HGNC Symbol;Acc:HGNC:18181]	2.038	0.013726	up
ENSG00000263368	ac069366.1	chromosome 9 open reading frame 30 (C9orf30) pseudogene	0.042	0.013993	down
ENSG00000285853	al137802.3	novel transcript	0.221	0.014276	down
ENSG00000144476	ackr3	atypical chemokine receptor 3 [Source:HGNC Symbol;Acc:HGNC:23692]	0.456	0.014322	down
ENSG00000215032	gnl3lp1	G protein nucleolar 3 like pseudogene 1 [Source:HGNC Symbol;Acc:HGNC:25733]	3.123	0.014492	up
ENSG00000147041	sytl5	synaptotagmin like 5 [Source:HGNC Symbol;Acc:HGNC:15589]	0.224	0.014825	down
ENSG00000259075	poc1b-galnt4	POC1B-GALNT4 readthrough [Source:HGNC Symbol;Acc:HGNC:42957]	0.404	0.014854	down
ENSG00000117407	artn	artemin [Source:HGNC Symbol;Acc:HGNC:727]	0.301	0.014867	down
ENSG00000198610	akr1c4	aldo-keto reductase family 1 member C4 [Source:HGNC Symbol;Acc:HGNC:387]	0.094	0.014883	down
ENSG00000141750	stac2	SH3 and cysteine rich domain 2 [Source:HGNC Symbol;Acc:HGNC:23990]	0.144	0.01504	down
ENSG00000249599	bmpr1b-dt	BMPR1B divergent transcript [Source:HGNC Symbol;Acc:HGNC:50864]	0.232	0.015899	down
ENSG00000171931	fbxw10	F-box and WD repeat domain containing 10 [Source:HGNC Symbol;Acc:HGNC:1211]	0.453	0.016124	down
ENSG00000241635	ugt1a1	UDP glucuronosyltransferase family 1 member A1 [Source:HGNC Symbol;Acc:HGNC:12530]	0.467	0.01615	down
ENSG00000248429	fam198b-as1	FAM198B antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:53132]	0.155	0.016534	down
ENSG00000234362	linc01914	long intergenic non-protein coding RNA 1914 [Source:HGNC Symbol;Acc:HGNC:52733]	0.367	0.016584	down
ENSG00000285845	al392086.1	novel transcript	0.033	0.016643	down
ENSG00000270617	urgcp-mrps24	URGCP-MRPS24 readthrough [Source:HGNC Symbol;Acc:HGNC:49188]	0.274	0.01672	down
ENSG00000132744	acy3	aminoacylase 3 [Source:HGNC Symbol;Acc:HGNC:24104]	0.313	0.01679	down
ENSG00000145040	ucn2	urocortin 2 [Source:HGNC Symbol;Acc:HGNC:18414]	0.465	0.01698	down
ENSG00000174521	ttc9b	tetratricopeptide repeat domain 9B [Source:HGNC Symbol;Acc:HGNC:26395]	0.123	0.017012	down
ENSG00000243414	ticam2	toll like receptor adaptor molecule 2 [Source:HGNC Symbol;Acc:HGNC:21354]	0.389	0.017119	down
ENSG00000008118	camk1g	calcium/calmodulin dependent protein kinase IG [Source:HGNC Symbol;Acc:HGNC:14585]	0.163	0.017296	down
ENSG00000250222	ac008443.4	novel transcript	2.05	0.017501	up
ENSG00000171119	nrtin	neurturin [Source:HGNC Symbol;Acc:HGNC:8007]	0.427	0.01759	down
ENSG00000250579	ctd-2297d10.2	uncharacterized LOC101929176 [Source:NCBI gene (formerly Entrezgene);Acc:101929176]	0.435	0.017632	down
ENSG00000248807	krtp9-12p	keratin associated protein 9-12, pseudogene [Source:HGNC Symbol;Acc:HGNC:48873]	0.423	0.017696	down
ENSG00000276430	fam25c	family with sequence similarity 25 member C [Source:HGNC Symbol;Acc:HGNC:23586]	30.652	0.017697	up
ENSG00000116299	elapor1	endosome-lysosome associated apoptosis and autophagy regulator 1 [Source:HGNC Symbol;Acc:HGNC:29618]	0.436	0.017727	down
ENSG00000274414	al121772.1	novel transcript	2.711	0.017834	up
ENSG00000202521	rna5s7	RNA, 5S ribosomal 7 [Source:HGNC Symbol;Acc:HGNC:34368]	31.812	0.017911	up
ENSG00000278817	ac007325.4	protein DGCR6 [Source:NCBI gene (formerly Entrezgene);Acc:102724770]	0.436	0.017961	down
ENSG00000160716	chrbn2	cholinergic receptor nicotinic beta 2 subunit [Source:HGNC Symbol;Acc:HGNC:1962]	2.206	0.018139	up
ENSG00000278133	ac135050.6	novel transcript, sense intronic to KAT8	0.453	0.018304	down
ENSG00000162723	slamf9	SLAM family member 9 [Source:HGNC Symbol;Acc:HGNC:18430]	3.863	0.01852	up
ENSG00000267226	ac104971.1	novel transcript, antisense to MALT1	0.374	0.019304	down
ENSG00000183873	scn5a	sodium voltage-gated channel alpha subunit 5 [Source:HGNC Symbol;Acc:HGNC:10593]	0.455	0.019415	down
ENSG00000228057	sec63p1	SEC63 homolog, protein translocation regulator pseudogene 1 [Source:HGNC Symbol;Acc:HGNC:41953]	2.167	0.019823	up
ENSG00000272502	ac104958.2	novel transcript	10.048	0.0201	up
ENSG00000275532	ac006449.2	novel transcript, antisense to MLLT6	14.253	0.020159	up
ENSG00000259515	al117209.1	novel transcript, antisense to CDC42BPB	0.095	0.020267	down
ENSG00000285467	al136419.1	dehydrogenase/reductase 4 like 1 [Source:NCBI gene (formerly Entrezgene);Acc:728635]	0.118	0.020719	down
ENSG00000167850	cd300c	CD300c molecule [Source:HGNC Symbol;Acc:HGNC:19320]	21.575	0.020721	up
ENSG00000261168	al592424.1	novel transcript, sense overlapping SEMA6C	0.071	0.021194	down
ENSG00000273294	c1qtnf3-amacr	C1QTNF3-AMACR readthrough (NMD candidate) [Source:HGNC Symbol;Acc:HGNC:49198]	29.087	0.021243	up

ENSG00000234869	al021392.1	novel transcript	0.284	0.021541	down
ENSG00000115009	ccl20	C-C motif chemokine ligand 20 [Source:HGNC Symbol;Acc:HGNC:10619]	0.408	0.021641	down
ENSG00000285942	ac018362.3	novel protein	11.928	0.02173	up
ENSG00000121075	tbx4	T-box transcription factor 4 [Source:HGNC Symbol;Acc:HGNC:11603]	0.31	0.021928	down
ENSG00000276266	fp325318.1	novel transcript	3.063	0.021963	up
ENSG00000267696	ervk-28	endogenous retrovirus group K member 28 [Source:HGNC Symbol;Acc:HGNC:44981]	6.152	0.022039	up
ENSG00000267147	linc01842	long intergenic non-protein coding RNA 1842 [Source:HGNC Symbol;Acc:HGNC:52656]	0.268	0.022393	down
ENSG00000288640	ac005192.1	novel protein	2.124	0.022497	up
ENSG00000268030	ac005253.1	novel transcript, antisense to KXD1	2.494	0.022828	up
ENSG00000279595	ac126335.2	TEC	4.982	0.022972	up
ENSG00000262712	ac012676.1	novel transcript	0.497	0.023662	down
ENSG00000066032	ctnna2	catenin alpha 2 [Source:HGNC Symbol;Acc:HGNC:2510]	14.241	0.024266	up
ENSG00000279369	ac046185.3	TEC	0.499	0.02437	down
ENSG00000286999	al121581.2	novel transcript, antisense to OPR1	0.037	0.024371	down
ENSG00000197837	h4-16	H4 histone 16 [Source:HGNC Symbol;Acc:HGNC:20510]	0.268	0.024504	down
ENSG00000146666	linc00525	long intergenic non-protein coding RNA 525 [Source:HGNC Symbol;Acc:HGNC:40290]	0.291	0.02455	down
ENSG00000135144	dtx1	deltex E3 ubiquitin ligase 1 [Source:HGNC Symbol;Acc:HGNC:3060]	0.457	0.024679	down
ENSG00000214338	soga3	SOGA family member 3 [Source:HGNC Symbol;Acc:HGNC:21494]	14.971	0.02482	up
ENSG00000254416	linc02732	long intergenic non-protein coding RNA 2732 [Source:HGNC Symbol;Acc:HGNC:54249]	0.297	0.025033	down
ENSG00000135114	oasl	2'-5'-oligoadenylate synthetase like [Source:HGNC Symbol;Acc:HGNC:8090]	2.035	0.025338	up
ENSG00000188626	golga8m	golgin A8 family member M [Source:HGNC Symbol;Acc:HGNC:44404]	5.764	0.025392	up
ENSG00000172794	rab37	RAB37, member RAS oncogene family [Source:HGNC Symbol;Acc:HGNC:30268]	0.365	0.025781	down
ENSG00000183908	lrrc55	leucine rich repeat containing 55 [Source:HGNC Symbol;Acc:HGNC:32324]	0.211	0.026059	down
ENSG00000272667	ac012306.2	novel transcript	0.273	0.026211	down
ENSG00000260305	ntrk3-as1	NTRK3 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:27532]	0.107	0.026368	down
ENSG00000224043	ccnt2-as1	CCNT2 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:40130]	0.496	0.026431	down
ENSG00000261063	ac009139.2	novel transcript, antisense to MON1B & SYCE1L	0.037	0.026636	down
ENSG00000250365	al139353.2	novel transcript, antisense to C14orf126	0.272	0.026701	down
ENSG00000286813	ac015871.6	novel transcript, sense intronic to ST20-MTHFSand MTHFS	0.398	0.02679	down
ENSG00000235070	ac062015.1	novel transcript	0.101	0.027053	down
ENSG00000278022	ac118658.1	novel transcript, sense intronic to IGF1R	0.31	0.02725	down
ENSG00000286835	al133477.1	novel transcript, sense intronic to ZNF367	0.416	0.027439	down
ENSG00000164400	csf2	colony stimulating factor 2 [Source:HGNC Symbol;Acc:HGNC:2434]	2.263	0.027861	up
ENSG00000179855	gipc3	GIPC PDZ domain containing family member 3 [Source:HGNC Symbol;Acc:HGNC:18183]	0.143	0.028084	down
ENSG00000225362	ct62	cancer/testis associated 62 [Source:HGNC Symbol;Acc:HGNC:27286]	2.151	0.028781	up
ENSG00000260896	arlnc1	androgen receptor regulated long noncoding RNA 1 [Source:HGNC Symbol;Acc:HGNC:53032]	13.143	0.028812	up
ENSG00000267317	ac027307.2	novel transcript, antisense to APC2	0.445	0.028934	down
ENSG00000133661	sftpd	surfactant protein D [Source:HGNC Symbol;Acc:HGNC:10803]	3.47	0.02913	up
ENSG00000237892	klf7-it1	KLF7 intronic transcript 1 [Source:HGNC Symbol;Acc:HGNC:41355]	0.049	0.029152	down
ENSG00000267049	ac002398.1	novel transcript	0.136	0.029265	down
ENSG00000237575	pyy2	peptide YY 2 (pseudogene) [Source:HGNC Symbol;Acc:HGNC:9749]	0.277	0.029324	down
ENSG00000259660	dnm1p47	dynamitin 1 pseudogene 47 [Source:HGNC Symbol;Acc:HGNC:35200]	2.742	0.029457	up
ENSG00000130203	apoe	apolipoprotein E [Source:HGNC Symbol;Acc:HGNC:613]	0.476	0.029634	down
ENSG00000107562	cxcl12	C-X-C motif chemokine ligand 12 [Source:HGNC Symbol;Acc:HGNC:10672]	0.039	0.029695	down
ENSG00000239332	linc01119	long intergenic non-protein coding RNA 1119 [Source:HGNC Symbol;Acc:HGNC:49262]	0.436	0.029922	down
ENSG00000274419	tbc1d3d	TBC1 domain family member 3D [Source:HGNC Symbol;Acc:HGNC:28944]	19.368	0.030198	up
ENSG00000262410	ac024361.1	novel transcript, sense intronic FN3K	0.148	0.031204	down
ENSG00000180730	shisa2	shisa family member 2 [Source:HGNC Symbol;Acc:HGNC:20366]	3.954	0.031233	up
ENSG00000273711	ac005520.5	novel transcript, antisense to PTGR2	11.293	0.032268	up
ENSG00000280924	linc00628	long intergenic non-protein coding RNA 628 [Source:HGNC Symbol;Acc:HGNC:27008]	0.256	0.032296	down
ENSG00000115596	wnt6	Wnt family member 6 [Source:HGNC Symbol;Acc:HGNC:12785]	0.047	0.032417	down
ENSG00000167183	prrl15l	proline rich 15 like [Source:HGNC Symbol;Acc:HGNC:28149]	0.245	0.032562	down
ENSG00000183486	mx2	MX dynamin like GTPase 2 [Source:HGNC Symbol;Acc:HGNC:7533]	0.148	0.03286	down
ENSG00000167751	klk2	kallikrein related peptidase 2 [Source:HGNC Symbol;Acc:HGNC:6363]	18.414	0.032959	up
ENSG00000148488	st8sia6	ST8 alpha-N-acetyl-neuraminidase alpha-2,8-sialyltransferase 6 [Source:HGNC Symbol;Acc:HGNC:23317]	2.883	0.034069	up
ENSG00000177363	lrrn4cl	LRRN4 C-terminal like [Source:HGNC Symbol;Acc:HGNC:33724]	0.051	0.034239	down
ENSG00000235884	linc00941	long intergenic non-protein coding RNA 941 [Source:HGNC Symbol;Acc:HGNC:48635]	24.063	0.034464	up
ENSG00000204882	gpr20	G protein-coupled receptor 20 [Source:HGNC Symbol;Acc:HGNC:4475]	0.099	0.034494	down
ENSG00000236213	ac006369.1	novel transcript	0.116	0.034965	down
ENSG00000129159	kcnk1	potassium voltage-gated channel subfamily C member 1 [Source:HGNC Symbol;Acc:HGNC:6233]	0.198	0.034996	down
ENSG00000176728	ttty14	testis-specific transcript, Y-linked 14 [Source:HGNC Symbol;Acc:HGNC:18495]	0.134	0.035182	down
ENSG00000186765	fscn2	fascin actin-bundling protein 2, retinal [Source:HGNC Symbol;Acc:HGNC:3960]	2.175	0.035349	up
ENSG00000235997	linc01936	long intergenic non-protein coding RNA 1936 [Source:HGNC Symbol;Acc:HGNC:52759]	0.079	0.03574	down
ENSG00000288520	al357075.4	CNK3/IPCEF1 fusion protein [Source:UniProtKB/Swiss-Prot;Acc:G9CGD6]	36.934	0.035966	up
ENSG00000155093	ptprn2	protein tyrosine phosphatase receptor type N2 [Source:HGNC Symbol;Acc:HGNC:10619]	2.392	0.035987	up

ENSG00000273784	al137058.2	Symbol;Acc:HGNC:9677]	0.244	0.036379	down
ENSG00000140287	hdc	novel transcript	0.215	0.036916	down
ENSG00000278769	ac090510.3	histidine decarboxylase [Source:HGNC Symbol;Acc:HGNC:4855]	24.335	0.036997	up
ENSG00000198576	arc	novel transcript, antisense to CDAN1	0.263	0.037426	down
ENSG00000259780	ac009065.1	activity regulated cytoskeleton associated protein [Source:HGNC Symbol;Acc:HGNC:648]	0.194	0.037706	down
ENSG00000258867	linc01146	novel transcript	0.22	0.038027	down
ENSG00000233384	cnih3-as2	long intergenic non-protein coding RNA 1146 [Source:HGNC Symbol;Acc:HGNC:49467]	2.285	0.038798	up
ENSG00000181885	cldn7	CNIH3 antisense RNA 2 [Source:HGNC Symbol;Acc:HGNC:41162]	0.288	0.038829	down
ENSG00000261934	pcdhga9	claudin 7 [Source:HGNC Symbol;Acc:HGNC:2049]	0.107	0.039061	down
ENSG00000174236	rep15	protocadherin gamma subfamily A, 9 [Source:HGNC Symbol;Acc:HGNC:8707]	0.202	0.039117	down
ENSG00000168913	enho	RAB15 effector protein [Source:HGNC Symbol;Acc:HGNC:33748]	0.467	0.03937	down
ENSG00000159618	adgrg5	energy homeostasis associated [Source:HGNC Symbol;Acc:HGNC:24838]	0.282	0.039435	down
ENSG00000111863	adtrp	adhesion G protein-coupled receptor G5 [Source:HGNC Symbol;Acc:HGNC:19010]	2.95	0.039822	up
ENSG00000134121	chl1	androgen dependent TFPI regulating protein [Source:HGNC Symbol;Acc:HGNC:21214]	0.268	0.039987	down
ENSG00000169071	ror2	cell adhesion molecule L1 like [Source:HGNC Symbol;Acc:HGNC:1939]	0.305	0.040003	down
ENSG00000121769	fabp3	receptor tyrosine kinase like orphan receptor 2 [Source:HGNC Symbol;Acc:HGNC:10257]	11.91	0.040096	up
ENSG00000284968	ac093827.4	fatty acid binding protein 3 [Source:HGNC Symbol;Acc:HGNC:3557]	2.388	0.040304	up
ENSG00000123453	sardh	Novel transcript, antisense to AFF1	3.588	0.040351	up
ENSG00000257607	ac073957.2	sarcosine dehydrogenase [Source:HGNC Symbol;Acc:HGNC:10536]	12.858	0.040422	up
ENSG00000272843	ac211476.2	novel transcript, antisense to GPR146	0.086	0.040449	down
ENSG00000223704	linc01422	novel transcript, antisense to POM121	0.118	0.040763	down
ENSG00000254894	nav2-as1	long intergenic non-protein coding RNA 1422 [Source:HGNC Symbol;Acc:HGNC:50728]	5.787	0.040876	up
ENSG00000267497	nfe2l3p1	NAV2 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:40744]	13.421	0.041057	up
ENSG00000288620	ac092032.2	nuclear factor, erythroid 2 like 3 pseudogene 1 [Source:HGNC Symbol;Acc:HGNC:22278]	18.179	0.041818	up
ENSG00000244513	ac109587.1	ring finger protein 216 pseudogene 1	6.768	0.041999	up
ENSG00000105559	plekha4	novel transcript	0.47	0.042266	down
ENSG00000133454	myo18b	pleckstrin homology domain containing A4 [Source:HGNC Symbol;Acc:HGNC:14339]	3.893	0.042435	up
ENSG00000283538	ac005972.3	myosin XVIIIIB [Source:HGNC Symbol;Acc:HGNC:18150]	0.408	0.042533	down
ENSG00000137198	gmpr	novel transcript	0.362	0.043084	down
ENSG00000250697	ac010343.3	guanosine monophosphate reductase [Source:HGNC Symbol;Acc:HGNC:4376]	2.264	0.043471	up
ENSG00000256667	klra1p	novel transcript	2.383	0.043662	up
ENSG00000155918	raet1l	killer cell lectin like receptor A1, pseudogene [Source:HGNC Symbol;Acc:HGNC:6372]	0.213	0.044049	down
ENSG00000287856	al445524.2	retinoic acid early transcript 1L [Source:HGNC Symbol;Acc:HGNC:16798]	34.321	0.044459	up
ENSG00000257527	ac126755.2	novel protein	0.046	0.04475	down
ENSG00000196189	sema4a	microRNA 3179-3	2.822	0.045352	up
ENSG00000277156	tomm40p1	semaphorin 4A [Source:HGNC Symbol;Acc:HGNC:10729]	11.124	0.045661	up
ENSG00000249141	ac159163.1	TOMM40 pseudogene 1 [Source:HGNC Symbol;Acc:HGNC:54623]	0.045	0.045915	down
ENSG00000269226	tmsb15b	novel protein	0.429	0.046105	down
ENSG00000260793	ac003102.1	thymosin beta 15B [Source:NCBI gene (formerly Entrezgene);Acc:286527]	0.478	0.046172	down
ENSG00000285600	ac023593.1	novel transcript, antisense to UBTF	0.431	0.04618	down
ENSG00000237803	linc00211	Novel transcript, antisense to MCM2	0.058	0.046749	down
ENSG00000278986	ac091060.1	long intergenic non-protein coding RNA 211 [Source:HGNC Symbol;Acc:HGNC:37459]	0.282	0.046937	down
ENSG00000230533	al356234.2	TEC	0.128	0.047041	down
ENSG00000258469	chmp4bp1	novel transcript	0.052	0.047504	down
ENSG00000270025	bms1p7	charged multivesicular body protein 4B pseudogene 1 [Source:HGNC Symbol;Acc:HGNC:43616]	11.162	0.047901	up
ENSG00000153930	ankfn1	BMS1 pseudogene 7 [Source:HGNC Symbol;Acc:HGNC:23655]	11.162	0.047901	up
ENSG00000146013	gfra3	ankyrin repeat and fibronectin type III domain containing 1 [Source:HGNC Symbol;Acc:HGNC:26766]	0.076	0.047936	down
ENSG00000272647	ac005020.2	GDNF family receptor alpha 3 [Source:HGNC Symbol;Acc:HGNC:4245]	2.745	0.048013	up
ENSG00000115590	il1r2	novel protein	0.326	0.048251	down
ENSG00000280063	ac012676.5	interleukin 1 receptor type 2 [Source:HGNC Symbol;Acc:HGNC:5994]	0.182	0.048949	down
ENSG00000280639	linc02204	tec	0.06	0.049045	down
ENSG00000130176	cnn1	long intergenic non-protein coding RNA 2204 [Source:HGNC Symbol;Acc:HGNC:53070]	0.251	0.049106	down
ENSG00000286215	al356534.1	calponin 1 [Source:HGNC Symbol;Acc:HGNC:2155]	0.445	0.049154	down
ENSG00000049768	foxp3	vimentin 2, pseudogene	3.416	0.049187	up
ENSG00000180279	linc01869	forkhead box P3 [Source:HGNC Symbol;Acc:HGNC:6106]	8.885	0.049245	up
ENSG00000248592	stimate-mustn1	long intergenic non-protein coding RNA 1869 [Source:HGNC Symbol;Acc:HGNC:25050]	0.233	0.04948	down
ENSG00000007314	scn4a	STIMATE-MUSTN1 readthrough [Source:HGNC Symbol;Acc:HGNC:38834]	5.468	0.049506	up
ENSG00000204950	lrrc10b	sodium voltage-gated channel alpha subunit 4 [Source:HGNC Symbol;Acc:HGNC:10591]	0.281	0.04975	down
		leucine rich repeat containing 10B [Source:HGNC Symbol;Acc:HGNC:37215]			

Table S6. DEGs in A549 cells from aged PS NPs groups compared with the control

Gene ID	Gene name	Gene description	Fold change	p-adjust	Regulate
ENSG00000145920	cplx2	complexin 2 [Source:HGNC Symbol;Acc:HGNC:2310]	0.054	2.5E-258	down
ENSG00000113739	stc2	stanniocalcin 2 [Source:HGNC Symbol;Acc:HGNC:11374]	8.67	8.2E-179	up
ENSG00000165376	cldn2	claudin 2 [Source:HGNC Symbol;Acc:HGNC:2041]	0.08	3.5E-169	down
ENSG00000108691	ccl2	C-C motif chemokine ligand 2 [Source:HGNC Symbol;Acc:HGNC:10618]	0.109	5.3E-138	down
ENSG00000126803	hspa2	heat shock protein family A (Hsp70) member 2 [Source:HGNC Symbol;Acc:HGNC:5235]	0.184	2.8E-125	down
ENSG00000104419	ndrg1	N-myc downstream regulated 1 [Source:HGNC Symbol;Acc:HGNC:7679]	5.007	4.9E-113	up
ENSG00000005884	itga3	integrin subunit alpha 3 [Source:HGNC Symbol;Acc:HGNC:6139]	4.869	2.6E-112	up
ENSG00000134824	fads2	fatty acid desaturase 2 [Source:HGNC Symbol;Acc:HGNC:3575]	0.169	1.4E-108	down
ENSG00000058085	lamc2	laminin subunit gamma 2 [Source:HGNC Symbol;Acc:HGNC:6493]	8.076	1.7E-108	up
ENSG00000140538	ntrk3	neurotrophic receptor tyrosine kinase 3 [Source:HGNC Symbol;Acc:HGNC:8033]	0.154	3.1E-108	down
ENSG00000103089	fa2h	fatty acid 2-hydroxylase [Source:HGNC Symbol;Acc:HGNC:21197]	7.379	7.9E-105	up
ENSG00000149948	hmg2	high mobility group AT-hook 2 [Source:HGNC Symbol;Acc:HGNC:5009]	8.956	1.1E-100	up
ENSG00000171560	fga	fibrinogen alpha chain [Source:HGNC Symbol;Acc:HGNC:3661]	0.05	2.6E-99	down
ENSG00000064300	ngfr	nerve growth factor receptor [Source:HGNC Symbol;Acc:HGNC:7809]	105.654	6E-99	up
ENSG00000144583	marchf4	membrane associated ring-CH-type finger 4 [Source:HGNC Symbol;Acc:HGNC:29269]	5.56	8.08E-96	up
ENSG00000176153	gpx2	glutathione peroxidase 2 [Source:HGNC Symbol;Acc:HGNC:4554]	0.062	2.65E-87	down
ENSG00000171564	fgb	fibrinogen beta chain [Source:HGNC Symbol;Acc:HGNC:3662]	0.053	2.7E-86	down
ENSG00000168209	ddit4	DNA damage inducible transcript 4 [Source:HGNC Symbol;Acc:HGNC:24944]	5.004	2.01E-82	up
ENSG00000116133	dhcr24	24-dehydrocholesterol reductase [Source:HGNC Symbol;Acc:HGNC:2859]	0.184	1.05E-81	down
ENSG00000166803	pclaf	PCNA clamp associated factor [Source:HGNC Symbol;Acc:HGNC:28961]	0.163	3.37E-81	down
ENSG00000005882	pdh2	pyruvate dehydrogenase kinase 2 [Source:HGNC Symbol;Acc:HGNC:8810]	0.086	1.97E-80	down
ENSG00000163739	cxcl1	C-X-C motif chemokine ligand 1 [Source:HGNC Symbol;Acc:HGNC:4602]	0.231	2.12E-79	down
ENSG00000169903	tm4sf4	transmembrane 4 L six family member 4 [Source:HGNC Symbol;Acc:HGNC:11856]	0.045	1.1E-78	down
ENSG00000228716	dhfr	dihydrofolate reductase [Source:HGNC Symbol;Acc:HGNC:2861]	0.222	2.49E-73	down
ENSG00000171848	rrm2	ribonucleotide reductase regulatory subunit M2 [Source:HGNC Symbol;Acc:HGNC:10452]	0.251	9.41E-73	down
ENSG00000168496	fen1	flap structure-specific endonuclease 1 [Source:HGNC Symbol;Acc:HGNC:3650]	0.195	1.18E-69	down
ENSG00000138166	dusp5	dual specificity phosphatase 5 [Source:HGNC Symbol;Acc:HGNC:3071]	7.441	1.66E-68	up
ENSG00000167680	sema6b	semaphorin 6B [Source:HGNC Symbol;Acc:HGNC:10739]	0.089	2.02E-68	down
ENSG00000137673	mmp7	matrix metalloproteinase 7 [Source:HGNC Symbol;Acc:HGNC:7174]	0.186	8.41E-68	down
ENSG00000167772	angptl4	angiopoietin like 4 [Source:HGNC Symbol;Acc:HGNC:16039]	8.043	3.77E-66	up
ENSG00000122952	zwint	ZW10 interacting kinetochore protein [Source:HGNC Symbol;Acc:HGNC:13195]	0.271	4.98E-66	down
ENSG00000163814	cdcp1	CUB domain containing protein 1 [Source:HGNC Symbol;Acc:HGNC:24357]	5.093	6.4E-64	up
ENSG00000080031	ptprh	protein tyrosine phosphatase receptor type H [Source:HGNC Symbol;Acc:HGNC:9672]	8.196	7.45E-64	up
ENSG00000073111	mcm2	minichromosome maintenance complex component 2 [Source:HGNC Symbol;Acc:HGNC:6944]	0.277	1.09E-61	down
ENSG00000133134	bex2	brain expressed X-linked 2 [Source:HGNC Symbol;Acc:HGNC:30933]	23.7	1.46E-61	up
ENSG00000130766	sesn2	sestrin 2 [Source:HGNC Symbol;Acc:HGNC:20746]	5.382	8.15E-61	up
ENSG00000139289	phlda1	pleckstrin homology like domain family A member 1 [Source:HGNC Symbol;Acc:HGNC:8933]	3.455	8.97E-61	up
ENSG00000147872	plin2	perilipin 2 [Source:HGNC Symbol;Acc:HGNC:248]	5.638	1.58E-60	up
ENSG00000146678	igfbp1	insulin like growth factor binding protein 1 [Source:HGNC Symbol;Acc:HGNC:5469]	5.963	3.7E-60	up
ENSG00000234741	gas5	growth arrest specific 5 [Source:HGNC Symbol;Acc:HGNC:16355]	4.745	5.16E-60	up
ENSG00000147010	sh3kbp1	SH3 domain containing kinase binding protein 1 [Source:HGNC Symbol;Acc:HGNC:13867]	3.268	6.67E-60	up
ENSG00000103647	coro2b	coronin 2B [Source:HGNC Symbol;Acc:HGNC:2256]	6.9	3.2E-59	up
ENSG00000135636	dysf	dysferlin [Source:HGNC Symbol;Acc:HGNC:3097]	19.457	1.4E-57	up
ENSG00000121895	tmem156	transmembrane protein 156 [Source:HGNC Symbol;Acc:HGNC:26260]	3.94	1.45E-56	up
ENSG00000170345	fos	Fos proto-oncogene, AP-1 transcription factor subunit [Source:HGNC Symbol;Acc:HGNC:3796]	0.114	9.11E-56	down
ENSG00000101255	trib3	tribbles pseudokinase 3 [Source:HGNC Symbol;Acc:HGNC:16228]	6.001	1.67E-55	up
ENSG00000169174	pcsk9	proprotein convertase subtilisin/kexin type 9 [Source:HGNC Symbol;Acc:HGNC:20001]	0.125	9.26E-55	down
ENSG00000156453	pcdh1	protocadherin 1 [Source:HGNC Symbol;Acc:HGNC:8655]	5.997	1.14E-54	up
ENSG00000129353	slc44a2	solute carrier family 44 member 2 [Source:HGNC Symbol;Acc:HGNC:17292]	4.757	8.88E-54	up
ENSG00000094804	cdc6	cell division cycle 6 [Source:HGNC Symbol;Acc:HGNC:1744]	0.275	1.87E-52	down
ENSG00000135842	niban1	niban apoptosis regulator 1 [Source:HGNC Symbol;Acc:HGNC:16784]	13.101	1.13E-51	up
ENSG00000158125	xdh	xanthine dehydrogenase [Source:HGNC Symbol;Acc:HGNC:12805]	9.647	1.77E-50	up
ENSG00000070669	asns	asparagine synthetase (glutamine-hydrolyzing) [Source:HGNC Symbol;Acc:HGNC:753]	4.972	4.78E-50	up
ENSG00000237649	kifc1	kinesin family member C1 [Source:HGNC Symbol;Acc:HGNC:6389]	0.237	8.51E-50	down
ENSG00000172893	dhcr7	7-dehydrocholesterol reductase [Source:HGNC Symbol;Acc:HGNC:2860]	0.272	8.63E-50	down
ENSG00000157851	dpysl5	dihydropyrimidinase like 5 [Source:HGNC Symbol;Acc:HGNC:20637]	0.203	4.52E-49	down
ENSG00000135318	nt5e	5'-nucleotidase ecto [Source:HGNC Symbol;Acc:HGNC:8021]	4.508	1.5E-48	up
ENSG00000106366	serpine1	serpin family E member 1 [Source:HGNC Symbol;Acc:HGNC:8583]	4.358	2.09E-48	up

ENSG00000101447	fam83d	family with sequence similarity 83 member D [Source:HGNC Symbol;Acc:HGNC:16122]	0.254	2.32E-48	down
ENSG00000076382	spag5	sperm associated antigen 5 [Source:HGNC Symbol;Acc:HGNC:13452]	0.298	4.13E-48	down
ENSG00000134668	spocd1	SPOC domain containing 1 [Source:HGNC Symbol;Acc:HGNC:26338]	5.209	1.86E-47	up
ENSG00000272398	cd24	CD24 molecule [Source:HGNC Symbol;Acc:HGNC:1645]	0.353	7.76E-46	down
ENSG00000213853	emp2	epithelial membrane protein 2 [Source:HGNC Symbol;Acc:HGNC:3334]	0.189	8.07E-46	down
ENSG00000116584	arhgef2	Rho/Rac guanine nucleotide exchange factor 2 [Source:HGNC Symbol;Acc:HGNC:682]	3.501	8.6E-46	up
ENSG00000132646	pcna	proliferating cell nuclear antigen [Source:HGNC Symbol;Acc:HGNC:8729]	0.315	1.27E-45	down
ENSG00000204387	snhg32	small nucleolar RNA host gene 32 [Source:HGNC Symbol;Acc:HGNC:19078]	4.429	2.35E-45	up
ENSG00000163235	tgfa	transforming growth factor alpha [Source:HGNC Symbol;Acc:HGNC:11765]	4.245	4.61E-45	up
ENSG00000198732	smoc1	SPARC related modular calcium binding 1 [Source:HGNC Symbol;Acc:HGNC:20318]	3.655	1.98E-44	up
ENSG00000172432	gtppb2	GTP binding protein 2 [Source:HGNC Symbol;Acc:HGNC:4670]	3.412	3.07E-44	up
ENSG00000123485	hjurp	Holliday junction recognition protein [Source:HGNC Symbol;Acc:HGNC:25444]	0.264	5.06E-44	down
ENSG00000168646	axin2	axin 2 [Source:HGNC Symbol;Acc:HGNC:904]	0.058	8.93E-44	down
ENSG00000088325	tpx2	TPX2 microtubule nucleation factor [Source:HGNC Symbol;Acc:HGNC:1249]	0.362	1.1E-43	down
ENSG00000111206	foxm1	forkhead box M1 [Source:HGNC Symbol;Acc:HGNC:3818]	0.246	2.18E-43	down
ENSG00000099994	susd2	sushi domain containing 2 [Source:HGNC Symbol;Acc:HGNC:30667]	0.234	3.46E-43	down
ENSG00000166922	scg5	secretogranin V [Source:HGNC Symbol;Acc:HGNC:10816]	11.936	8.03E-43	up
ENSG00000140534	ticrr	TOPBP1 interacting checkpoint and replication regulator [Source:HGNC Symbol;Acc:HGNC:28704]	0.21	1.24E-42	down
ENSG00000112118	mcm3	minichromosome maintenance complex component 3 [Source:HGNC Symbol;Acc:HGNC:6945]	0.37	3.63E-42	down
ENSG00000135069	psat1	phosphoserine aminotransferase 1 [Source:HGNC Symbol;Acc:HGNC:19129]	2.827	4.97E-42	up
ENSG00000142871	ccn1	cellular communication network factor 1 [Source:HGNC Symbol;Acc:HGNC:2654]	2.673	6.4E-42	up
ENSG00000167601	axl	AXL receptor tyrosine kinase [Source:HGNC Symbol;Acc:HGNC:905]	2.82	2.05E-41	up
ENSG00000108821	col1a1	collagen type I alpha 1 chain [Source:HGNC Symbol;Acc:HGNC:2197]	0.222	2.91E-40	down
ENSG00000104490	ncald	neurocalcin delta [Source:HGNC Symbol;Acc:HGNC:7655]	0.121	2.92E-40	down
ENSG00000136881	baat	bile acid-CoA:amino acid N-acyltransferase [Source:HGNC Symbol;Acc:HGNC:932]	0.095	3.4E-40	down
ENSG00000196352	cd55	CD55 molecule (Cromer blood group) [Source:HGNC Symbol;Acc:HGNC:2665]	3.578	5.33E-40	up
ENSG00000112576	ccnd3	cyclin D3 [Source:HGNC Symbol;Acc:HGNC:1585]	0.174	6.33E-40	down
ENSG00000060982	bcat1	branched chain amino acid transaminase 1 [Source:HGNC Symbol;Acc:HGNC:976]	5.7	8.42E-40	up
ENSG00000184792	osbp2	oxysterol binding protein 2 [Source:HGNC Symbol;Acc:HGNC:8504]	3.091	9.85E-40	up
ENSG00000134363	fst	follicle stimulating hormone receptor 1 [Source:HGNC Symbol;Acc:HGNC:3971]	6.353	6.63E-39	up
ENSG00000240476	linc00973	long intergenic non-protein coding RNA 973 [Source:HGNC Symbol;Acc:HGNC:48868]	3.88	7.77E-39	up
ENSG00000075218	gtse1	G2 and S-phase expressed 1 [Source:HGNC Symbol;Acc:HGNC:13698]	0.25	8.55E-39	down
ENSG00000111602	timeless	timeless circadian regulator [Source:HGNC Symbol;Acc:HGNC:11813]	0.381	9.78E-39	down
ENSG00000128965	chac1	ChaC glutathione specific gamma-glutamylcyclotransferase 1 [Source:HGNC Symbol;Acc:HGNC:28680]	5.737	1.01E-38	up
ENSG00000147394	znf185	zinc finger protein 185 with LIM domain [Source:HGNC Symbol;Acc:HGNC:12976]	3.641	1.56E-38	up
ENSG00000108375	rnf43	ring finger protein 43 [Source:HGNC Symbol;Acc:HGNC:18505]	0.141	2.55E-38	down
ENSG00000153879	cebpq	CCAAT enhancer binding protein gamma [Source:HGNC Symbol;Acc:HGNC:1837]	2.681	3.03E-38	up
ENSG00000181449	sox2	SRY-box transcription factor 2 [Source:HGNC Symbol;Acc:HGNC:11195]	0.098	2.4E-37	down
ENSG00000166923	grem1	gremlin 1, DAN family BMP antagonist [Source:HGNC Symbol;Acc:HGNC:2001]	6.559	3.86E-37	up
ENSG00000160957	recq4	RecQ like helicase 4 [Source:HGNC Symbol;Acc:HGNC:9949]	0.252	4.62E-37	down
ENSG00000075643	mocos	molybdenum cofactor sulfuryase [Source:HGNC Symbol;Acc:HGNC:18234]	3.028	5.16E-37	up
ENSG00000163637	prickle2	prickle planar cell polarity protein 2 [Source:HGNC Symbol;Acc:HGNC:20340]	0.176	7.06E-37	down
ENSG00000135047	ctsl	cathepsin L [Source:HGNC Symbol;Acc:HGNC:2537]	2.909	8.5E-37	up
ENSG00000104738	mcm4	minichromosome maintenance complex component 4 [Source:HGNC Symbol;Acc:HGNC:6947]	0.287	1.71E-36	down
ENSG00000153714	lurap1l	leucine rich adaptor protein 1 like [Source:HGNC Symbol;Acc:HGNC:31452]	4.742	2.05E-36	up
ENSG00000115963	rnd3	Rho family GTPase 3 [Source:HGNC Symbol;Acc:HGNC:671]	4.432	2.7E-36	up
ENSG00000130529	trpm4	transient receptor potential cation channel subfamily M member 4 [Source:HGNC Symbol;Acc:HGNC:17993]	3.147	2.73E-36	up
ENSG00000085840	orc1	origin recognition complex subunit 1 [Source:HGNC Symbol;Acc:HGNC:8487]	0.248	3.18E-36	down
ENSG00000146670	cdca5	cell division cycle associated 5 [Source:HGNC Symbol;Acc:HGNC:14626]	0.259	3.74E-36	down
ENSG00000171557	fgg	fibrinogen gamma chain [Source:HGNC Symbol;Acc:HGNC:3694]	0.127	5.39E-36	down
ENSG00000174371	exo1	exonuclease 1 [Source:HGNC Symbol;Acc:HGNC:3511]	0.239	5.74E-36	down
ENSG00000140950	meak7	MTOR associated protein, eak-7 homolog [Source:HGNC Symbol;Acc:HGNC:29325]	2.809	6.93E-36	up
ENSG00000233369	gtf2ip4	general transcription factor Ili pseudogene 4 [Source:HGNC Symbol;Acc:HGNC:51716]	0.337	9.49E-36	down
ENSG00000168077	scara3	scavenger receptor class A member 3 [Source:HGNC Symbol;Acc:HGNC:19000]	0.37	1.16E-35	down
ENSG00000161800	racgap1	Rac GTPase activating protein 1 [Source:HGNC Symbol;Acc:HGNC:9804]	0.361	1.32E-35	down
ENSG00000065911	methfd2	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 2, methenyltetrahydrofolate cyclohydrolase [Source:HGNC Symbol;Acc:HGNC:7434]	2.666	1.45E-35	up
ENSG00000105011	asf1b	anti-silencing function 1B histone chaperone [Source:HGNC Symbol;Acc:HGNC:20996]	0.201	2.37E-35	down
ENSG00000170312	cdk1	cyclin dependent kinase 1 [Source:HGNC Symbol;Acc:HGNC:1722]	0.308	5.59E-35	down

ENSG00000182481	kpna2	karyopherin subunit alpha 2 [Source:HGNC Symbol;Acc:HGNC:6395]	0.365	8.58E-35	down
ENSG00000129226	cd68	CD68 molecule [Source:HGNC Symbol;Acc:HGNC:1693]	4.386	2.81E-34	up
ENSG00000116717	gadd45a	growth arrest and DNA damage inducible alpha [Source:HGNC Symbol;Acc:HGNC:4095]	3.402	3.02E-34	up
ENSG00000108852	mpp2	membrane palmitoylated protein 2 [Source:HGNC Symbol;Acc:HGNC:7220]	0.177	4.06E-34	down
ENSG00000133466	c1qtnf6	C1q and TNF related 6 [Source:HGNC Symbol;Acc:HGNC:14343]	0.24	4.29E-34	down
ENSG00000100889	pck2	phosphoenolpyruvate carboxykinase 2, mitochondrial [Source:HGNC Symbol;Acc:HGNC:8725]	3.331	5.39E-34	up
ENSG00000125746	eml2	EMAP like 2 [Source:HGNC Symbol;Acc:HGNC:18035]	3.099	6.22E-34	up
ENSG00000099194	scd	stearyl-CoA desaturase [Source:HGNC Symbol;Acc:HGNC:10571]	0.217	1.43E-33	down
ENSG00000112984	kif20a	kinesin family member 20A [Source:HGNC Symbol;Acc:HGNC:9787]	0.283	2.65E-33	down
ENSG00000198959	tgm2	transglutaminase 2 [Source:HGNC Symbol;Acc:HGNC:11778]	2.267	2.71E-33	up
ENSG00000008513	st3gal1	ST3 beta-galactoside alpha-2,3-sialyltransferase 1 [Source:HGNC Symbol;Acc:HGNC:10862]	3.582	3.68E-33	up
ENSG00000121152	ncaph	non-SMC condensin I complex subunit H [Source:HGNC Symbol;Acc:HGNC:1112]	0.238	3.95E-33	down
ENSG00000119969	hells	helicase, lymphoid specific [Source:HGNC Symbol;Acc:HGNC:4861]	0.356	5.06E-33	down
ENSG00000133636	nts	neurotensin [Source:HGNC Symbol;Acc:HGNC:8038]	0.222	6.24E-33	down
ENSG00000093009	cdc45	cell division cycle 45 [Source:HGNC Symbol;Acc:HGNC:1739]	0.298	7.26E-33	down
ENSG00000186871	ercc6l	ERCC excision repair 6 like, spindle assembly checkpoint helicase [Source:HGNC Symbol;Acc:HGNC:20794]	0.255	7.59E-33	down
ENSG00000186480	insig1	insulin induced gene 1 [Source:HGNC Symbol;Acc:HGNC:6083]	0.283	9.92E-33	down
ENSG00000100297	mcm5	minichromosome maintenance complex component 5 [Source:HGNC Symbol;Acc:HGNC:6948]	0.272	1.16E-32	down
ENSG00000141314	rhbdl3	rhomboid like 3 [Source:HGNC Symbol;Acc:HGNC:16502]	0.121	3.04E-32	down
ENSG00000169242	efna1	ephrin A1 [Source:HGNC Symbol;Acc:HGNC:3221]	0.345	5.59E-32	down
ENSG00000128567	podxl	podocalyxin like [Source:HGNC Symbol;Acc:HGNC:9171]	4.806	1.14E-31	up
ENSG00000160949	tonsl	tonsoku like, DNA repair protein [Source:HGNC Symbol;Acc:HGNC:7801]	0.277	1.45E-31	down
ENSG00000007968	e2f2	E2F transcription factor 2 [Source:HGNC Symbol;Acc:HGNC:3114]	0.188	3.97E-31	down
ENSG00000169213	rab3b	RAB3B, member RAS oncogene family [Source:HGNC Symbol;Acc:HGNC:9778]	4.615	4.44E-31	up
ENSG00000173210	ablim3	actin binding LIM protein family member 3 [Source:HGNC Symbol;Acc:HGNC:29132]	3.022	4.46E-31	up
ENSG00000120437	acat2	acetyl-CoA acetyltransferase 2 [Source:HGNC Symbol;Acc:HGNC:94]	0.216	4.71E-31	down
ENSG00000059728	mxd1	MAX dimerization protein 1 [Source:HGNC Symbol;Acc:HGNC:6761]	4.856	6.93E-31	up
ENSG00000166250	clmp	CXADR like membrane protein [Source:HGNC Symbol;Acc:HGNC:24039]	6.406	1.2E-30	up
ENSG00000242574	hla-dmb	major histocompatibility complex, class II, DM beta [Source:HGNC Symbol;Acc:HGNC:4935]	0.097	2.21E-30	down
ENSG00000134070	irak2	interleukin 1 receptor associated kinase 2 [Source:HGNC Symbol;Acc:HGNC:6113]	2.874	2.42E-30	up
ENSG00000101003	gins1	GINs complex subunit 1 [Source:HGNC Symbol;Acc:HGNC:28980]	0.3	2.67E-30	down
ENSG00000112715	vegfa	vascular endothelial growth factor A [Source:HGNC Symbol;Acc:HGNC:12680]	3.573	3.68E-30	up
ENSG00000143476	dtl	denticleless E3 ubiquitin protein ligase homolog [Source:HGNC Symbol;Acc:HGNC:30288]	0.313	3.87E-30	down
ENSG00000109084	tmem97	transmembrane protein 97 [Source:HGNC Symbol;Acc:HGNC:28106]	0.334	7.9E-30	down
ENSG00000261824	linc00662	long intergenic non-protein coding RNA 662 [Source:HGNC Symbol;Acc:HGNC:27122]	2.936	1.94E-29	up
ENSG00000122862	srgn	serglycin [Source:HGNC Symbol;Acc:HGNC:9361]	2.628	2.05E-29	up
ENSG00000113368	lmbn1	lamin B1 [Source:HGNC Symbol;Acc:HGNC:6637]	0.398	2.46E-29	down
ENSG00000142945	kif2c	kinesin family member 2C [Source:HGNC Symbol;Acc:HGNC:6393]	0.39	2.98E-29	down
ENSG00000257242	linc01619	long intergenic non-protein coding RNA 1619 [Source:HGNC Symbol;Acc:HGNC:27409]	4.469	3.13E-29	up
ENSG00000138623	sema7a	semaphorin 7A (John Milton Hagen blood group) [Source:HGNC Symbol;Acc:HGNC:10741]	5.412	3.18E-29	up
ENSG00000087074	ppp1r15a	protein phosphatase 1 regulatory subunit 15A [Source:HGNC Symbol;Acc:HGNC:14375]	2.976	3.29E-29	up
ENSG00000129354	ap1m2	adaptor related protein complex 1 subunit mu 2 [Source:HGNC Symbol;Acc:HGNC:558]	0.109	5.13E-29	down
ENSG00000137804	nusap1	nucleolar and spindle associated protein 1 [Source:HGNC Symbol;Acc:HGNC:18538]	0.329	9.48E-29	down
ENSG00000265972	txnip	thioredoxin interacting protein [Source:HGNC Symbol;Acc:HGNC:16952]	3.954	1.06E-28	up
ENSG00000087586	aurka	aurora kinase A [Source:HGNC Symbol;Acc:HGNC:11393]	0.353	2.04E-28	down
ENSG00000108932	slc16a6	solute carrier family 16 member 6 [Source:HGNC Symbol;Acc:HGNC:10927]	6.776	2.07E-28	up
ENSG00000175197	ddit3	DNA damage inducible transcript 3 [Source:HGNC Symbol;Acc:HGNC:2726]	5.339	2.46E-28	up
ENSG00000179242	cdh4	cadherin 4 [Source:HGNC Symbol;Acc:HGNC:1763]	2.609	2.92E-28	up
ENSG00000135919	serpine2	serpin family E member 2 [Source:HGNC Symbol;Acc:HGNC:8951]	2.269	3.35E-28	up
ENSG00000204389	hspa1a	heat shock protein family A (Hsp70) member 1A [Source:HGNC Symbol;Acc:HGNC:5232]	0.321	6.52E-28	down
ENSG00000147536	gins4	GINs complex subunit 4 [Source:HGNC Symbol;Acc:HGNC:28226]	0.372	9.21E-28	down
ENSG00000214357	neur1b	neuronalized E3 ubiquitin protein ligase 1B [Source:HGNC Symbol;Acc:HGNC:35422]	0.253	1.51E-27	down
ENSG00000115758	odc1	ornithine decarboxylase 1 [Source:HGNC Symbol;Acc:HGNC:8109]	2.784	2.27E-27	up
ENSG00000164649	cdca7l	cell division cycle associated 7 like [Source:HGNC Symbol;Acc:HGNC:30777]	0.345	3.12E-27	down
ENSG00000078401	edn1	endothelin 1 [Source:HGNC Symbol;Acc:HGNC:3176]	0.413	3.35E-27	down
ENSG00000134013	lox12	lysyl oxidase like 2 [Source:HGNC Symbol;Acc:HGNC:6666]	2.304	4.42E-27	up
ENSG00000076003	mcm6	minichromosome maintenance complex component 6 [Source:HGNC Symbol;Acc:HGNC:6949]	0.403	4.45E-27	down
ENSG00000284707	ac079781.5	novel transcript	2.923	4.57E-27	up

ENSG00000135476	espl1	extra spindle pole bodies like 1, separase [Source:HGNC Symbol;Acc:HGNC:16856]	0.307	4.59E-27	down
ENSG00000120217	cd274	CD274 molecule [Source:HGNC Symbol;Acc:HGNC:17635]	7.93	4.81E-27	up
ENSG00000211448	dio2	iodothyronine deiodinase 2 [Source:HGNC Symbol;Acc:HGNC:2884]	0.156	4.88E-27	down
ENSG00000101871	mid1	midline 1 [Source:HGNC Symbol;Acc:HGNC:7095]	0.272	4.94E-27	down
ENSG00000165304	melk	maternal embryonic leucine zipper kinase [Source:HGNC Symbol;Acc:HGNC:16870]	0.369	4.95E-27	down
ENSG00000187741	fanca	FA complementation group A [Source:HGNC Symbol;Acc:HGNC:3582]	0.348	6.69E-27	down
ENSG00000124145	sdca4	syndecan 4 [Source:HGNC Symbol;Acc:HGNC:10661]	2.268	6.73E-27	up
ENSG00000167900	tk1	thymidine kinase 1 [Source:HGNC Symbol;Acc:HGNC:11830]	0.184	8.05E-27	down
ENSG00000154611	psma8	proteasome 20S subunit alpha 8 [Source:HGNC Symbol;Acc:HGNC:22985]	0.171	8.2E-27	down
ENSG00000105486	lig1	DNA ligase 1 [Source:HGNC Symbol;Acc:HGNC:6598]	0.32	1.41E-26	down
ENSG00000106105	gars1	glycyl-tRNA synthetase 1 [Source:HGNC Symbol;Acc:HGNC:4162]	2.407	1.91E-26	up
ENSG00000164120	hpgd	15-hydroxyprostaglandin dehydrogenase [Source:HGNC Symbol;Acc:HGNC:5154]	0.276	2.04E-26	down
ENSG00000134690	cdca8	cell division cycle associated 8 [Source:HGNC Symbol;Acc:HGNC:14629]	0.373	2.24E-26	down
ENSG00000128564	vgf	VGF nerve growth factor inducible [Source:HGNC Symbol;Acc:HGNC:12684]	8.105	3.19E-26	up
ENSG00000085999	rad54l	RAD54 like [Source:HGNC Symbol;Acc:HGNC:9826]	0.251	3.62E-26	down
ENSG00000163993	s100p	S100 calcium binding protein P [Source:HGNC Symbol;Acc:HGNC:10504]	8.978	4.34E-26	up
ENSG00000137310	tcf19	transcription factor 19 [Source:HGNC Symbol;Acc:HGNC:11629]	0.272	5.22E-26	down
ENSG00000183696	upp1	uridine phosphorylase 1 [Source:HGNC Symbol;Acc:HGNC:12576]	4.645	8.33E-26	up
ENSG00000075702	wdr62	WD repeat domain 62 [Source:HGNC Symbol;Acc:HGNC:24502]	0.36	1.16E-25	down
ENSG00000106541	agr2	anterior gradient 2, protein disulphide isomerase family member [Source:HGNC Symbol;Acc:HGNC:328]	0.352	1.45E-25	down
ENSG00000165480	ska3	spindle and kinetochore associated complex subunit 3 [Source:HGNC Symbol;Acc:HGNC:20262]	0.304	1.72E-25	down
ENSG00000167889	mgat5b	alpha-1,6-mannosylglycoprotein 6-beta-N-acetylglucosaminyltransferase B [Source:HGNC Symbol;Acc:HGNC:24140]	0.388	2.26E-25	down
ENSG00000167670	chaf1a	chromatin assembly factor 1 subunit A [Source:HGNC Symbol;Acc:HGNC:1910]	0.277	3.21E-25	down
ENSG00000160298	c21orf58	chromosome 21 open reading frame 58 [Source:HGNC Symbol;Acc:HGNC:1300]	0.262	3.69E-25	down
ENSG00000053108	fstl4	folliculin like 4 [Source:HGNC Symbol;Acc:HGNC:21389]	0.139	3.71E-25	down
ENSG00000127564	pkmyt1	protein kinase, membrane associated tyrosine/threonine 1 [Source:HGNC Symbol;Acc:HGNC:29650]	0.238	4.35E-25	down
ENSG00000125378	bmp4	bone morphogenetic protein 4 [Source:HGNC Symbol;Acc:HGNC:1071]	0.354	7E-25	down
ENSG00000145386	ccna2	cyclin A2 [Source:HGNC Symbol;Acc:HGNC:1578]	0.353	7.47E-25	down
ENSG00000172164	sntb1	syntrophin beta 1 [Source:HGNC Symbol;Acc:HGNC:11168]	6.484	1.28E-24	up
ENSG00000256802	ac022613.1	novel transcript, antisense to TJP1	0.326	1.48E-24	down
ENSG00000148120	aopep	aminopeptidase O (putative) [Source:HGNC Symbol;Acc:HGNC:1361]	0.351	1.99E-24	down
ENSG00000170485	npas2	neuronal PAS domain protein 2 [Source:HGNC Symbol;Acc:HGNC:7895]	2.407	2.33E-24	up
ENSG00000021826	cps1	carbamoyl-phosphate synthase 1 [Source:HGNC Symbol;Acc:HGNC:2323]	0.192	5.58E-24	down
ENSG00000164109	mad2l1	mitotic arrest deficient 2 like 1 [Source:HGNC Symbol;Acc:HGNC:6763]	0.401	9.45E-24	down
ENSG00000019186	cyp24a1	cytochrome P450 family 24 subfamily A member 1 [Source:HGNC Symbol;Acc:HGNC:2602]	0.232	1E-23	down
ENSG00000101104	pabpc1l	poly(A) binding protein cytoplasmic 1 like [Source:HGNC Symbol;Acc:HGNC:15797]	3.344	1.12E-23	up
ENSG00000108984	map2k6	mitogen-activated protein kinase kinase 6 [Source:HGNC Symbol;Acc:HGNC:6846]	0.266	1.19E-23	down
ENSG00000131737	krt34	keratin 34 [Source:HGNC Symbol;Acc:HGNC:6452]	12.545	1.58E-23	up
ENSG00000117143	uap1	UDP-N-acetylglucosamine pyrophosphorylase 1 [Source:HGNC Symbol;Acc:HGNC:12457]	2.459	1.67E-23	up
ENSG00000244128	linc01322	long intergenic non-protein coding RNA 1322 [Source:HGNC Symbol;Acc:HGNC:50528]	4.258	1.83E-23	up
ENSG00000259207	itgb3	integrin subunit beta 3 [Source:HGNC Symbol;Acc:HGNC:6156]	6.165	1.97E-23	up
ENSG00000162063	ccnf	cyclin F [Source:HGNC Symbol;Acc:HGNC:1591]	0.314	3.13E-23	down
ENSG00000204388	hspa1b	heat shock protein family A (Hsp70) member 1B [Source:HGNC Symbol;Acc:HGNC:5233]	0.417	3.37E-23	down
ENSG00000137486	arrb1	arrestin beta 1 [Source:HGNC Symbol;Acc:HGNC:711]	0.175	3.81E-23	down
ENSG00000077152	ube2t	ubiquitin conjugating enzyme E2 T [Source:HGNC Symbol;Acc:HGNC:25009]	0.365	5.96E-23	down
ENSG00000166508	mcm7	minichromosome maintenance complex component 7 [Source:HGNC Symbol;Acc:HGNC:6950]	0.337	7.72E-23	down
ENSG00000073008	pvr	PVR cell adhesion molecule [Source:HGNC Symbol;Acc:HGNC:9705]	2.115	8.14E-23	up
ENSG00000149599	dusp15	dual specificity phosphatase 15 [Source:HGNC Symbol;Acc:HGNC:16236]	6.283	8.52E-23	up
ENSG00000185022	maff	MAF bZIP transcription factor F [Source:HGNC Symbol;Acc:HGNC:6780]	2.993	1.26E-22	up
ENSG00000125826	rbck1	RANBP2-type and C3HC4-type zinc finger containing 1 [Source:HGNC Symbol;Acc:HGNC:15864]	2.942	1.47E-22	up
ENSG00000149571	kirrel3	kirre like nephrin family adhesion molecule 3 [Source:HGNC Symbol;Acc:HGNC:23204]	2.594	1.59E-22	up
ENSG00000259316	ac087632.2	novel protein	0.235	1.71E-22	down
ENSG00000159403	c1r	complement C1r [Source:HGNC Symbol;Acc:HGNC:1246]	0.432	1.78E-22	down
ENSG00000071539	trip13	thyroid hormone receptor interactor 13 [Source:HGNC Symbol;Acc:HGNC:12307]	0.437	2.08E-22	down
ENSG00000108854	smurf2	SMAD specific E3 ubiquitin protein ligase 2 [Source:HGNC Symbol;Acc:HGNC:16809]	2.622	2.11E-22	up
ENSG00000074416	mgll	monoglyceride lipase [Source:HGNC Symbol;Acc:HGNC:17038]	2.238	2.72E-22	up
ENSG00000082641	nfe2l1	nuclear factor, erythroid 2 like 1 [Source:HGNC Symbol;Acc:HGNC:7781]	2.171	2.83E-22	up
ENSG00000139725	rhof	ras homolog family member F, filopodia associated [Source:HGNC	3.228	4.2E-22	up

ENSG00000012124	cd22	Symbol;Acc:HGNC:15703]			
ENSG00000072310	sreb1	CD22 molecule [Source:HGNC Symbol;Acc:HGNC:1643]	28.454	4.84E-22	up
ENSG00000138092	cenpo	sterol regulatory element binding transcription factor 1 [Source:HGNC Symbol;Acc:HGNC:11289]	0.452	5.61E-22	down
ENSG00000186185	kif18b	centromere protein O [Source:HGNC Symbol;Acc:HGNC:28152]	0.408	6.3E-22	down
ENSG00000164949	gem	kinesin family member 18B [Source:HGNC Symbol;Acc:HGNC:27102]	0.362	8.82E-22	down
ENSG00000166825	anpep	GTP binding protein overexpressed in skeletal muscle [Source:HGNC Symbol;Acc:HGNC:4234]	4.375	1.14E-21	up
ENSG00000159399	hk2	alanyl aminopeptidase, membrane [Source:HGNC Symbol;Acc:HGNC:500]	6.129	2.58E-21	up
ENSG00000110888	caprin2	hexokinase 2 [Source:HGNC Symbol;Acc:HGNC:4923]	9.132	3.31E-21	up
ENSG00000088826	smox	caprin family member 2 [Source:HGNC Symbol;Acc:HGNC:21259]	3.6	3.56E-21	up
ENSG00000056558	traf1	spermine oxidase [Source:HGNC Symbol;Acc:HGNC:15862]	3.198	3.56E-21	up
ENSG00000171320	esco2	TNF receptor associated factor 1 [Source:HGNC Symbol;Acc:HGNC:12031]	3.303	3.83E-21	up
ENSG00000184156	kcnq3	establishment of sister chromatid cohesion N-acetyltransferase 2 [Source:HGNC Symbol;Acc:HGNC:27230]	0.211	3.99E-21	down
ENSG00000171246	nptx1	potassium voltage-gated channel subfamily Q member 3 [Source:HGNC Symbol;Acc:HGNC:6297]	9.003	4.45E-21	up
ENSG00000010292	ncapd2	neuronal pentraxin 1 [Source:HGNC Symbol;Acc:HGNC:7952]	0.238	4.94E-21	down
ENSG00000136943	ctsv	non-SMC condensin I complex subunit D2 [Source:HGNC Symbol;Acc:HGNC:24305]	0.45	5.48E-21	down
ENSG00000101057	mybl2	cathepsin V [Source:HGNC Symbol;Acc:HGNC:2538]	0.247	6.54E-21	down
ENSG00000146072	tnfrsf21	MYB proto-oncogene like 2 [Source:HGNC Symbol;Acc:HGNC:7548]	0.246	9.61E-21	down
ENSG00000014138	pola2	TNF receptor superfamily member 21 [Source:HGNC Symbol;Acc:HGNC:13469]	2.158	1.23E-20	up
ENSG00000149260	capn5	DNA polymerase alpha 2, accessory subunit [Source:HGNC Symbol;Acc:HGNC:30073]	0.295	1.28E-20	down
ENSG00000177410	zfas1	calpain 5 [Source:HGNC Symbol;Acc:HGNC:1482]	2.435	1.63E-20	up
ENSG00000005981	asb4	ZNF1 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:33101]	2.54	1.75E-20	up
ENSG00000004799	pdk4	ankyrin repeat and SOCS box containing 4 [Source:HGNC Symbol;Acc:HGNC:16009]	0.131	2.5E-20	down
ENSG000000204682	mir1915hg	pyruvate dehydrogenase kinase 4 [Source:HGNC Symbol;Acc:HGNC:8812]	0.349	2.75E-20	down
ENSG00000148344	ptges	MIR1915 host gene [Source:HGNC Symbol;Acc:HGNC:31448]	0.358	2.81E-20	down
ENSG00000074181	notch3	prostaglandin E synthase [Source:HGNC Symbol;Acc:HGNC:9599]	2.983	2.82E-20	up
ENSG00000095752	il11	notch receptor 3 [Source:HGNC Symbol;Acc:HGNC:7883]	0.241	2.9E-20	down
ENSG00000164638	slc29a4	interleukin 11 [Source:HGNC Symbol;Acc:HGNC:5966]	2.903	3.04E-20	up
ENSG00000166401	serpinb8	solute carrier family 29 member 4 [Source:HGNC Symbol;Acc:HGNC:23097]	0.291	3.32E-20	down
ENSG00000149636	dsn1	serpin family B member 8 [Source:HGNC Symbol;Acc:HGNC:8952]	2.84	3.63E-20	up
ENSG00000170689	hoxb9	DSN1 component of MIS12 kinetochore complex [Source:HGNC Symbol;Acc:HGNC:16165]	0.39	4.43E-20	down
ENSG00000169710	fasn	homeobox B9 [Source:HGNC Symbol;Acc:HGNC:5120]	2.54	4.96E-20	up
ENSG00000075461	cacng4	fatty acid synthase [Source:HGNC Symbol;Acc:HGNC:3594]	0.323	5.06E-20	down
ENSG00000124762	cdkn1a	calcium voltage-gated channel auxiliary subunit gamma 4 [Source:HGNC Symbol;Acc:HGNC:1408]	0.326	5.24E-20	down
ENSG00000149503	incenp	cyclin dependent kinase inhibitor 1A [Source:HGNC Symbol;Acc:HGNC:1784]	2.682	6.33E-20	up
ENSG00000153132	clgn	inner centromere protein [Source:HGNC Symbol;Acc:HGNC:6058]	0.297	1.68E-19	down
ENSG00000088002	sult2b1	calmegin [Source:HGNC Symbol;Acc:HGNC:2060]	3.31	1.9E-19	up
ENSG000000284946	ac068831.6	sulfotransferase family 2B member 1 [Source:HGNC Symbol;Acc:HGNC:11459]	0.105	2.09E-19	down
ENSG00000185585	olfml2a	novel protein	0.346	2.44E-19	down
ENSG00000011422	plaur	olfactomedin like 2A [Source:HGNC Symbol;Acc:HGNC:27270]	0.368	3.05E-19	down
ENSG00000162174	asrgl1	plasminogen activator, urokinase receptor [Source:HGNC Symbol;Acc:HGNC:9053]	2.636	3.09E-19	up
ENSG00000168078	pbk	asparaginase and isoaspartyl peptidase 1 [Source:HGNC Symbol;Acc:HGNC:16448]	0.286	3.95E-19	down
ENSG00000171241	shcbp1	PDZ binding kinase [Source:HGNC Symbol;Acc:HGNC:18282]	0.356	5.02E-19	down
ENSG00000140284	slc27a2	SHC binding and spindle associated 1 [Source:HGNC Symbol;Acc:HGNC:29547]	0.337	5.18E-19	down
ENSG00000197043	anxa6	solute carrier family 27 member 2 [Source:HGNC Symbol;Acc:HGNC:10996]	0.497	5.56E-19	down
ENSG00000106123	ephb6	annexin A6 [Source:HGNC Symbol;Acc:HGNC:544]	0.326	5.68E-19	down
ENSG00000157216	ssbp3	EPH receptor B6 [Source:HGNC Symbol;Acc:HGNC:3396]	0.143	6.08E-19	down
ENSG00000166750	slfn5	single stranded DNA binding protein 3 [Source:HGNC Symbol;Acc:HGNC:15674]	0.321	9.2E-19	down
ENSG00000145247	ociad2	schlafen family member 5 [Source:HGNC Symbol;Acc:HGNC:28286]	5.996	1.43E-18	up
ENSG00000143416	selenbp1	OCIA domain containing 2 [Source:HGNC Symbol;Acc:HGNC:28685]	3.276	1.62E-18	up
ENSG00000115163	cenpa	selenium binding protein 1 [Source:HGNC Symbol;Acc:HGNC:10719]	0.202	1.73E-18	down
ENSG00000101280	angpt4	centromere protein A [Source:HGNC Symbol;Acc:HGNC:1851]	0.375	2.08E-18	down
ENSG00000152253	spc25	angiopoietin 4 [Source:HGNC Symbol;Acc:HGNC:487]	17.551	2.44E-18	up
ENSG00000160200	cbs	SPC25 component of NDC80 kinetochore complex [Source:HGNC Symbol;Acc:HGNC:24031]	0.287	3.02E-18	down
ENSG00000106070	grb10	cystathionine beta-synthase [Source:HGNC Symbol;Acc:HGNC:1550]	2.271	3.41E-18	up
ENSG00000102384	cenpi	growth factor receptor bound protein 10 [Source:HGNC Symbol;Acc:HGNC:4564]	2.176	3.47E-18	up
ENSG00000198910	l1cam	centromere protein I [Source:HGNC Symbol;Acc:HGNC:3968]	0.336	5E-18	down
ENSG00000175471	mctp1	L1 cell adhesion molecule [Source:HGNC Symbol;Acc:HGNC:6470]	3.1	5.28E-18	up
ENSG00000198517	maf	multiple C2 and transmembrane domain containing 1 [Source:HGNC Symbol;Acc:HGNC:26183]	5.077	5.46E-18	up
ENSG00000148154	ugcg	MAF bZIP transcription factor K [Source:HGNC Symbol;Acc:HGNC:6782]	2.463	5.53E-18	up
ENSG00000100612	dhrr7	UDP-glucose ceramide glucosyltransferase [Source:HGNC Symbol;Acc:HGNC:12524]	3.249	6.04E-18	up
		dehydrogenase/reductase 7 [Source:HGNC Symbol;Acc:HGNC:21524]	2.318	8.67E-18	up

ENSG0000006042	tmem98	transmembrane protein 98 [Source:HGNC Symbol;Acc:HGNC:24529]	0.23	8.95E-18	down
ENSG00000167325	rrm1	ribonucleotide reductase catalytic subunit M1 [Source:HGNC Symbol;Acc:HGNC:10451]	0.395	9.09E-18	down
ENSG00000166347	cyb5a	cytochrome b5 type A [Source:HGNC Symbol;Acc:HGNC:2570]	0.395	9.5E-18	down
ENSG00000133805	ampd3	adenosine monophosphate deaminase 3 [Source:HGNC Symbol;Acc:HGNC:470]	3.473	1.17E-17	up
ENSG00000137261	kiaa0319	KIAA0319 [Source:HGNC Symbol;Acc:HGNC:21580]	2.736	1.71E-17	up
ENSG00000072041	slc6a15	solute carrier family 6 member 15 [Source:HGNC Symbol;Acc:HGNC:13621]	3.146	1.99E-17	up
ENSG00000066735	kif26a	kinesin family member 26A [Source:HGNC Symbol;Acc:HGNC:20226]	0.294	2.19E-17	down
ENSG00000118985	ell2	elongation factor for RNA polymerase II 2 [Source:HGNC Symbol;Acc:HGNC:17064]	2.71	2.46E-17	up
ENSG00000198901	prc1	protein regulator of cytokinesis 1 [Source:HGNC Symbol;Acc:HGNC:9341]	0.406	2.61E-17	down
ENSG00000140511	hapln3	hyaluronan and proteoglycan link protein 3 [Source:HGNC Symbol;Acc:HGNC:21446]	0.243	2.77E-17	down
ENSG00000062822	pold1	DNA polymerase delta 1, catalytic subunit [Source:HGNC Symbol;Acc:HGNC:9175]	0.398	2.81E-17	down
ENSG00000184903	immp2l	inner mitochondrial membrane peptidase subunit 2 [Source:HGNC Symbol;Acc:HGNC:14598]	2.48	3.27E-17	up
ENSG00000065328	mcm10	minichromosome maintenance 10 replication initiation factor [Source:HGNC Symbol;Acc:HGNC:18043]	0.241	3.62E-17	down
ENSG00000100479	pole2	DNA polymerase epsilon 2, accessory subunit [Source:HGNC Symbol;Acc:HGNC:9178]	0.339	3.83E-17	down
ENSG00000151725	cenpu	centromere protein U [Source:HGNC Symbol;Acc:HGNC:21348]	0.355	4.08E-17	down
ENSG00000171793	ctps1	CTP synthase 1 [Source:HGNC Symbol;Acc:HGNC:2519]	2.036	6.93E-17	up
ENSG00000129173	e2f8	E2F transcription factor 8 [Source:HGNC Symbol;Acc:HGNC:24727]	0.193	7.44E-17	down
ENSG00000104147	oip5	Opa interacting protein 5 [Source:HGNC Symbol;Acc:HGNC:20300]	0.325	8.1E-17	down
ENSG00000126822	plekhg3	pleckstrin homology and RhoGEF domain containing G3 [Source:HGNC Symbol;Acc:HGNC:20364]	0.464	8.4E-17	down
ENSG00000106462	ezh2	enhancer of zeste 2 polycomb repressive complex 2 subunit [Source:HGNC Symbol;Acc:HGNC:3527]	0.405	8.6E-17	down
ENSG00000246985	socs2-as1	Socs2 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:27054]	4.475	9.81E-17	up
ENSG00000131153	gins2	GINS complex subunit 2 [Source:HGNC Symbol;Acc:HGNC:24575]	0.208	9.87E-17	down
ENSG00000108602	aldh3a1	aldehyde dehydrogenase 3 family member A1 [Source:HGNC Symbol;Acc:HGNC:405]	0.293	1.07E-16	down
ENSG00000177602	haspin	histone H3 associated protein kinase [Source:HGNC Symbol;Acc:HGNC:19682]	0.297	1.4E-16	down
ENSG00000198223	csf2ra	colony stimulating factor 2 receptor subunit alpha [Source:HGNC Symbol;Acc:HGNC:2435]	2.983	1.76E-16	up
ENSG00000159167	stc1	stanniocalcin 1 [Source:HGNC Symbol;Acc:HGNC:11373]	4.62	2.05E-16	up
ENSG00000117650	nek2	NIMA related kinase 2 [Source:HGNC Symbol;Acc:HGNC:7745]	0.436	2.06E-16	down
ENSG00000102879	coro1a	coronin 1A [Source:HGNC Symbol;Acc:HGNC:2252]	0.087	2.12E-16	down
ENSG00000104213	pdgfrl	platelet derived growth factor receptor like [Source:HGNC Symbol;Acc:HGNC:8805]	0.218	2.25E-16	down
ENSG00000074370	atp2a3	ATPase sarcoplasmic/endoplasmic reticulum Ca2+ transporting 3 [Source:HGNC Symbol;Acc:HGNC:813]	2.279	2.45E-16	up
ENSG00000133067	lgr6	leucine rich repeat containing G protein-coupled receptor 6 [Source:HGNC Symbol;Acc:HGNC:19719]	0.168	2.78E-16	down
ENSG00000106483	sfrp4	secreted frizzled related protein 4 [Source:HGNC Symbol;Acc:HGNC:10778]	0.096	2.86E-16	down
ENSG00000125772	gpcpd1	glycerophosphocholine phosphodiesterase 1 [Source:HGNC Symbol;Acc:HGNC:26957]	3.765	2.98E-16	up
ENSG00000105409	atp1a3	ATPase Na+/K+ transporting subunit alpha 3 [Source:HGNC Symbol;Acc:HGNC:801]	0.082	3.01E-16	down
ENSG00000159259	chaf1b	chromatin assembly factor 1 subunit B [Source:HGNC Symbol;Acc:HGNC:1911]	0.316	3.14E-16	down
ENSG00000137135	arhgef39	Rho guanine nucleotide exchange factor 39 [Source:HGNC Symbol;Acc:HGNC:25909]	0.341	3.42E-16	down
ENSG00000125740	fosb	FosB proto-oncogene, AP-1 transcription factor subunit [Source:HGNC Symbol;Acc:HGNC:3797]	0.192	3.88E-16	down
ENSG00000160285	lss	lanosterol synthase [Source:HGNC Symbol;Acc:HGNC:6708]	0.405	4.35E-16	down
ENSG00000146410	mtfr2	mitochondrial fission regulator 2 [Source:HGNC Symbol;Acc:HGNC:21115]	0.288	4.41E-16	down
ENSG00000106617	prkag2	protein kinase AMP-activated non-catalytic subunit gamma 2 [Source:HGNC Symbol;Acc:HGNC:9386]	2.331	4.47E-16	up
ENSG00000154920	eme1	essential meiotic structure-specific endonuclease 1 [Source:HGNC Symbol;Acc:HGNC:24965]	0.396	4.48E-16	down
ENSG00000178105	ddx10	DEAD-box helicase 10 [Source:HGNC Symbol;Acc:HGNC:2735]	2.197	4.51E-16	up
ENSG00000111445	rfc5	replication factor C subunit 5 [Source:HGNC Symbol;Acc:HGNC:9973]	0.375	4.68E-16	down
ENSG00000109805	ncapg	non-SMC condensin I complex subunit G [Source:HGNC Symbol;Acc:HGNC:24304]	0.355	4.86E-16	down
ENSG00000123080	cdkn2c	cyclin dependent kinase inhibitor 2C [Source:HGNC Symbol;Acc:HGNC:1789]	0.298	4.87E-16	down
ENSG00000101412	e2f1	E2F transcription factor 1 [Source:HGNC Symbol;Acc:HGNC:3113]	0.333	5.37E-16	down
ENSG00000214548	meg3	maternally expressed 3 [Source:HGNC Symbol;Acc:HGNC:14575]	3.848	5.9E-16	up
ENSG00000071242	rps6ka2	ribosomal protein S6 kinase A2 [Source:HGNC Symbol;Acc:HGNC:10431]	28.197	6.03E-16	up
ENSG00000255248	mir100hg	mir-100-let-7a-2-mir-125b-1 cluster host gene [Source:HGNC Symbol;Acc:HGNC:39522]	2.961	6.7E-16	up
ENSG00000126246	igflr1	IGF like family receptor 1 [Source:HGNC Symbol;Acc:HGNC:23620]	0.17	6.92E-16	down
ENSG00000063180	ca11	carbonic anhydrase 11 [Source:HGNC Symbol;Acc:HGNC:1370]	0.224	6.97E-16	down
ENSG00000130164	ldlr	low density lipoprotein receptor [Source:HGNC Symbol;Acc:HGNC:6547]	0.3	8.29E-16	down
ENSG00000134215	vav3	vav guanine nucleotide exchange factor 3 [Source:HGNC Symbol;Acc:HGNC:12659]	0.148	9.42E-16	down

ENSG00000120899	ptk2b	protein tyrosine kinase 2 beta [Source:HGNC Symbol;Acc:HGNC:9612]	2.248	9.98E-16	up
ENSG00000171346	krt15	keratin 15 [Source:HGNC Symbol;Acc:HGNC:6421]	3.735	1.02E-15	up
ENSG00000105290	aplp1	amyloid beta precursor like protein 1 [Source:HGNC Symbol;Acc:HGNC:597]	0.261	1.1E-15	down
ENSG00000145107	tm4sf19	transmembrane 4 L six family member 19 [Source:HGNC Symbol;Acc:HGNC:25167]	4.982	1.18E-15	up
ENSG00000123358	nr4a1	nuclear receptor subfamily 4 group A member 1 [Source:HGNC Symbol;Acc:HGNC:7980]	0.371	1.59E-15	down
ENSG00000176974	shmt1	serine hydroxymethyltransferase 1 [Source:HGNC Symbol;Acc:HGNC:10850]	0.402	1.75E-15	down
ENSG00000176890	tyms	thymidylate synthetase [Source:HGNC Symbol;Acc:HGNC:12441]	0.393	1.83E-15	down
ENSG00000154027	ak5	adenylate kinase 5 [Source:HGNC Symbol;Acc:HGNC:365]	3.047	2.29E-15	up
ENSG00000026559	kcng1	potassium voltage-gated channel modifier subfamily G member 1 [Source:HGNC Symbol;Acc:HGNC:6248]	2.741	2.38E-15	up
ENSG00000140105	wars1	tryptophanyl-tRNA synthetase 1 [Source:HGNC Symbol;Acc:HGNC:12729]	2.238	2.39E-15	up
ENSG00000115738	id2	inhibitor of DNA binding 2 [Source:HGNC Symbol;Acc:HGNC:5361]	0.375	2.44E-15	down
ENSG00000183421	ripk4	receptor interacting serine/threonine kinase 4 [Source:HGNC Symbol;Acc:HGNC:496]	0.44	2.7E-15	down
ENSG00000165821	sall2	spalt like transcription factor 2 [Source:HGNC Symbol;Acc:HGNC:10526]	0.177	2.8E-15	down
ENSG000000287287	al133476.1	novel transcript, antisense to RUSC2	3.354	3.16E-15	up
ENSG00000198794	scamp5	secretory carrier membrane protein 5 [Source:HGNC Symbol;Acc:HGNC:30386]	0.351	3.17E-15	down
ENSG00000154096	thy1	Thy-1 cell surface antigen [Source:HGNC Symbol;Acc:HGNC:11801]	0.235	3.41E-15	down
ENSG00000165795	ndrg2	NDRG family member 2 [Source:HGNC Symbol;Acc:HGNC:14460]	0.195	3.52E-15	down
ENSG00000130816	dnmt1	DNA methyltransferase 1 [Source:HGNC Symbol;Acc:HGNC:2976]	0.42	4E-15	down
ENSG00000111665	cdca3	cell division cycle associated 3 [Source:HGNC Symbol;Acc:HGNC:14624]	0.387	4.79E-15	down
ENSG00000249992	tmem158	transmembrane protein 158 (gene/pseudogene) [Source:HGNC Symbol;Acc:HGNC:30293]	4.983	5.16E-15	up
ENSG00000197587	dmbx1	diencephalon/mesencephalon homeobox 1 [Source:HGNC Symbol;Acc:HGNC:19026]	0.201	6.04E-15	down
ENSG00000099260	palmd	palmdelphin [Source:HGNC Symbol;Acc:HGNC:15846]	0.234	7.61E-15	down
ENSG00000167964	rab26	RAB26, member RAS oncogene family [Source:HGNC Symbol;Acc:HGNC:14259]	0.25	7.84E-15	down
ENSG00000109674	nei3	nei like DNA glycosylase 3 [Source:HGNC Symbol;Acc:HGNC:24573]	0.307	9.23E-15	down
ENSG00000112029	fbxo5	F-box protein 5 [Source:HGNC Symbol;Acc:HGNC:13584]	0.353	1.19E-14	down
ENSG00000162878	pkdcc	protein kinase domain containing, cytoplasmic [Source:HGNC Symbol;Acc:HGNC:25123]	0.389	1.3E-14	down
ENSG00000175063	ube2c	ubiquitin conjugating enzyme E2 C [Source:HGNC Symbol;Acc:HGNC:15937]	0.345	1.44E-14	down
ENSG00000100346	cacna1i	calcium voltage-gated channel subunit alpha1 I [Source:HGNC Symbol;Acc:HGNC:1396]	0.045	1.5E-14	down
ENSG00000161888	spc24	SPC24 component of NDC80 kinetochore complex [Source:HGNC Symbol;Acc:HGNC:26913]	0.296	1.75E-14	down
ENSG00000074935	tube1	tubulin epsilon 1 [Source:HGNC Symbol;Acc:HGNC:20775]	2.663	2.17E-14	up
ENSG00000137936	bcar3	BCAR3 adaptor protein, NSP family member [Source:HGNC Symbol;Acc:HGNC:973]	2.03	2.36E-14	up
ENSG00000253671	ac027117.1	novel transcript	0.119	2.42E-14	down
ENSG00000072071	adgr1	adhesion G protein-coupled receptor L1 [Source:HGNC Symbol;Acc:HGNC:20973]	0.361	2.42E-14	down
ENSG00000197467	col13a1	collagen type XIII alpha 1 chain [Source:HGNC Symbol;Acc:HGNC:2190]	8.709	2.56E-14	up
ENSG00000165389	sptssa	serine palmitoyltransferase small subunit A [Source:HGNC Symbol;Acc:HGNC:20361]	0.467	2.64E-14	down
ENSG00000198624	ccdc69	coiled-coil domain containing 69 [Source:HGNC Symbol;Acc:HGNC:24487]	0.176	3.1E-14	down
ENSG00000101347	samhd1	SAM and HD domain containing deoxynucleoside triphosphate triphosphohydrolase 1 [Source:HGNC Symbol;Acc:HGNC:15925]	0.354	3.23E-14	down
ENSG00000258017	ac011603.3	novel transcript, antisense to TUBA1B	0.168	3.35E-14	down
ENSG00000051596	thoc3	THO complex 3 [Source:HGNC Symbol;Acc:HGNC:19072]	0.468	3.6E-14	down
ENSG00000187735	tcea1	transcription elongation factor A1 [Source:HGNC Symbol;Acc:HGNC:11612]	2.158	4.5E-14	up
ENSG00000132688	nes	nestin [Source:HGNC Symbol;Acc:HGNC:7756]	0.169	4.68E-14	down
ENSG00000123473	stil	STIL centriolar assembly protein [Source:HGNC Symbol;Acc:HGNC:10879]	0.302	4.79E-14	down
ENSG00000134057	ccnb1	cyclin B1 [Source:HGNC Symbol;Acc:HGNC:1579]	0.406	6.23E-14	down
ENSG00000120211	insl4	insulin like 4 [Source:HGNC Symbol;Acc:HGNC:6087]	0.32	6.96E-14	down
ENSG00000276043	uhrf1	ubiquitin like with PHD and ring finger domains 1 [Source:HGNC Symbol;Acc:HGNC:12556]	0.352	7.82E-14	down
ENSG00000101213	ptk6	protein tyrosine kinase 6 [Source:HGNC Symbol;Acc:HGNC:9617]	4.091	8.19E-14	up
ENSG00000279333	ac096636.1	novel transcript	2.798	8.47E-14	up
ENSG00000134291	tmem106c	transmembrane protein 106C [Source:HGNC Symbol;Acc:HGNC:28775]	0.417	8.52E-14	down
ENSG00000268089	gabrq	gamma-aminobutyric acid type A receptor subunit theta [Source:HGNC Symbol;Acc:HGNC:14454]	0.126	9.31E-14	down
ENSG00000175040	chst2	carbohydrate sulfotransferase 2 [Source:HGNC Symbol;Acc:HGNC:1970]	3.784	1.02E-13	up
ENSG00000197872	cyria	CYFIP related Rac1 interactor A [Source:HGNC Symbol;Acc:HGNC:25373]	17.397	1.06E-13	up
ENSG00000258655	arhgap5-as1	ARHAP5 antisense RNA 1 (head to head) [Source:HGNC Symbol;Acc:HGNC:20279]	3.035	1.12E-13	up
ENSG00000154760	slfn13	schlafen family member 13 [Source:HGNC Symbol;Acc:HGNC:26481]	0.311	1.16E-13	down
ENSG00000003147	ica1	islet cell autoantigen 1 [Source:HGNC Symbol;Acc:HGNC:5343]	2.991	1.24E-13	up
ENSG00000176678	foxl1	forkhead box L1 [Source:HGNC Symbol;Acc:HGNC:3817]	3.656	1.38E-13	up
ENSG00000169302	stk32a	serine/threonine kinase 32A [Source:HGNC Symbol;Acc:HGNC:28317]	3.469	1.44E-13	up
ENSG00000143384	mcl1	MCL1 apoptosis regulator, BCL2 family member [Source:HGNC Symbol;Acc:HGNC:6943]	2.101	1.52E-13	up
ENSG00000157150	timp4	TIMP metalloproteinase inhibitor 4 [Source:HGNC Symbol;Acc:HGNC:11823]	2.47	1.73E-13	up

ENSG00000136826	klf4	Kruppel like factor 4 [Source:HGNC Symbol;Acc:HGNC:6348]	2.286	1.81E-13	up
ENSG00000170779	cdca4	cell division cycle associated 4 [Source:HGNC Symbol;Acc:HGNC:14625]	0.467	1.87E-13	down
ENSG00000076248	ung	uracil DNA glycosylase [Source:HGNC Symbol;Acc:HGNC:12572]	0.457	1.9E-13	down
ENSG00000246640	picart1	p53 inducible cancer associated RNA transcript 1 [Source:HGNC Symbol;Acc:HGNC:27576]	3.55	1.96E-13	up
ENSG00000174567	golt1a	golgi transport 1A [Source:HGNC Symbol;Acc:HGNC:24766]	5.599	2.28E-13	up
ENSG00000126215	xrcc3	X-ray repair cross complementing 3 [Source:HGNC Symbol;Acc:HGNC:12830]	0.333	3.65E-13	down
ENSG00000243649	cfb	complement factor B [Source:HGNC Symbol;Acc:HGNC:1037]	0.456	3.95E-13	down
ENSG00000104368	plat	plasminogen activator, tissue type [Source:HGNC Symbol;Acc:HGNC:9051]	0.247	4.05E-13	down
ENSG00000092621	phgdh	phosphoglycerate dehydrogenase [Source:HGNC Symbol;Acc:HGNC:8923]	2.794	4.07E-13	up
ENSG00000117519	cnn3	calponin 3 [Source:HGNC Symbol;Acc:HGNC:2157]	0.403	4.34E-13	down
ENSG00000175592	fosl1	FOS like 1, AP-1 transcription factor subunit [Source:HGNC Symbol;Acc:HGNC:13718]	2.529	4.63E-13	up
ENSG00000257335	mgam	maltase-glucoamylase [Source:HGNC Symbol;Acc:HGNC:7043]	0.081	5.36E-13	down
ENSG00000104047	dtwd1	DTW domain containing 1 [Source:HGNC Symbol;Acc:HGNC:30926]	2.036	5.6E-13	up
ENSG00000135116	hrk	harakiri, BCL2 interacting protein [Source:HGNC Symbol;Acc:HGNC:5185]	7.498	5.82E-13	up
ENSG00000179841	akap5	A-kinase anchoring protein 5 [Source:HGNC Symbol;Acc:HGNC:375]	0.169	6.19E-13	down
ENSG00000164379	foxq1	forkhead box Q1 [Source:HGNC Symbol;Acc:HGNC:20951]	2.402	6.84E-13	up
ENSG00000177084	pole	DNA polymerase epsilon, catalytic subunit [Source:HGNC Symbol;Acc:HGNC:9177]	0.373	7.71E-13	down
ENSG00000188486	h2ax	H2A.X variant histone [Source:HGNC Symbol;Acc:HGNC:4739]	0.294	7.84E-13	down
ENSG00000236404	vldlr-as1	VLDLR antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:49621]	9.447	8.07E-13	up
ENSG00000171227	tmem37	transmembrane protein 37 [Source:HGNC Symbol;Acc:HGNC:18216]	0.149	8.53E-13	down
ENSG00000184661	cdca2	cell division cycle associated 2 [Source:HGNC Symbol;Acc:HGNC:14623]	0.396	8.61E-13	down
ENSG00000118785	spp1	secreted phosphoprotein 1 [Source:HGNC Symbol;Acc:HGNC:11255]	2.171	8.96E-13	up
ENSG00000156113	kcnma1	potassium calcium-activated channel subfamily M alpha 1 [Source:HGNC Symbol;Acc:HGNC:6284]	2.844	9.3E-13	up
ENSG00000204767	insyn2b	inhibitory synaptic factor family member 2B [Source:HGNC Symbol;Acc:HGNC:37271]	5.871	1E-12	up
ENSG00000134954	ets1	ETS proto-oncogene 1, transcription factor [Source:HGNC Symbol;Acc:HGNC:3488]	3.388	1.03E-12	up
ENSG00000163083	inhbb	inhibin subunit beta B [Source:HGNC Symbol;Acc:HGNC:6067]	0.377	1.04E-12	down
ENSG00000196136	serpina3	serpin family A member 3 [Source:HGNC Symbol;Acc:HGNC:16]	0.274	1.07E-12	down
ENSG00000144554	fancd2	FA complementation group D2 [Source:HGNC Symbol;Acc:HGNC:3585]	0.375	1.31E-12	down
ENSG00000175745	nr2f1	nuclear receptor subfamily 2 group F member 1 [Source:HGNC Symbol;Acc:HGNC:7975]	0.404	1.32E-12	down
ENSG00000174951	fut1	fucosyltransferase 1 (H blood group) [Source:HGNC Symbol;Acc:HGNC:4012]	23.09	1.33E-12	up
ENSG00000123374	cdk2	cyclin dependent kinase 2 [Source:HGNC Symbol;Acc:HGNC:1771]	0.453	1.38E-12	down
ENSG00000170458	cd14	CD14 molecule [Source:HGNC Symbol;Acc:HGNC:1628]	0.075	1.47E-12	down
ENSG00000129195	pimreg	PICALM interacting mitotic regulator [Source:HGNC Symbol;Acc:HGNC:25483]	0.387	1.57E-12	down
ENSG00000149679	cables2	Cdk5 and Abl enzyme substrate 2 [Source:HGNC Symbol;Acc:HGNC:16143]	0.424	2.08E-12	down
ENSG00000154146	nrgn	neurogranin [Source:HGNC Symbol;Acc:HGNC:8000]	0.099	2.24E-12	down
ENSG00000171310	chst11	carbohydrate sulfotransferase 11 [Source:HGNC Symbol;Acc:HGNC:17422]	2.035	2.32E-12	up
ENSG00000277957	senp3-eif4a1	SEN3-EIF4A1 readthrough (NMD candidate) [Source:HGNC Symbol;Acc:HGNC:49182]	2.317	2.36E-12	up
ENSG00000223745	ccdc18-as1	CCDC18 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:52262]	3.137	2.6E-12	up
ENSG00000168404	mlkl	mixed lineage kinase domain like pseudokinase [Source:HGNC Symbol;Acc:HGNC:26617]	2.174	2.93E-12	up
ENSG00000110921	mvk	mevalonate kinase [Source:HGNC Symbol;Acc:HGNC:7530]	0.353	2.96E-12	down
ENSG00000124882	ereg	epiregulin [Source:HGNC Symbol;Acc:HGNC:3443]	2.998	3.13E-12	up
ENSG00000175183	csrp2	cysteine and glycine rich protein 2 [Source:HGNC Symbol;Acc:HGNC:2470]	0.367	3.23E-12	down
ENSG00000136010	aldh1l2	aldehyde dehydrogenase 1 family member L2 [Source:HGNC Symbol;Acc:HGNC:26777]	4.893	3.42E-12	up
ENSG00000166851	plk1	polo like kinase 1 [Source:HGNC Symbol;Acc:HGNC:9077]	0.341	3.69E-12	down
ENSG00000130956	habp4	hyaluronan binding protein 4 [Source:HGNC Symbol;Acc:HGNC:17062]	2.293	4.05E-12	up
ENSG00000164045	cdc25a	cell division cycle 25A [Source:HGNC Symbol;Acc:HGNC:1725]	0.359	4.43E-12	down
ENSG00000113657	dpysl3	dihydropyrimidinase like 3 [Source:HGNC Symbol;Acc:HGNC:3015]	0.43	4.46E-12	down
ENSG00000107984	dkk1	dickkopf WNT signaling pathway inhibitor 1 [Source:HGNC Symbol;Acc:HGNC:2891]	0.492	4.56E-12	down
ENSG00000197461	pdgfa	platelet derived growth factor subunit A [Source:HGNC Symbol;Acc:HGNC:8799]	2.184	4.67E-12	up
ENSG00000107968	map3k8	mitogen-activated protein kinase kinase kinase 8 [Source:HGNC Symbol;Acc:HGNC:6860]	0.434	4.74E-12	down
ENSG00000160447	pkn3	protein kinase N3 [Source:HGNC Symbol;Acc:HGNC:17999]	0.413	5.01E-12	down
ENSG00000269893	snhg8	small nucleolar RNA host gene 8 [Source:HGNC Symbol;Acc:HGNC:33098]	2.802	5.19E-12	up
ENSG00000166123	gpt2	glutamic--pyruvic transaminase 2 [Source:HGNC Symbol;Acc:HGNC:18062]	2.102	5.63E-12	up
ENSG00000138160	kif11	kinesin family member 11 [Source:HGNC Symbol;Acc:HGNC:6388]	0.306	6.06E-12	down
ENSG00000238266	linc00707	long intergenic non-protein coding RNA 707 [Source:HGNC Symbol;Acc:HGNC:44691]	2.32	6.36E-12	up
ENSG00000004777	arhgap33	Rho GTPase activating protein 33 [Source:HGNC Symbol;Acc:HGNC:23085]	0.369	6.4E-12	down
ENSG00000155961	rab39b	RAB39B, member RAS oncogene family [Source:HGNC Symbol;Acc:HGNC:16499]	4.994	6.52E-12	up
ENSG00000186638	kif24	kinesin family member 24 [Source:HGNC Symbol;Acc:HGNC:19916]	0.28	7.17E-12	down
ENSG00000161682	fam171a2	family with sequence similarity 171 member A2 [Source:HGNC Symbol;Acc:HGNC:30480]	0.33	7.33E-12	down
ENSG00000173846	plk3	polo like kinase 3 [Source:HGNC Symbol;Acc:HGNC:2154]	2.804	7.34E-12	up
ENSG00000140451	pif1	PIF1 5'-to-3' DNA helicase [Source:HGNC Symbol;Acc:HGNC:26220]	0.372	8.09E-12	down

ENSG00000235531	msc-as1	MSC antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:48724]	2.823	8.48E-12	up
ENSG00000089685	birc5	baculoviral IAP repeat containing 5 [Source:HGNC Symbol;Acc:HGNC:593]	0.338	8.98E-12	down
ENSG00000136244	il6	interleukin 6 [Source:HGNC Symbol;Acc:HGNC:6018]	5.284	9.19E-12	up
ENSG00000197299	blm	BLM RecQ like helicase [Source:HGNC Symbol;Acc:HGNC:1058]	0.427	9.28E-12	down
ENSG00000012963	ubt1	ubiquitin protein ligase E3 component n-recogin 7 [Source:HGNC Symbol;Acc:HGNC:20344]	0.488	9.64E-12	down
ENSG00000172927	myeov	myeloma overexpressed [Source:HGNC Symbol;Acc:HGNC:7563]	2.034	9.95E-12	up
ENSG00000079616	kif22	kinesin family member 22 [Source:HGNC Symbol;Acc:HGNC:6391]	0.344	1.04E-11	down
ENSG00000092470	wdr76	WD repeat domain 76 [Source:HGNC Symbol;Acc:HGNC:25773]	0.448	1.05E-11	down
ENSG00000162062	tedc2	tubulin epsilon and delta complex 2 [Source:HGNC Symbol;Acc:HGNC:25849]	0.327	1.17E-11	down
ENSG00000105499	pla2g4c	phospholipase A2 group IVC [Source:HGNC Symbol;Acc:HGNC:9037]	4.393	1.23E-11	up
ENSG00000160867	fgfr4	fibroblast growth factor receptor 4 [Source:HGNC Symbol;Acc:HGNC:3691]	0.364	1.34E-11	down
ENSG00000185480	parp1	PARP1 binding protein [Source:HGNC Symbol;Acc:HGNC:26074]	0.37	1.37E-11	down
ENSG00000106948	akna	AT-hook transcription factor [Source:HGNC Symbol;Acc:HGNC:24108]	2.413	1.37E-11	up
ENSG00000198203	sult1c2	sulfotransferase family 1C member 2 [Source:HGNC Symbol;Acc:HGNC:11456]	9.283	1.55E-11	up
ENSG00000091583	apoh	apolipoprotein H [Source:HGNC Symbol;Acc:HGNC:616]	0.089	1.71E-11	down
ENSG00000147852	vldlr	very low density lipoprotein receptor [Source:HGNC Symbol;Acc:HGNC:12698]	2.646	1.85E-11	up
ENSG00000198380	gfpt1	glutamine--fructose-6-phosphate transaminase 1 [Source:HGNC Symbol;Acc:HGNC:4241]	2.42	1.87E-11	up
ENSG00000225377	nrsn2-as1	NRSN2 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:51222]	2.649	1.91E-11	up
ENSG00000224166	pryp1	PTPN13 like Y-linked pseudogene 1 [Source:HGNC Symbol;Acc:HGNC:34018]	0.265	2.18E-11	down
ENSG00000272734	adirf-as1	ADIRF antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:45127]	4.592	2.28E-11	up
ENSG00000189001	sbsn	suprabasin [Source:HGNC Symbol;Acc:HGNC:24950]	14.839	2.33E-11	up
ENSG00000135373	ehf	ETS homologous factor [Source:HGNC Symbol;Acc:HGNC:3246]	0.231	2.47E-11	down
ENSG00000178999	aurkb	aurora kinase B [Source:HGNC Symbol;Acc:HGNC:11390]	0.295	2.53E-11	down
ENSG00000022267	fhl1	four and a half LIM domains 1 [Source:HGNC Symbol;Acc:HGNC:3702]	2.07	2.66E-11	up
ENSG00000148677	ankrd1	ankyrin repeat domain 1 [Source:HGNC Symbol;Acc:HGNC:15819]	2.803	3.71E-11	up
ENSG00000213347	mxd3	MAX dimerization protein 3 [Source:HGNC Symbol;Acc:HGNC:14008]	0.287	4.16E-11	down
ENSG00000162645	gbp2	guanylate binding protein 2 [Source:HGNC Symbol;Acc:HGNC:4183]	0.392	4.36E-11	down
ENSG00000181938	gins3	GIN3 complex subunit 3 [Source:HGNC Symbol;Acc:HGNC:25851]	0.464	4.42E-11	down
ENSG00000105767	cadm4	cell adhesion molecule 4 [Source:HGNC Symbol;Acc:HGNC:30825]	0.461	4.78E-11	down
ENSG00000285906	ac083855.2	Novel transcript, antisense to HRH1	2.326	5.38E-11	up
ENSG00000113140	sparc	secreted protein acidic and cysteine rich [Source:HGNC Symbol;Acc:HGNC:11219]	0.338	5.74E-11	down
ENSG00000065923	slc9a7	solute carrier family 9 member A7 [Source:HGNC Symbol;Acc:HGNC:17123]	2.229	6.03E-11	up
ENSG00000185561	tlcd2	TLC domain containing 2 [Source:HGNC Symbol;Acc:HGNC:33522]	2.24	6.13E-11	up
ENSG00000169683	lrrc45	leucine rich repeat containing 45 [Source:HGNC Symbol;Acc:HGNC:28302]	0.28	8.75E-11	down
ENSG00000167513	cdt1	chromatin licensing and DNA replication factor 1 [Source:HGNC Symbol;Acc:HGNC:24576]	0.286	8.87E-11	down
ENSG00000007944	myl1p	myosin regulatory light chain interacting protein [Source:HGNC Symbol;Acc:HGNC:21155]	0.173	9.27E-11	down
ENSG00000153162	bmp6	bone morphogenetic protein 6 [Source:HGNC Symbol;Acc:HGNC:1073]	3.176	9.58E-11	up
ENSG00000185989	rasa3	RAS p21 protein activator 3 [Source:HGNC Symbol;Acc:HGNC:20331]	2.036	1.02E-10	up
ENSG00000135414	gdf11	growth differentiation factor 11 [Source:HGNC Symbol;Acc:HGNC:4216]	0.435	1.11E-10	down
ENSG00000119686	flvcr2	FLVCR heme transporter 2 [Source:HGNC Symbol;Acc:HGNC:20105]	0.324	1.25E-10	down
ENSG00000011638	tmem159	transmembrane protein 159 [Source:HGNC Symbol;Acc:HGNC:30136]	2.555	1.3E-10	up
ENSG00000165272	aqp3	aquaporin 3 (Gill blood group) [Source:HGNC Symbol;Acc:HGNC:636]	0.323	1.33E-10	down
ENSG00000274070	castor2	cytosolic arginine sensor for mTORC1 subunit 2 [Source:HGNC Symbol;Acc:HGNC:37073]	0.3	1.33E-10	down
ENSG00000163918	rfc4	replication factor C subunit 4 [Source:HGNC Symbol;Acc:HGNC:9972]	0.496	1.36E-10	down
ENSG00000091592	nlrp1	NLR family pyrin domain containing 1 [Source:HGNC Symbol;Acc:HGNC:14374]	13.218	1.39E-10	up
ENSG00000197381	adarb1	adenosine deaminase RNA specific B1 [Source:HGNC Symbol;Acc:HGNC:226]	2.412	1.41E-10	up
ENSG00000095596	cyp26a1	cytochrome P450 family 26 subfamily A member 1 [Source:HGNC Symbol;Acc:HGNC:2603]	0.095	1.57E-10	down
ENSG00000197977	elovl2	ELOVL fatty acid elongase 2 [Source:HGNC Symbol;Acc:HGNC:14416]	0.283	1.58E-10	down
ENSG00000029534	ank1	ankyrin 1 [Source:HGNC Symbol;Acc:HGNC:492]	0.269	1.71E-10	down
ENSG00000013810	tacc3	transforming acidic coiled-coil containing protein 3 [Source:HGNC Symbol;Acc:HGNC:11524]	0.32	1.76E-10	down
ENSG00000157927	radil	Rap associating with DIL domain [Source:HGNC Symbol;Acc:HGNC:22226]	0.269	1.83E-10	down
ENSG00000135697	bco1	beta-carotene oxygenase 1 [Source:HGNC Symbol;Acc:HGNC:13815]	0.151	1.91E-10	down
ENSG00000123136	ddx39a	DEXD-box helicase 39A [Source:HGNC Symbol;Acc:HGNC:17821]	0.414	1.99E-10	down
ENSG00000089199	chgb	chromogranin B [Source:HGNC Symbol;Acc:HGNC:1930]	2.651	2.02E-10	up
ENSG00000111319	scnn1a	sodium channel epithelial 1 subunit alpha [Source:HGNC Symbol;Acc:HGNC:10599]	0.337	2.16E-10	down
ENSG00000183048	slc25a10	solute carrier family 25 member 10 [Source:HGNC Symbol;Acc:HGNC:10980]	0.358	2.41E-10	down
ENSG00000175061	snhg29	small nucleolar RNA host gene 29 [Source:HGNC Symbol;Acc:HGNC:28619]	2.378	2.64E-10	up
ENSG00000104231	zfang1	zinc finger AN1-type containing 1 [Source:HGNC Symbol;Acc:HGNC:25858]	2.122	2.71E-10	up
ENSG00000031698	sars1	seryl-tRNA synthetase 1 [Source:HGNC Symbol;Acc:HGNC:10537]	2.505	2.93E-10	up
ENSG00000161011	sqstm1	sequestosome 1 [Source:HGNC Symbol;Acc:HGNC:11280]	2.26	3.13E-10	up
ENSG00000153904	ddah1	dimethylarginine dimethylaminohydrolase 1 [Source:HGNC Symbol;Acc:HGNC:2715]	2.067	3.26E-10	up
ENSG00000168679	slc16a4	solute carrier family 16 member 4 [Source:HGNC Symbol;Acc:HGNC:10925]	2.402	3.39E-10	up
ENSG00000163435	elf3	E74 like ETS transcription factor 3 [Source:HGNC Symbol;Acc:HGNC:3318]	0.467	3.46E-10	down
ENSG00000112312	gmnn	geminin DNA replication inhibitor [Source:HGNC Symbol;Acc:HGNC:17493]	0.43	3.55E-10	down
ENSG00000059804	slc2a3	solute carrier family 2 member 3 [Source:HGNC Symbol;Acc:HGNC:11007]	0.471	3.76E-10	down
ENSG00000285517	ac010198.2	long intergenic non-protein coding RNA 941	3.321	3.94E-10	up
ENSG00000239521	castor3	CASTOR family member 3 [Source:HGNC Symbol;Acc:HGNC:29954]	0.35	4.09E-10	down

ENSG00000160179	abcg1	ATP binding cassette subfamily G member 1 [Source:HGNC Symbol;Acc:HGNC:73]	0.086	4.21E-10	down
ENSG00000173281	ppp1r3b	protein phosphatase 1 regulatory subunit 3B [Source:HGNC Symbol;Acc:HGNC:14942]	3.077	4.32E-10	up
ENSG00000159200	rcan1	regulator of calcineurin 1 [Source:HGNC Symbol;Acc:HGNC:3040]	2.01	4.47E-10	up
ENSG00000143382	adamtsl4	ADAMTS like 4 [Source:HGNC Symbol;Acc:HGNC:19706]	3.33	4.54E-10	up
ENSG00000111802	tdp2	tyrosyl-DNA phosphodiesterase 2 [Source:HGNC Symbol;Acc:HGNC:17768]	2.058	4.74E-10	up
ENSG00000141556	tbcd	tubulin folding cofactor D [Source:HGNC Symbol;Acc:HGNC:11581]	0.491	5.03E-10	down
ENSG00000139926	frmd6	FERM domain containing 6 [Source:HGNC Symbol;Acc:HGNC:19839]	3.549	5.05E-10	up
ENSG00000217801	al390719.1	protein tyrosine phosphatase family pseudogene	3.418	5.35E-10	up
ENSG00000105088	olfm2	olfactomedin 2 [Source:HGNC Symbol;Acc:HGNC:17189]	0.353	5.69E-10	down
ENSG00000133119	rfc3	replication factor C subunit 3 [Source:HGNC Symbol;Acc:HGNC:9971]	0.378	5.87E-10	down
ENSG00000102393	gla	galactosidase alpha [Source:HGNC Symbol;Acc:HGNC:4296]	0.41	5.98E-10	down
ENSG00000111077	tns2	tensin 2 [Source:HGNC Symbol;Acc:HGNC:19737]	0.451	6.45E-10	down
ENSG00000136068	flnb	filamin B [Source:HGNC Symbol;Acc:HGNC:3755]	2.511	7.06E-10	up
ENSG00000261200	ac136944.2	novel transcript	6.75	8.2E-10	up
ENSG00000143786	cnih3	cornichon family AMPA receptor auxiliary protein 3 [Source:HGNC Symbol;Acc:HGNC:26802]	4.088	8.46E-10	up
ENSG00000115687	pask	PAS domain containing serine/threonine kinase [Source:HGNC Symbol;Acc:HGNC:17270]	0.378	8.79E-10	down
ENSG00000136982	dsccl	DNA replication and sister chromatid cohesion 1 [Source:HGNC Symbol;Acc:HGNC:24453]	0.438	9.29E-10	down
ENSG00000116285	errfi1	ERBB receptor feedback inhibitor 1 [Source:HGNC Symbol;Acc:HGNC:18185]	2.299	9.31E-10	up
ENSG00000112655	ptk7	protein tyrosine kinase 7 (inactive) [Source:HGNC Symbol;Acc:HGNC:9618]	0.426	9.81E-10	down
ENSG00000215717	tmem167b	transmembrane protein 167B [Source:HGNC Symbol;Acc:HGNC:30187]	2.191	9.82E-10	up
ENSG00000242265	peg10	paternally expressed 10 [Source:HGNC Symbol;Acc:HGNC:14005]	0.346	1E-09	down
ENSG00000147454	slc25a37	solute carrier family 25 member 37 [Source:HGNC Symbol;Acc:HGNC:29786]	2.345	1.03E-09	up
ENSG00000140525	fanci	FA complementation group I [Source:HGNC Symbol;Acc:HGNC:25568]	0.415	1.21E-09	down
ENSG00000138347	mypn	myopalladin [Source:HGNC Symbol;Acc:HGNC:23246]	3.623	1.22E-09	up
ENSG00000131584	acap3	ArfGAP with coiled-coil, ankyrin repeat and PH domains 3 [Source:HGNC Symbol;Acc:HGNC:16754]	0.445	1.24E-09	down
ENSG00000166963	map1a	microtubule associated protein 1A [Source:HGNC Symbol;Acc:HGNC:6835]	0.245	1.24E-09	down
ENSG00000091490	sel1l3	SEL1L family member 3 [Source:HGNC Symbol;Acc:HGNC:29108]	2.218	1.31E-09	up
ENSG00000286235	al035461.3	novel protein	0.289	1.34E-09	down
ENSG00000109517	slc6a9	solute carrier family 6 member 9 [Source:HGNC Symbol;Acc:HGNC:11056]	2.282	1.44E-09	up
ENSG00000151632	akr1c2	aldo-keto reductase family 1 member C2 [Source:HGNC Symbol;Acc:HGNC:385]	0.424	1.55E-09	down
ENSG00000111981	ulbp1	UL16 binding protein 1 [Source:HGNC Symbol;Acc:HGNC:14893]	3.131	1.56E-09	up
ENSG00000120889	tnfrsf10b	TNF receptor superfamily member 10b [Source:HGNC Symbol;Acc:HGNC:11905]	2.111	1.61E-09	up
ENSG00000178038	als2cl	ALS2 C-terminal like [Source:HGNC Symbol;Acc:HGNC:20605]	2.547	1.89E-09	up
ENSG00000069399	bcl3	BCL3 transcription coactivator [Source:HGNC Symbol;Acc:HGNC:998]	0.434	1.9E-09	down
ENSG00000100558	plek2	pleckstrin 2 [Source:HGNC Symbol;Acc:HGNC:19238]	2.375	1.91E-09	up
ENSG00000148841	itrip1	inositol 1,4,5-trisphosphate receptor interacting protein [Source:HGNC Symbol;Acc:HGNC:29370]	2.199	1.94E-09	up
ENSG00000205208	c4orf46	chromosome 4 open reading frame 46 [Source:HGNC Symbol;Acc:HGNC:27320]	0.446	1.99E-09	down
ENSG00000130487	klhdc7b	kelch domain containing 7B [Source:HGNC Symbol;Acc:HGNC:25145]	59.592	2.09E-09	up
ENSG00000125648	slc25a23	solute carrier family 25 member 23 [Source:HGNC Symbol;Acc:HGNC:19375]	0.45	2.28E-09	down
ENSG00000123975	cks2	CDC28 protein kinase regulatory subunit 2 [Source:HGNC Symbol;Acc:HGNC:2000]	0.477	2.3E-09	down
ENSG00000257167	tmpo-as1	TMPO antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:44158]	0.228	2.53E-09	down
ENSG00000137142	igfbpl1	insulin like growth factor binding protein like 1 [Source:HGNC Symbol;Acc:HGNC:20081]	0.421	3.07E-09	down
ENSG00000101945	suv39h1	suppressor of variegation 3-9 homolog 1 [Source:HGNC Symbol;Acc:HGNC:11479]	0.372	3.09E-09	down
ENSG00000232956	snhg15	small nucleolar RNA host gene 15 [Source:HGNC Symbol;Acc:HGNC:27797]	2.058	3.11E-09	up
ENSG00000231312	map4k3-dt	MAP4K3 divergent transcript [Source:HGNC Symbol;Acc:HGNC:54056]	2.389	3.31E-09	up
ENSG00000154447	sh3rf1	SH3 domain containing ring finger 1 [Source:HGNC Symbol;Acc:HGNC:17650]	2.04	3.35E-09	up
ENSG00000168743	npnt	nephronectin [Source:HGNC Symbol;Acc:HGNC:27405]	0.218	3.39E-09	down
ENSG00000124749	col21a1	collagen type XXI alpha 1 chain [Source:HGNC Symbol;Acc:HGNC:17025]	0.155	3.58E-09	down
ENSG00000198855	ficd	FIC domain protein adenylyltransferase [Source:HGNC Symbol;Acc:HGNC:18416]	2.552	3.59E-09	up
ENSG00000198496	nbr2	neighbor of BRCA1 lncRNA 2 [Source:HGNC Symbol;Acc:HGNC:20691]	2.469	3.97E-09	up
ENSG00000000460	c1orf112	chromosome 1 open reading frame 112 [Source:HGNC Symbol;Acc:HGNC:25565]	0.435	4.13E-09	down
ENSG00000196611	mmp1	matrix metalloproteinase 1 [Source:HGNC Symbol;Acc:HGNC:7155]	7.744	4.19E-09	up
ENSG00000136205	tns3	tensin 3 [Source:HGNC Symbol;Acc:HGNC:21616]	0.36	4.67E-09	down
ENSG00000183763	traip	TRAF interacting protein [Source:HGNC Symbol;Acc:HGNC:30764]	0.328	4.99E-09	down
ENSG00000070540	wipi1	WD repeat domain, phosphoinositide interacting 1 [Source:HGNC Symbol;Acc:HGNC:25471]	2.201	5.29E-09	up
ENSG00000155368	dbi	diazepam binding inhibitor, acyl-CoA binding protein [Source:HGNC Symbol;Acc:HGNC:2690]	0.457	5.34E-09	down
ENSG00000112139	mdga1	MAM domain containing glycosylphosphatidylinositol anchor 1 [Source:HGNC Symbol;Acc:HGNC:19267]	0.388	5.35E-09	down
ENSG000000051180	rad51	RAD51 recombinase [Source:HGNC Symbol;Acc:HGNC:9817]	0.34	5.61E-09	down
ENSG00000168874	atoh8	atonal bHLH transcription factor 8 [Source:HGNC Symbol;Acc:HGNC:24126]	0.174	5.7E-09	down

ENSG00000164087	poc1a	POC1 centriolar protein A [Source:HGNC Symbol;Acc:HGNC:24488]	0.408	6.11E-09	down
ENSG00000163297	antxr2	ANTXR cell adhesion molecule 2 [Source:HGNC Symbol;Acc:HGNC:21732]	3.05	6.42E-09	up
ENSG00000163661	ptx3	pentraxin 3 [Source:HGNC Symbol;Acc:HGNC:9692]	4.35	6.73E-09	up
ENSG00000126368	nr1d1	nuclear receptor subfamily 1 group D member 1 [Source:HGNC Symbol;Acc:HGNC:7962]	2.05	6.91E-09	up
ENSG00000161692	dbf4b	DBF4 zinc finger B [Source:HGNC Symbol;Acc:HGNC:17883]	0.495	7.42E-09	down
ENSG00000173559	nabp1	nucleic acid binding protein 1 [Source:HGNC Symbol;Acc:HGNC:26232]	2.507	7.51E-09	up
ENSG00000123416	tuba1b	tubulin alpha 1b [Source:HGNC Symbol;Acc:HGNC:18809]	0.496	7.66E-09	down
ENSG00000144677	ctdSpl	CTD small phosphatase like [Source:HGNC Symbol;Acc:HGNC:16890]	0.451	7.7E-09	down
ENSG00000108448	trim16l	tripartite motif containing 16 like [Source:HGNC Symbol;Acc:HGNC:32670]	0.497	7.99E-09	down
ENSG00000150630	vegfc	vascular endothelial growth factor C [Source:HGNC Symbol;Acc:HGNC:12682]	2.122	8E-09	up
ENSG00000005238	fam214b	family with sequence similarity 214 member B [Source:HGNC Symbol;Acc:HGNC:25666]	2.028	9.01E-09	up
ENSG00000281991	tmem265	transmembrane protein 265 [Source:HGNC Symbol;Acc:HGNC:51241]	3.047	9.37E-09	up
ENSG00000138346	dna2	DNA replication helicase/nuclease 2 [Source:HGNC Symbol;Acc:HGNC:2939]	0.357	1.12E-08	down
ENSG00000137767	sqr	sulfide quinone oxidoreductase [Source:HGNC Symbol;Acc:HGNC:20390]	2.278	1.15E-08	up
ENSG00000166173	larp6	La ribonucleoprotein 6, translational regulator [Source:HGNC Symbol;Acc:HGNC:24012]	2.413	1.17E-08	up
ENSG00000137309	hmga1	high mobility group AT-hook 1 [Source:HGNC Symbol;Acc:HGNC:5010]	2.451	1.37E-08	up
ENSG00000260804	linc01963	long intergenic non-protein coding RNA 1963 [Source:HGNC Symbol;Acc:HGNC:25283]	0.385	1.47E-08	down
ENSG00000187550	sbk2	SH3 domain binding kinase family member 2 [Source:HGNC Symbol;Acc:HGNC:34416]	3.548	1.48E-08	up
ENSG00000005961	itga2b	integrin subunit alpha 2b [Source:HGNC Symbol;Acc:HGNC:6138]	0.15	1.56E-08	down
ENSG00000188322	sbk1	SH3 domain binding kinase 1 [Source:HGNC Symbol;Acc:HGNC:17699]	0.331	1.6E-08	down
ENSG00000138696	bmpr1b	bone morphogenetic protein receptor type 1B [Source:HGNC Symbol;Acc:HGNC:1077]	0.429	1.68E-08	down
ENSG00000137491	slco2b1	solute carrier organic anion transporter family member 2B1 [Source:HGNC Symbol;Acc:HGNC:10962]	0.123	1.69E-08	down
ENSG00000137404	nrm	nurim [Source:HGNC Symbol;Acc:HGNC:8003]	0.341	1.69E-08	down
ENSG000000067840	pdzd4	PDZ domain containing 4 [Source:HGNC Symbol;Acc:HGNC:21167]	0.393	1.87E-08	down
ENSG00000164626	kcnk5	potassium two pore domain channel subfamily K member 5 [Source:HGNC Symbol;Acc:HGNC:6280]	0.243	1.87E-08	down
ENSG00000139438	fam222a	family with sequence similarity 222 member A [Source:HGNC Symbol;Acc:HGNC:25915]	0.269	1.95E-08	down
ENSG00000183018	spns2	sphingolipid transporter 2 [Source:HGNC Symbol;Acc:HGNC:26992]	7.989	1.99E-08	up
ENSG00000214826	ddx12p	DEAD/H-box helicase 12, pseudogene [Source:HGNC Symbol;Acc:HGNC:2737]	0.376	2.07E-08	down
ENSG00000026751	slamf7	SLAM family member 7 [Source:HGNC Symbol;Acc:HGNC:21394]	11.556	2.34E-08	up
ENSG00000220205	vamp2	vesicle associated membrane protein 2 [Source:HGNC Symbol;Acc:HGNC:12643]	2.165	2.46E-08	up
ENSG00000134548	spx	spexin hormone [Source:HGNC Symbol;Acc:HGNC:28139]	3.42	2.51E-08	up
ENSG00000248187	ac078850.1	novel transcript	4.876	2.69E-08	up
ENSG00000128408	ribc2	RIB43A domain with coiled-coils 2 [Source:HGNC Symbol;Acc:HGNC:13241]	0.181	2.74E-08	down
ENSG00000254632	ap003119.1	novel transcript	0.328	2.94E-08	down
ENSG00000141337	arsg	arylsulfatase G [Source:HGNC Symbol;Acc:HGNC:24102]	2.561	2.98E-08	up
ENSG00000139668	wdfy2	WD repeat and FYVE domain containing 2 [Source:HGNC Symbol;Acc:HGNC:20482]	2.104	3.46E-08	up
ENSG00000154134	robo3	roundabout guidance receptor 3 [Source:HGNC Symbol;Acc:HGNC:13433]	2.935	3.73E-08	up
ENSG00000120802	tmpo	thymopoietin [Source:HGNC Symbol;Acc:HGNC:11875]	0.441	3.89E-08	down
ENSG00000165804	znf219	zinc finger protein 219 [Source:HGNC Symbol;Acc:HGNC:13011]	0.449	3.93E-08	down
ENSG00000080986	ndc80	NDC80 kinetochore complex component [Source:HGNC Symbol;Acc:HGNC:16909]	0.363	4.08E-08	down
ENSG00000110628	slc22a18	solute carrier family 22 member 18 [Source:HGNC Symbol;Acc:HGNC:10964]	2.35	4.2E-08	up
ENSG00000111424	vdr	vitamin D receptor [Source:HGNC Symbol;Acc:HGNC:12679]	2.357	4.33E-08	up
ENSG00000225783	miat	myocardial infarction associated transcript [Source:HGNC Symbol;Acc:HGNC:33425]	0.132	4.53E-08	down
ENSG00000254860	tmem9b-as1	TMEM9B antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:19230]	2.482	4.58E-08	up
ENSG00000163931	tkf	transketolase [Source:HGNC Symbol;Acc:HGNC:11834]	0.486	4.69E-08	down
ENSG00000143256	pfdn2	prefoldin subunit 2 [Source:HGNC Symbol;Acc:HGNC:8867]	2.221	4.79E-08	up
ENSG00000101076	hnf4a	hepatocyte nuclear factor 4 alpha [Source:HGNC Symbol;Acc:HGNC:5024]	0.498	4.84E-08	down
ENSG00000114771	aadac	arylacetamide deacetylase [Source:HGNC Symbol;Acc:HGNC:17]	3.153	5.05E-08	up
ENSG00000158292	gpr153	G protein-coupled receptor 153 [Source:HGNC Symbol;Acc:HGNC:23618]	0.21	5.2E-08	down
ENSG00000157510	afap1l1	actin filament associated protein 1 like 1 [Source:HGNC Symbol;Acc:HGNC:26714]	2.216	5.38E-08	up
ENSG00000258602	linc01629	long intergenic non-protein coding RNA 1629 [Source:HGNC Symbol;Acc:HGNC:52260]	7.557	5.79E-08	up
ENSG00000203760	cenpw	centromere protein W [Source:HGNC Symbol;Acc:HGNC:21488]	0.397	5.88E-08	down
ENSG00000143375	cgn	cingulin [Source:HGNC Symbol;Acc:HGNC:17429]	0.262	6.26E-08	down
ENSG00000165905	large2	LARGE xylosyl- and glucuronyltransferase 2 [Source:HGNC Symbol;Acc:HGNC:16522]	0.28	6.29E-08	down
ENSG00000128242	gal3st1	galactose-3-O-sulfotransferase 1 [Source:HGNC Symbol;Acc:HGNC:24240]	0.262	6.42E-08	down
ENSG00000003436	tfpi	tissue factor pathway inhibitor [Source:HGNC Symbol;Acc:HGNC:11760]	2.557	7.01E-08	up
ENSG00000138678	gpat3	glycerol-3-phosphate acyltransferase 3 [Source:HGNC Symbol;Acc:HGNC:28157]	2.012	7.24E-08	up
ENSG00000165449	slc16a9	solute carrier family 16 member 9 [Source:HGNC Symbol;Acc:HGNC:23520]	2.545	7.33E-08	up
ENSG00000056998	gyg2	glycogenin 2 [Source:HGNC Symbol;Acc:HGNC:4700]	0.394	8.02E-08	down

ENSG00000113532	st8sia4	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransferase 4 [Source:HGNC Symbol;Acc:HGNC:10871]	0.287	8.16E-08	down
ENSG00000179023	klhdc7a	kelch domain containing 7A [Source:HGNC Symbol;Acc:HGNC:26791]	0.319	8.39E-08	down
ENSG00000126562	wnk4	WNK lysine deficient protein kinase 4 [Source:HGNC Symbol;Acc:HGNC:14544]	2.949	8.73E-08	up
ENSG00000100253	miox	myo-inositol oxygenase [Source:HGNC Symbol;Acc:HGNC:14522]	10.802	8.9E-08	up
ENSG00000135324	mrp2	melanocortin 2 receptor accessory protein 2 [Source:HGNC Symbol;Acc:HGNC:21232]	0.221	9.34E-08	down
ENSG00000119514	galnt12	polypeptide N-acetylgalactosaminyltransferase 12 [Source:HGNC Symbol;Acc:HGNC:19877]	2.134	9.49E-08	up
ENSG00000140450	arrdc4	arrestin domain containing 4 [Source:HGNC Symbol;Acc:HGNC:28087]	2.946	1.02E-07	up
ENSG00000101445	ppp1r16b	protein phosphatase 1 regulatory subunit 16B [Source:HGNC Symbol;Acc:HGNC:15850]	0.184	1.04E-07	down
ENSG00000163053	slc16a14	solute carrier family 16 member 14 [Source:HGNC Symbol;Acc:HGNC:26417]	2.776	1.15E-07	up
ENSG00000120833	socs2	suppressor of cytokine signaling 2 [Source:HGNC Symbol;Acc:HGNC:19382]	2.081	1.25E-07	up
ENSG00000116711	pla2g4a	phospholipase A2 group IVA [Source:HGNC Symbol;Acc:HGNC:9035]	0.341	1.3E-07	down
ENSG00000152076	ccdc74b	coiled-coil domain containing 74B [Source:HGNC Symbol;Acc:HGNC:25267]	0.402	1.3E-07	down
ENSG00000235301	hla-z	major histocompatibility complex, class I, Z (pseudogene) [Source:HGNC Symbol;Acc:HGNC:19394]	0.402	1.48E-07	down
ENSG00000100626	galnt16	polypeptide N-acetylgalactosaminyltransferase 16 [Source:HGNC Symbol;Acc:HGNC:23233]	0.371	1.57E-07	down
ENSG00000137807	kif23	kinesin family member 23 [Source:HGNC Symbol;Acc:HGNC:6392]	0.396	1.73E-07	down
ENSG00000162595	diras3	DIRAS family GTPase 3 [Source:HGNC Symbol;Acc:HGNC:687]	0.117	1.77E-07	down
ENSG00000100162	cenpm	centromere protein M [Source:HGNC Symbol;Acc:HGNC:18352]	0.33	1.8E-07	down
ENSG00000272933	al391121.1	novel transcript	3.555	1.82E-07	up
ENSG00000136404	tm6sf1	transmembrane 6 superfamily member 1 [Source:HGNC Symbol;Acc:HGNC:11860]	20.484	1.87E-07	up
ENSG00000102409	bex4	brain expressed X-linked 4 [Source:HGNC Symbol;Acc:HGNC:25475]	6.746	1.88E-07	up
ENSG00000154175	abi3bp	ABI family member 3 binding protein [Source:HGNC Symbol;Acc:HGNC:17265]	3.781	1.98E-07	up
ENSG00000127586	chtf18	chromosome transmission fidelity factor 18 [Source:HGNC Symbol;Acc:HGNC:18435]	0.465	1.99E-07	down
ENSG00000156970	bub1b	BUB1 mitotic checkpoint serine/threonine kinase B [Source:HGNC Symbol;Acc:HGNC:1149]	0.416	2.02E-07	down
ENSG00000176046	nupr1	nuclear protein 1, transcriptional regulator [Source:HGNC Symbol;Acc:HGNC:29990]	3.077	2.02E-07	up
ENSG00000074527	ntn4	netrin 4 [Source:HGNC Symbol;Acc:HGNC:13658]	2.135	2.08E-07	up
ENSG00000078081	lamp3	lysosomal associated membrane protein 3 [Source:HGNC Symbol;Acc:HGNC:14582]	6.194	2.23E-07	up
ENSG00000107957	sh3pxd2a	SH3 and PX domains 2A [Source:HGNC Symbol;Acc:HGNC:23664]	2.558	2.25E-07	up
ENSG00000105357	myh14	myosin heavy chain 14 [Source:HGNC Symbol;Acc:HGNC:23212]	0.47	2.28E-07	down
ENSG00000064655	eya2	EYA transcriptional coactivator and phosphatase 2 [Source:HGNC Symbol;Acc:HGNC:3520]	0.405	2.43E-07	down
ENSG00000113209	pcdhb5	protocadherin beta 5 [Source:HGNC Symbol;Acc:HGNC:8690]	0.211	2.77E-07	down
ENSG00000203875	snhg5	small nucleolar RNA host gene 5 [Source:HGNC Symbol;Acc:HGNC:21026]	2.102	2.91E-07	up
ENSG00000165887	ankrd2	ankyrin repeat domain 2 [Source:HGNC Symbol;Acc:HGNC:495]	0.188	2.98E-07	down
ENSG00000196139	akr1c3	aldo-keto reductase family 1 member C3 [Source:HGNC Symbol;Acc:HGNC:386]	0.465	2.98E-07	down
ENSG00000035499	depdc1b	DEP domain containing 1B [Source:HGNC Symbol;Acc:HGNC:24902]	0.419	3.33E-07	down
ENSG00000154764	wnt7a	Wnt family member 7A [Source:HGNC Symbol;Acc:HGNC:12786]	9.714	3.41E-07	up
ENSG00000169258	gprin1	G protein regulated inducer of neurite outgrowth 1 [Source:HGNC Symbol;Acc:HGNC:24835]	0.483	3.47E-07	down
ENSG00000167693	nxn	nucleoredoxin [Source:HGNC Symbol;Acc:HGNC:18008]	0.392	3.5E-07	down
ENSG00000265763	znf488	zinc finger protein 488 [Source:HGNC Symbol;Acc:HGNC:23535]	0.456	3.61E-07	down
ENSG00000163565	ifi16	interferon gamma inducible protein 16 [Source:HGNC Symbol;Acc:HGNC:5395]	2.674	4.12E-07	up
ENSG00000101098	rims4	regulating synaptic membrane exocytosis 4 [Source:HGNC Symbol;Acc:HGNC:16183]	0.37	4.32E-07	down
ENSG00000249115	haus5	HAUS augmin like complex subunit 5 [Source:HGNC Symbol;Acc:HGNC:29130]	0.492	4.42E-07	down
ENSG00000128510	cpa4	carboxypeptidase A4 [Source:HGNC Symbol;Acc:HGNC:15740]	0.387	4.48E-07	down
ENSG00000108423	tubd1	tubulin delta 1 [Source:HGNC Symbol;Acc:HGNC:16811]	0.461	4.52E-07	down
ENSG00000178607	ern1	endoplasmic reticulum to nucleus signaling 1 [Source:HGNC Symbol;Acc:HGNC:3449]	2.641	4.83E-07	up
ENSG00000253552	hoxa-as2	HOXA cluster antisense RNA 2 [Source:HGNC Symbol;Acc:HGNC:43745]	0.332	5.09E-07	down
ENSG00000172216	cebpb	CCAAT enhancer binding protein beta [Source:HGNC Symbol;Acc:HGNC:1834]	2.625	5.11E-07	up
ENSG00000154127	ubash3b	ubiquitin associated and SH3 domain containing B [Source:HGNC Symbol;Acc:HGNC:29884]	2.05	5.2E-07	up
ENSG00000197646	pdc1lg2	programmed cell death 1 ligand 2 [Source:HGNC Symbol;Acc:HGNC:18731]	6.712	5.42E-07	up
ENSG00000132773	toe1	target of EGR1, exonuclease [Source:HGNC Symbol;Acc:HGNC:15954]	0.461	5.47E-07	down
ENSG00000131409	lrrc4b	leucine rich repeat containing 4B [Source:HGNC Symbol;Acc:HGNC:25042]	0.318	5.79E-07	down
ENSG00000113319	rasgrf2	Ras protein specific guanine nucleotide releasing factor 2 [Source:HGNC Symbol;Acc:HGNC:9876]	2.653	5.81E-07	up
ENSG00000065717	tle2	TLE family member 2, transcriptional corepressor [Source:HGNC Symbol;Acc:HGNC:11838]	0.304	6.35E-07	down
ENSG00000006459	kdm7a	lysine demethylase 7A [Source:HGNC Symbol;Acc:HGNC:22224]	3.233	6.47E-07	up
ENSG00000171219	cdc42bpg	CDC42 binding protein kinase gamma [Source:HGNC Symbol;Acc:HGNC:29829]	0.197	6.56E-07	down
ENSG00000186472	pclo	piccolo presynaptic cytomatrix protein [Source:HGNC Symbol;Acc:HGNC:13406]	5.124	6.63E-07	up
ENSG00000132436	figl1	figletin like 1 [Source:HGNC Symbol;Acc:HGNC:13286]	0.413	6.64E-07	down

ENSG00000173531	mst1	macrophage stimulating 1 [Source:HGNC Symbol;Acc:HGNC:7380]	2.898	7.13E-07	up
ENSG00000280195	ac245140.2	novel transcript, antisense to RPL10	2.697	7.64E-07	up
ENSG00000025039	rragd	Ras related GTP binding D [Source:HGNC Symbol;Acc:HGNC:19903]	2.513	8.52E-07	up
ENSG00000105173	ccne1	cyclin E1 [Source:HGNC Symbol;Acc:HGNC:1589]	0.431	9.81E-07	down
ENSG00000112972	hmgcs1	3-hydroxy-3-methylglutaryl-CoA synthase 1 [Source:HGNC Symbol;Acc:HGNC:5007]	0.391	1.04E-06	down
ENSG00000213023	syt3	synaptotagmin 3 [Source:HGNC Symbol;Acc:HGNC:11511]	0.077	1.06E-06	down
ENSG00000173530	tnfrsf10d	TNF receptor superfamily member 10d [Source:HGNC Symbol;Acc:HGNC:11907]	2.322	1.07E-06	up
ENSG00000145911	n4bp3	NEDD4 binding protein 3 [Source:HGNC Symbol;Acc:HGNC:29852]	3.123	1.21E-06	up
ENSG00000197256	kank2	KN motif and ankyrin repeat domains 2 [Source:HGNC Symbol;Acc:HGNC:29300]	0.485	1.3E-06	down
ENSG00000120539	mastl	microtubule associated serine/threonine kinase like [Source:HGNC Symbol;Acc:HGNC:19042]	0.395	1.5E-06	down
ENSG00000006652	ifrd1	interferon related developmental regulator 1 [Source:HGNC Symbol;Acc:HGNC:5456]	2.127	1.68E-06	up
ENSG00000134531	emp1	epithelial membrane protein 1 [Source:HGNC Symbol;Acc:HGNC:3333]	2.206	1.76E-06	up
ENSG00000197959	dnm3	dynammin 3 [Source:HGNC Symbol;Acc:HGNC:29125]	0.21	1.85E-06	down
ENSG00000108387	septin4	septin 4 [Source:HGNC Symbol;Acc:HGNC:9165]	0.098	1.86E-06	down
ENSG00000116852	kif21b	kinesin family member 21B [Source:HGNC Symbol;Acc:HGNC:29442]	3.053	1.94E-06	up
ENSG00000250510	gpr162	G protein-coupled receptor 162 [Source:HGNC Symbol;Acc:HGNC:16693]	0.184	1.97E-06	down
ENSG00000154839	ska1	spindle and kinetochore associated complex subunit 1 [Source:HGNC Symbol;Acc:HGNC:28109]	0.45	2.05E-06	down
ENSG00000117632	stmn1	stathmin 1 [Source:HGNC Symbol;Acc:HGNC:6510]	0.459	2.05E-06	down
ENSG00000144468	rhbdd1	rhomboid domain containing 1 [Source:HGNC Symbol;Acc:HGNC:23081]	2.11	2.24E-06	up
ENSG00000186088	gsap	gamma-secretase activating protein [Source:HGNC Symbol;Acc:HGNC:28042]	2.187	2.27E-06	up
ENSG00000261040	wfdc21p	WAP four-disulfide core domain 21, pseudogene [Source:HGNC Symbol;Acc:HGNC:50357]	0.265	2.28E-06	down
ENSG00000221829	fancg	FA complementation group G [Source:HGNC Symbol;Acc:HGNC:3588]	0.427	2.38E-06	down
ENSG00000140678	itgax	integrin subunit alpha X [Source:HGNC Symbol;Acc:HGNC:6152]	4.346	2.4E-06	up
ENSG00000103021	ccdc113	coiled-coil domain containing 113 [Source:HGNC Symbol;Acc:HGNC:25002]	2.056	2.64E-06	up
ENSG00000170099	serpina6	serpin family A member 6 [Source:HGNC Symbol;Acc:HGNC:1540]	0.033	2.65E-06	down
ENSG00000138376	bard1	BRCA1 associated RING domain 1 [Source:HGNC Symbol;Acc:HGNC:952]	0.436	2.83E-06	down
ENSG00000140807	nkd1	NKD inhibitor of WNT signaling pathway 1 [Source:HGNC Symbol;Acc:HGNC:17045]	0.305	2.85E-06	down
ENSG00000135960	edar	ectodysplasin A receptor [Source:HGNC Symbol;Acc:HGNC:2895]	0.056	2.93E-06	down
ENSG00000107159	ca9	carbonic anhydrase 9 [Source:HGNC Symbol;Acc:HGNC:1383]	0.247	3.13E-06	down
ENSG00000128268	mgat3	beta-1,4-mannosyl-glycoprotein 4-beta-N-acetylglucosaminyltransferase [Source:HGNC Symbol;Acc:HGNC:7046]	0.16	3.18E-06	down
ENSG00000161996	wdr90	WD repeat domain 90 [Source:HGNC Symbol;Acc:HGNC:26960]	0.49	3.2E-06	down
ENSG00000187867	palm3	paralemmin 3 [Source:HGNC Symbol;Acc:HGNC:33274]	0.157	3.42E-06	down
ENSG00000159713	tppp3	tubulin polymerization promoting protein family member 3 [Source:HGNC Symbol;Acc:HGNC:24162]	0.141	3.5E-06	down
ENSG00000139880	cdh24	cadherin 24 [Source:HGNC Symbol;Acc:HGNC:14265]	0.406	3.78E-06	down
ENSG00000128262	pom121i9p	POM121 transmembrane nucleoporin like 9, pseudogene [Source:HGNC Symbol;Acc:HGNC:30080]	0.075	3.92E-06	down
ENSG00000170477	krt4	keratin 4 [Source:HGNC Symbol;Acc:HGNC:6441]	0.008	3.96E-06	down
ENSG00000184207	pgp	phosphoglycolate phosphatase [Source:HGNC Symbol;Acc:HGNC:8909]	0.369	4.12E-06	down
ENSG00000156398	sfxn2	sideroflexin 2 [Source:HGNC Symbol;Acc:HGNC:16086]	0.434	4.12E-06	down
ENSG00000131351	haus8	HAUS augmin like complex subunit 8 [Source:HGNC Symbol;Acc:HGNC:30532]	0.348	4.22E-06	down
ENSG00000196083	il1rap	interleukin 1 receptor accessory protein [Source:HGNC Symbol;Acc:HGNC:5995]	2.809	4.24E-06	up
ENSG00000117461	pik3r3	phosphoinositide-3-kinase regulatory subunit 3 [Source:HGNC Symbol;Acc:HGNC:8981]	0.261	4.24E-06	down
ENSG00000143320	crabp2	cellular retinoic acid binding protein 2 [Source:HGNC Symbol;Acc:HGNC:2339]	0.195	4.41E-06	down
ENSG00000064651	slc12a2	solute carrier family 12 member 2 [Source:HGNC Symbol;Acc:HGNC:10911]	0.296	4.95E-06	down
ENSG00000168917	slc35g2	solute carrier family 35 member G2 [Source:HGNC Symbol;Acc:HGNC:28480]	2.168	5.07E-06	up
ENSG00000288640	ac005192.1	novel protein	5.386	5.07E-06	up
ENSG00000145569	otulinl	OTU deubiquitinase with linear linkage specificity like [Source:HGNC Symbol;Acc:HGNC:25629]	0.223	5.16E-06	down
ENSG00000169689	cenpx	centromere protein X [Source:HGNC Symbol;Acc:HGNC:11422]	0.382	5.19E-06	down
ENSG00000141668	cbln2	cerebellin 2 precursor [Source:HGNC Symbol;Acc:HGNC:1544]	0.017	5.42E-06	down
ENSG00000151655	itih2	inter-alpha-trypsin inhibitor heavy chain 2 [Source:HGNC Symbol;Acc:HGNC:6167]	0.16	5.68E-06	down
ENSG00000151503	ncapd3	non-SMC condensin II complex subunit D3 [Source:HGNC Symbol;Acc:HGNC:28952]	0.433	5.74E-06	down
ENSG00000160746	ano10	anoctamin 10 [Source:HGNC Symbol;Acc:HGNC:25519]	2.187	5.74E-06	up
ENSG00000164597	cog5	component of oligomeric golgi complex 5 [Source:HGNC Symbol;Acc:HGNC:14857]	2.154	5.76E-06	up
ENSG00000146242	tpbg	trophoblast glycoprotein [Source:HGNC Symbol;Acc:HGNC:12004]	2.005	6.09E-06	up
ENSG00000221963	apol6	apolipoprotein L6 [Source:HGNC Symbol;Acc:HGNC:14870]	2.198	6.4E-06	up
ENSG00000130600	h19	H19 imprinted maternally expressed transcript [Source:HGNC Symbol;Acc:HGNC:4713]	0.154	6.5E-06	down
ENSG00000114805	plch1	phospholipase C eta 1 [Source:HGNC Symbol;Acc:HGNC:29185]	0.342	6.56E-06	down
ENSG00000271605	milr1	mast cell immunoglobulin like receptor 1 [Source:HGNC Symbol;Acc:HGNC:27570]	3.132	6.56E-06	up
ENSG00000175567	ucp2	uncoupling protein 2 [Source:HGNC Symbol;Acc:HGNC:12518]	0.388	6.76E-06	down

ENSG00000134259	ngf	nerve growth factor [Source:HGNC Symbol;Acc:HGNC:7808]	4.447	6.95E-06	up
ENSG00000235142	linc02532	long intergenic non-protein coding RNA 2532 [Source:HGNC Symbol;Acc:HGNC:53549]	0.149	7.11E-06	down
ENSG00000175352	nrip3	nuclear receptor interacting protein 3 [Source:HGNC Symbol;Acc:HGNC:1167]	3.112	7.43E-06	up
ENSG00000101868	pola1	DNA polymerase alpha 1, catalytic subunit [Source:HGNC Symbol;Acc:HGNC:9173]	0.442	7.43E-06	down
ENSG00000134243	sort1	sortilin 1 [Source:HGNC Symbol;Acc:HGNC:11186]	0.42	7.48E-06	down
ENSG00000175309	phykpl	5-phosphohydroxy-L-lysine phospho-lyase [Source:HGNC Symbol;Acc:HGNC:28249]	2.027	7.67E-06	up
ENSG00000175643	rmi2	RecQ mediated genome instability 2 [Source:HGNC Symbol;Acc:HGNC:28349]	0.4	7.79E-06	down
ENSG00000224259	linc01133	long intergenic non-protein coding RNA 1133 [Source:HGNC Symbol;Acc:HGNC:49447]	5.683	8.51E-06	up
ENSG00000170439	mettl7b	methyltransferase like 7B [Source:HGNC Symbol;Acc:HGNC:28276]	0.314	8.56E-06	down
ENSG00000135451	troap	trophinin associated protein [Source:HGNC Symbol;Acc:HGNC:12327]	0.422	9.16E-06	down
ENSG00000164741	dlc1	DLC1 Rho GTPase activating protein [Source:HGNC Symbol;Acc:HGNC:2897]	2.908	9.22E-06	up
ENSG00000145703	iqgap2	IQ motif containing GTPase activating protein 2 [Source:HGNC Symbol;Acc:HGNC:6111]	0.255	9.27E-06	down
ENSG00000168268	nt5dc2	5'-nucleotidase domain containing 2 [Source:HGNC Symbol;Acc:HGNC:25717]	0.43	9.39E-06	down
ENSG00000133816	mical2	microtubule associated monooxygenase, calponin and LIM domain containing 2 [Source:HGNC Symbol;Acc:HGNC:24693]	2.286	9.51E-06	up
ENSG00000257261	ac008014.1	novel transcript	3.354	9.61E-06	up
ENSG00000087510	tfap2c	transcription factor AP-2 gamma [Source:HGNC Symbol;Acc:HGNC:11744]	0.453	9.85E-06	down
ENSG00000162366	pdzk1ip1	PDZK1 interacting protein 1 [Source:HGNC Symbol;Acc:HGNC:16887]	0.441	1.02E-05	down
ENSG00000178947	smim10l2a	small integral membrane protein 10 like 2A [Source:HGNC Symbol;Acc:HGNC:34499]	2.872	1.04E-05	up
ENSG00000169679	bub1	BUB1 mitotic checkpoint serine/threonine kinase [Source:HGNC Symbol;Acc:HGNC:1148]	0.464	1.06E-05	down
ENSG00000148426	proser2	proline and serine rich 2 [Source:HGNC Symbol;Acc:HGNC:23728]	2.221	1.15E-05	up
ENSG00000163485	adora1	adenosine A1 receptor [Source:HGNC Symbol;Acc:HGNC:262]	0.289	1.15E-05	down
ENSG00000171631	p2ry6	pyrimidinergic receptor P2Y6 [Source:HGNC Symbol;Acc:HGNC:8543]	0.373	1.16E-05	down
ENSG00000126878	aif1l	allograft inflammatory factor 1 like [Source:HGNC Symbol;Acc:HGNC:28904]	0.294	1.16E-05	down
ENSG00000184985	sorcs2	sortilin related VPS10 domain containing receptor 2 [Source:HGNC Symbol;Acc:HGNC:16698]	2.322	1.21E-05	up
ENSG00000173391	olr1	oxidized low density lipoprotein receptor 1 [Source:HGNC Symbol;Acc:HGNC:8133]	0.262	1.21E-05	down
ENSG00000204758	ac008429.1	novel transcript, antisense to RPL26L1	2.765	1.31E-05	up
ENSG00000140092	fbn15	fibulin 5 [Source:HGNC Symbol;Acc:HGNC:3602]	0.28	1.33E-05	down
ENSG00000166165	ckb	creatine kinase B [Source:HGNC Symbol;Acc:HGNC:1991]	0.391	1.36E-05	down
ENSG00000178381	zfand2a	zinc finger AN1-type containing 2A [Source:HGNC Symbol;Acc:HGNC:28073]	2.073	1.36E-05	up
ENSG00000180354	mtun	maturin, neural progenitor differentiation regulator homolog [Source:HGNC Symbol;Acc:HGNC:25457]	2.128	1.4E-05	up
ENSG00000260916	ccpg1	cell cycle progression 1 [Source:HGNC Symbol;Acc:HGNC:24227]	3.638	1.44E-05	up
ENSG00000178852	efcab13	EF-hand calcium binding domain 13 [Source:HGNC Symbol;Acc:HGNC:26864]	2.286	1.49E-05	up
ENSG00000121653	mapk8ip1	mitogen-activated protein kinase 8 interacting protein 1 [Source:HGNC Symbol;Acc:HGNC:6882]	0.417	1.58E-05	down
ENSG00000073756	ptgs2	prostaglandin-endoperoxide synthase 2 [Source:HGNC Symbol;Acc:HGNC:9605]	0.328	1.6E-05	down
ENSG00000136883	kif12	kinesin family member 12 [Source:HGNC Symbol;Acc:HGNC:21495]	0.272	1.65E-05	down
ENSG00000152256	pdk1	pyruvate dehydrogenase kinase 1 [Source:HGNC Symbol;Acc:HGNC:8809]	2.37	1.68E-05	up
ENSG00000124702	klhdc3	kelch domain containing 3 [Source:HGNC Symbol;Acc:HGNC:20704]	0.465	1.72E-05	down
ENSG00000125657	tnfsf9	TNF superfamily member 9 [Source:HGNC Symbol;Acc:HGNC:11939]	0.463	1.81E-05	down
ENSG00000129422	mtus1	microtubule associated scaffold protein 1 [Source:HGNC Symbol;Acc:HGNC:29789]	0.372	1.87E-05	down
ENSG00000139190	vamp1	vesicle associated membrane protein 1 [Source:HGNC Symbol;Acc:HGNC:12642]	0.469	1.91E-05	down
ENSG00000105289	tjp3	tight junction protein 3 [Source:HGNC Symbol;Acc:HGNC:11829]	0.214	1.91E-05	down
ENSG00000163697	apbb2	amyloid beta precursor protein binding family B member 2 [Source:HGNC Symbol;Acc:HGNC:582]	2.407	1.99E-05	up
ENSG00000164211	stard4	StAR related lipid transfer domain containing 4 [Source:HGNC Symbol;Acc:HGNC:18058]	0.379	2.04E-05	down
ENSG00000214900	linc01588	long intergenic non-protein coding RNA 1588 [Source:HGNC Symbol;Acc:HGNC:27503]	2.818	2.14E-05	up
ENSG00000148773	mki67	marker of proliferation Ki-67 [Source:HGNC Symbol;Acc:HGNC:7107]	0.311	2.14E-05	down
ENSG00000147614	atp6v0d2	ATPase H+ transporting V0 subunit d2 [Source:HGNC Symbol;Acc:HGNC:18266]	195.927	2.15E-05	up
ENSG00000135540	nhsl1	NHS like 1 [Source:HGNC Symbol;Acc:HGNC:21021]	2.645	2.27E-05	up
ENSG00000164488	dact2	dishevelled binding antagonist of beta catenin 2 [Source:HGNC Symbol;Acc:HGNC:21231]	0.068	2.28E-05	down
ENSG00000180318	alx1	ALX homeobox 1 [Source:HGNC Symbol;Acc:HGNC:1494]	0.463	2.41E-05	down
ENSG00000214944	arhgef28	Rho guanine nucleotide exchange factor 28 [Source:HGNC Symbol;Acc:HGNC:30322]	2.15	2.59E-05	up
ENSG00000153233	ptpr	protein tyrosine phosphatase receptor type R [Source:HGNC Symbol;Acc:HGNC:9680]	17.813	2.7E-05	up
ENSG00000132429	popdc3	popeye domain containing 3 [Source:HGNC Symbol;Acc:HGNC:17649]	2.093	2.73E-05	up
ENSG00000261762	ac027228.2	novel transcript, antisense to CHRNA5	0.451	2.9E-05	down
ENSG00000264772	ac016876.3	novel transcript	2.553	2.99E-05	up
ENSG00000162738	vangl2	VANGL planar cell polarity protein 2 [Source:HGNC Symbol;Acc:HGNC:15511]	0.325	3.08E-05	down

ENSG00000131462	tubg1	tubulin gamma 1 [Source:HGNC Symbol;Acc:HGNC:12417]	0.481	3.22E-05	down
ENSG00000187634	samd11	sterile alpha motif domain containing 11 [Source:HGNC Symbol;Acc:HGNC:28706]	0.366	3.25E-05	down
ENSG00000142731	plk4	polo like kinase 4 [Source:HGNC Symbol;Acc:HGNC:11397]	0.34	3.39E-05	down
ENSG00000025770	ncaph2	non-SMC condensin II complex subunit H2 [Source:HGNC Symbol;Acc:HGNC:25071]	0.434	3.57E-05	down
ENSG00000002079	myh16	myosin heavy chain 16 pseudogene [Source:HGNC Symbol;Acc:HGNC:31038]	4.878	3.69E-05	up
ENSG00000133424	large1	LARGE xylosyl- and glucuronyltransferase 1 [Source:HGNC Symbol;Acc:HGNC:6511]	0.469	3.84E-05	down
ENSG00000167619	tmem145	transmembrane protein 145 [Source:HGNC Symbol;Acc:HGNC:26912]	0.275	3.88E-05	down
ENSG00000160345	c9orf116	chromosome 9 open reading frame 116 [Source:HGNC Symbol;Acc:HGNC:28435]	0.299	3.96E-05	down
ENSG00000120738	egr1	early growth response 1 [Source:HGNC Symbol;Acc:HGNC:3238]	0.376	4.02E-05	down
ENSG00000100167	sepin3	sepin 3 [Source:HGNC Symbol;Acc:HGNC:10750]	0.39	4.36E-05	down
ENSG00000173269	mmr2	multimerin 2 [Source:HGNC Symbol;Acc:HGNC:19888]	3.304	4.45E-05	up
ENSG00000187583	plekhn1	pleckstrin homology domain containing N1 [Source:HGNC Symbol;Acc:HGNC:25284]	2.392	4.61E-05	up
ENSG00000171680	plekhg5	pleckstrin homology and RhoGEF domain containing G5 [Source:HGNC Symbol;Acc:HGNC:29105]	2.265	4.72E-05	up
ENSG00000066248	ngef	neuronal guanine nucleotide exchange factor [Source:HGNC Symbol;Acc:HGNC:7807]	2.021	4.89E-05	up
ENSG00000113361	cdh6	cadherin 6 [Source:HGNC Symbol;Acc:HGNC:1765]	0.416	5.17E-05	down
ENSG00000120278	plekhg1	pleckstrin homology and RhoGEF domain containing G1 [Source:HGNC Symbol;Acc:HGNC:20884]	3.173	5.35E-05	up
ENSG00000101335	myl9	myosin light chain 9 [Source:HGNC Symbol;Acc:HGNC:15754]	0.265	5.43E-05	down
ENSG00000152154	tmem178a	transmembrane protein 178A [Source:HGNC Symbol;Acc:HGNC:28517]	5.982	5.61E-05	up
ENSG00000111252	sh2b3	SH2B adaptor protein 3 [Source:HGNC Symbol;Acc:HGNC:29605]	2.168	5.62E-05	up
ENSG00000127423	aunip	aurora kinase A and ninein interacting protein [Source:HGNC Symbol;Acc:HGNC:28363]	0.321	5.69E-05	down
ENSG00000166313	apbb1	amyloid beta precursor protein binding family B member 1 [Source:HGNC Symbol;Acc:HGNC:581]	0.491	5.91E-05	down
ENSG00000204516	micb	MHC class I polypeptide-related sequence B [Source:HGNC Symbol;Acc:HGNC:7091]	0.45	5.92E-05	down
ENSG00000153214	tmem87b	transmembrane protein 87B [Source:HGNC Symbol;Acc:HGNC:25913]	2.05	6.09E-05	up
ENSG00000135406	prph	peripherin [Source:HGNC Symbol;Acc:HGNC:9461]	5.255	6.5E-05	up
ENSG00000156509	fbxo43	F-box protein 43 [Source:HGNC Symbol;Acc:HGNC:28521]	0.298	6.57E-05	down
ENSG00000070182	sptb	spectrin beta, erythrocytic [Source:HGNC Symbol;Acc:HGNC:11274]	0.372	6.84E-05	down
ENSG00000287263	ac008875.3	novel transcript	2.519	6.96E-05	up
ENSG00000182809	crip2	cysteine rich protein 2 [Source:HGNC Symbol;Acc:HGNC:2361]	0.417	6.99E-05	down
ENSG00000141499	wrap53	WD repeat containing antisense to TP53 [Source:HGNC Symbol;Acc:HGNC:25522]	0.431	7.03E-05	down
ENSG00000261052	sult1a3	sulfotransferase family 1A member 3 [Source:HGNC Symbol;Acc:HGNC:11455]	0.316	7.27E-05	down
ENSG00000131094	c1ql1	complement C1q like 1 [Source:HGNC Symbol;Acc:HGNC:24182]	0.338	7.48E-05	down
ENSG00000277534	ac007996.1	novel transcript, sense intronic to KCTD1	0.341	7.55E-05	down
ENSG00000188761	bcl2l15	BCL2 like 15 [Source:HGNC Symbol;Acc:HGNC:33624]	0.051	7.84E-05	down
ENSG00000132837	dmgdh	dimethylglycine dehydrogenase [Source:HGNC Symbol;Acc:HGNC:24475]	36.566	7.89E-05	up
ENSG00000196935	srgap1	SLIT-ROBO Rho GTPase activating protein 1 [Source:HGNC Symbol;Acc:HGNC:17382]	2.165	8.06E-05	up
ENSG00000037280	flt4	fms related receptor tyrosine kinase 4 [Source:HGNC Symbol;Acc:HGNC:3767]	0.406	8.11E-05	down
ENSG00000156802	atad2	ATPase family AAA domain containing 2 [Source:HGNC Symbol;Acc:HGNC:30123]	0.332	8.13E-05	down
ENSG00000166073	gpr176	G protein-coupled receptor 176 [Source:HGNC Symbol;Acc:HGNC:32370]	2.237	8.22E-05	up
ENSG00000130881	lrp3	LDL receptor related protein 3 [Source:HGNC Symbol;Acc:HGNC:6695]	0.476	8.59E-05	down
ENSG00000058668	atp2b4	ATPase plasma membrane Ca2+ transporting 4 [Source:HGNC Symbol;Acc:HGNC:817]	3.221	8.69E-05	up
ENSG00000135048	cemip2	cell migration inducing hyaluronidase 2 [Source:HGNC Symbol;Acc:HGNC:11869]	0.42	8.94E-05	down
ENSG00000104140	rhov	ras homolog family member V [Source:HGNC Symbol;Acc:HGNC:18313]	0.407	9.65E-05	down
ENSG00000117228	gbp1	guanylate binding protein 1 [Source:HGNC Symbol;Acc:HGNC:4182]	0.471	9.9E-05	down
ENSG00000179348	gata2	GATA binding protein 2 [Source:HGNC Symbol;Acc:HGNC:4171]	0.434	9.96E-05	down
ENSG00000105865	dus4l	dihydrouridine synthase 4 like [Source:HGNC Symbol;Acc:HGNC:21517]	2.014	0.000101	up
ENSG00000164920	osr2	odd-skipped related transcription factor 2 [Source:HGNC Symbol;Acc:HGNC:15830]	0.275	0.000103	down
ENSG00000189143	cldn4	claudin 4 [Source:HGNC Symbol;Acc:HGNC:2046]	2.142	0.000107	up
ENSG00000134533	rerg	RAS like estrogen regulated growth inhibitor [Source:HGNC Symbol;Acc:HGNC:15980]	0.033	0.00011	down
ENSG00000052850	alx4	ALX homeobox 4 [Source:HGNC Symbol;Acc:HGNC:450]	0.447	0.000117	down
ENSG00000104833	tubb4a	tubulin beta 4A class IVa [Source:HGNC Symbol;Acc:HGNC:20774]	0.367	0.000118	down
ENSG00000165501	lrr1	leucine rich repeat protein 1 [Source:HGNC Symbol;Acc:HGNC:19742]	0.49	0.000118	down
ENSG00000121690	depdc7	DEP domain containing 7 [Source:HGNC Symbol;Acc:HGNC:29899]	0.455	0.00012	down
ENSG00000213694	s1pr3	sphingosine-1-phosphate receptor 3 [Source:HGNC Symbol;Acc:HGNC:3167]	0.482	0.000126	down
ENSG00000130508	pxdn	peroxidasin [Source:HGNC Symbol;Acc:HGNC:14966]	2.283	0.000126	up
ENSG00000144395	ccdc150	coiled-coil domain containing 150 [Source:HGNC Symbol;Acc:HGNC:26834]	0.363	0.000131	down
ENSG00000243566	upk3b	uroplakin 3B [Source:HGNC Symbol;Acc:HGNC:21444]	0.387	0.000131	down
ENSG00000169239	ca5b	carbonic anhydrase 5B [Source:HGNC Symbol;Acc:HGNC:1378]	2.665	0.000131	up
ENSG00000215375	myl5	myosin light chain 5 [Source:HGNC Symbol;Acc:HGNC:7586]	2.515	0.000132	up
ENSG00000280164	cu638689.5	novel transcript	0.25	0.000142	down

ENSG00000203709	mir29b2chg	MIR29B2 and MIR29C host gene [Source:HGNC Symbol;Acc:HGNC:32018]	4.17	0.000142	up
ENSG00000145476	cyp4v2	cytochrome P450 family 4 subfamily V member 2 [Source:HGNC Symbol;Acc:HGNC:23198]	2.323	0.000144	up
ENSG00000106689	lhx2	LIM homeobox 2 [Source:HGNC Symbol;Acc:HGNC:6594]	0.329	0.000148	down
ENSG00000185347	tedc1	tubulin epsilon and delta complex 1 [Source:HGNC Symbol;Acc:HGNC:20127]	0.405	0.00015	down
ENSG00000262526	ac120057.2	novel protein	0.004	0.000158	down
ENSG00000158402	cdc25c	cell division cycle 25C [Source:HGNC Symbol;Acc:HGNC:1727]	0.454	0.00016	down
ENSG00000279117	ap001972.5	TEC	0.16	0.000164	down
ENSG00000263155	myzap	myocardial zonula adherens protein [Source:HGNC Symbol;Acc:HGNC:43444]	2.534	0.000166	up
ENSG00000169252	adrb2	adrenoceptor beta 2 [Source:HGNC Symbol;Acc:HGNC:286]	2.296	0.000172	up
ENSG00000111912	ncoa7	nuclear receptor coactivator 7 [Source:HGNC Symbol;Acc:HGNC:21081]	0.481	0.000175	down
ENSG00000160752	fdps	farnesyl diphosphate synthase [Source:HGNC Symbol;Acc:HGNC:3631]	0.462	0.000181	down
ENSG00000050438	slc4a8	solute carrier family 4 member 8 [Source:HGNC Symbol;Acc:HGNC:11034]	0.177	0.000198	down
ENSG00000154310	tnik	TRAF2 and NCK interacting kinase [Source:HGNC Symbol;Acc:HGNC:30765]	3.583	0.0002	up
ENSG00000116774	olfml3	olfactomedin like 3 [Source:HGNC Symbol;Acc:HGNC:24956]	0.049	0.000214	down
ENSG00000180730	shisa2	shisa family member 2 [Source:HGNC Symbol;Acc:HGNC:20366]	15.26	0.000216	up
ENSG00000105227	prx	periaxin [Source:HGNC Symbol;Acc:HGNC:13797]	2.221	0.000222	up
ENSG00000204616	trim31	tripartite motif containing 31 [Source:HGNC Symbol;Acc:HGNC:16289]	0.17	0.000224	down
ENSG00000183287	ccbe1	collagen and calcium binding EGF domains 1 [Source:HGNC Symbol;Acc:HGNC:29426]	2.246	0.000227	up
ENSG00000161981	snrnp25	small nuclear ribonucleoprotein U11/U12 subunit 25 [Source:HGNC Symbol;Acc:HGNC:14161]	0.391	0.000234	down
ENSG00000168481	lgi3	leucine rich repeat LGL family member 3 [Source:HGNC Symbol;Acc:HGNC:18711]	0.215	0.000241	down
ENSG00000146592	creb5	cAMP responsive element binding protein 5 [Source:HGNC Symbol;Acc:HGNC:16844]	3.674	0.000246	up
ENSG00000126259	kirrel2	kirre like nephrin family adhesion molecule 2 [Source:HGNC Symbol;Acc:HGNC:18816]	0.164	0.000246	down
ENSG00000109511	anxa10	annexin A10 [Source:HGNC Symbol;Acc:HGNC:534]	2.942	0.000264	up
ENSG00000198055	grk6	G protein-coupled receptor kinase 6 [Source:HGNC Symbol;Acc:HGNC:4545]	0.497	0.000265	down
ENSG00000088305	dnmt3b	DNA methyltransferase 3 beta [Source:HGNC Symbol;Acc:HGNC:2979]	0.481	0.00028	down
ENSG00000011426	anln	anillin actin binding protein [Source:HGNC Symbol;Acc:HGNC:14082]	0.353	0.000281	down
ENSG00000184226	pcdh9	protocadherin 9 [Source:HGNC Symbol;Acc:HGNC:8661]	0.317	0.000285	down
ENSG00000173812	eif1	eukaryotic translation initiation factor 1 [Source:HGNC Symbol;Acc:HGNC:3249]	2.045	0.000285	up
ENSG00000164690	shh	sonic hedgehog signaling molecule [Source:HGNC Symbol;Acc:HGNC:10848]	2.74	0.000303	up
ENSG00000173275	znf449	zinc finger protein 449 [Source:HGNC Symbol;Acc:HGNC:21039]	2.396	0.000307	up
ENSG00000180592	skida1	SKI/DACH domain containing 1 [Source:HGNC Symbol;Acc:HGNC:32697]	0.344	0.000307	down
ENSG00000250509	ac034213.1	novel transcript	12.264	0.000321	up
ENSG00000131747	top2a	DNA topoisomerase II alpha [Source:HGNC Symbol;Acc:HGNC:11989]	0.37	0.000322	down
ENSG00000137094	dnajb5	DnaJ heat shock protein family (Hsp40) member B5 [Source:HGNC Symbol;Acc:HGNC:14887]	0.459	0.000328	down
ENSG00000115008	il1a	interleukin 1 alpha [Source:HGNC Symbol;Acc:HGNC:5991]	8.128	0.000355	up
ENSG00000088854	c20orf194	chromosome 20 open reading frame 194 [Source:HGNC Symbol;Acc:HGNC:17721]	2.168	0.000356	up
ENSG00000102362	sytl4	synaptotagmin like 4 [Source:HGNC Symbol;Acc:HGNC:15588]	0.392	0.00036	down
ENSG00000063127	slc6a16	solute carrier family 6 member 16 [Source:HGNC Symbol;Acc:HGNC:13622]	0.287	0.000362	down
ENSG00000174516	peli3	pellino E3 ubiquitin protein ligase family member 3 [Source:HGNC Symbol;Acc:HGNC:30010]	0.466	0.000374	down
ENSG00000288018	ap003120.1	novel transcript	8.683	0.000414	up
ENSG00000139200	pianp	PILR alpha associated neural protein [Source:HGNC Symbol;Acc:HGNC:25338]	0.217	0.000422	down
ENSG00000155849	elmo1	engulfment and cell motility 1 [Source:HGNC Symbol;Acc:HGNC:16286]	0.261	0.000457	down
ENSG00000134569	lrp4	LDL receptor related protein 4 [Source:HGNC Symbol;Acc:HGNC:6696]	0.401	0.000461	down
ENSG00000110031	lpxn	leupaxin [Source:HGNC Symbol;Acc:HGNC:14061]	2.796	0.000488	up
ENSG00000204381	layln	layilin [Source:HGNC Symbol;Acc:HGNC:29471]	0.298	0.000502	down
ENSG00000255774	linc02747	long intergenic non-protein coding RNA 2747 [Source:HGNC Symbol;Acc:HGNC:54266]	0.391	0.000551	down
ENSG00000182600	snorc	secondary ossification center associated regulator of chondrocyte maturation [Source:HGNC Symbol;Acc:HGNC:33763]	2.013	0.000553	up
ENSG00000003096	klhl13	kelch like family member 13 [Source:HGNC Symbol;Acc:HGNC:22931]	0.181	0.000558	down
ENSG00000141738	grb7	growth factor receptor bound protein 7 [Source:HGNC Symbol;Acc:HGNC:4567]	0.383	0.000595	down
ENSG00000170089	ac106795.1	THO complex 3 (THOC3) pseudogene	0.44	0.000614	down
ENSG00000131080	eda2r	ectodysplasin A2 receptor [Source:HGNC Symbol;Acc:HGNC:17756]	2.237	0.000635	up
ENSG00000051341	polq	DNA polymerase theta [Source:HGNC Symbol;Acc:HGNC:9186]	0.4	0.000658	down
ENSG00000100092	sh3bp1	SH3 domain binding protein 1 [Source:HGNC Symbol;Acc:HGNC:10824]	0.343	0.000659	down
ENSG00000103742	igdcc4	immunoglobulin superfamily DCC subclass member 4 [Source:HGNC Symbol;Acc:HGNC:13770]	2.44	0.000674	up
ENSG00000074621	slc24a1	solute carrier family 24 member 1 [Source:HGNC Symbol;Acc:HGNC:10975]	2.311	0.000678	up
ENSG00000271503	ccl5	C-C motif chemokine ligand 5 [Source:HGNC Symbol;Acc:HGNC:10632]	3.908	0.000685	up
ENSG00000249279	linc02057	long intergenic non-protein coding RNA 2057 [Source:HGNC Symbol;Acc:HGNC:52900]	3.411	0.000726	up
ENSG00000165171	mettl27	methyltransferase like 27 [Source:HGNC Symbol;Acc:HGNC:19068]	2.093	0.000741	up
ENSG00000165730	stox1	storkhead box 1 [Source:HGNC Symbol;Acc:HGNC:23508]	0.27	0.000749	down
ENSG00000285106	ac016831.6	novel transcript	3.121	0.000794	up
ENSG00000134222	psrc1	proline and serine rich coiled-coil 1 [Source:HGNC Symbol;Acc:HGNC:24472]	0.452	0.00085	down
ENSG00000142149	hunk	hormonally up-regulated Neu-associated kinase [Source:HGNC	0.332	0.000888	down

ENSG00000116962	nid1	Symbol;Acc:HGNC:13326]			
ENSG00000169432	scn9a	nidogen 1 [Source:HGNC Symbol;Acc:HGNC:7821]	2.371	0.000896	up
		sodium voltage-gated channel alpha subunit 9 [Source:HGNC Symbol;Acc:HGNC:10597]	3.143	0.000906	up
ENSG00000164171	itga2	integrin subunit alpha 2 [Source:HGNC Symbol;Acc:HGNC:6137]	3.972	0.000913	up
ENSG00000080839	rbl1	RB transcriptional corepressor like 1 [Source:HGNC Symbol;Acc:HGNC:9893]	0.387	0.000932	down
ENSG00000182310	spaca6	sperm acrosome associated 6 [Source:HGNC Symbol;Acc:HGNC:27113]	0.4	0.000967	down
ENSG00000242147	lastr	lncRNA associated with SART3 regulation of splicing [Source:HGNC Symbol;Acc:HGNC:54143]	2.642	0.000987	up
ENSG00000184990	siva1	SIVA1 apoptosis inducing factor [Source:HGNC Symbol;Acc:HGNC:17712]	0.481	0.000987	down
ENSG00000172346	csdc2	cold shock domain containing C2 [Source:HGNC Symbol;Acc:HGNC:30359]	0.21	0.001058	down
ENSG00000285793	anapc1p2	ANAPC1 pseudogene 2 [Source:NCBI gene (formerly Entrezgene);Acc:285074]	2.068	0.001059	up
ENSG00000113070	hbegf	heparin binding EGF like growth factor [Source:HGNC Symbol;Acc:HGNC:3059]	2.311	0.001066	up
ENSG00000253174	ac009630.2	novel transcript, antisense to GINS4	0.288	0.001119	down
ENSG00000243742	rplp0p2	ribosomal protein lateral stalk subunit P0 pseudogene 2 [Source:HGNC Symbol;Acc:HGNC:17960]	17.212	0.001143	up
ENSG00000170421	krt8	keratin 8 [Source:HGNC Symbol;Acc:HGNC:6446]	0.461	0.001147	down
ENSG00000254166	casc19	cancer susceptibility 19 [Source:HGNC Symbol;Acc:HGNC:49476]	2.447	0.001172	up
ENSG00000136167	lcp1	lymphocyte cytosolic protein 1 [Source:HGNC Symbol;Acc:HGNC:6528]	116.848	0.001197	up
ENSG00000133083	dclk1	doublecortin like kinase 1 [Source:HGNC Symbol;Acc:HGNC:2700]	2.734	0.001237	up
ENSG00000196154	s100a4	S100 calcium binding protein A4 [Source:HGNC Symbol;Acc:HGNC:10494]	0.418	0.001277	down
ENSG00000116183	pappa2	pappalysin 2 [Source:HGNC Symbol;Acc:HGNC:14615]	66.449	0.001346	up
ENSG00000126787	dlgap5	DLG associated protein 5 [Source:HGNC Symbol;Acc:HGNC:16864]	0.452	0.001405	down
ENSG00000100604	chga	chromogranin A [Source:HGNC Symbol;Acc:HGNC:1929]	5.034	0.001439	up
ENSG00000135519	kcnh3	potassium voltage-gated channel subfamily H member 3 [Source:HGNC Symbol;Acc:HGNC:6252]	0.47	0.001441	down
ENSG00000168393	dtymk	deoxythymidylate kinase [Source:HGNC Symbol;Acc:HGNC:3061]	0.406	0.00147	down
ENSG00000172175	malt1	MALT1 paracaspase [Source:HGNC Symbol;Acc:HGNC:6819]	0.488	0.001551	down
ENSG00000135114	oasl	2'-5'-oligoadenylate synthetase like [Source:HGNC Symbol;Acc:HGNC:8090]	4.284	0.001691	up
ENSG00000270069	mir222hg	miR222/221 cluster host gene [Source:HGNC Symbol;Acc:HGNC:49555]	2.43	0.00171	up
ENSG00000112837	tbx18	T-box transcription factor 18 [Source:HGNC Symbol;Acc:HGNC:11595]	0.484	0.001716	down
ENSG00000160963	col26a1	collagen type XXVI alpha 1 chain [Source:HGNC Symbol;Acc:HGNC:18038]	0.248	0.001819	down
ENSG00000230479	ap000695.1	novel transcript	2.363	0.001828	up
ENSG00000177494	zbed2	zinc finger BED-type containing 2 [Source:HGNC Symbol;Acc:HGNC:20710]	0.147	0.002023	down
ENSG00000182324	kcnj14	potassium inwardly rectifying channel subfamily J member 14 [Source:HGNC Symbol;Acc:HGNC:6260]	4.318	0.002077	up
ENSG00000171492	lrrc8d	leucine rich repeat containing 8 VRAC subunit D [Source:HGNC Symbol;Acc:HGNC:16992]	2.741	0.002129	up
ENSG00000272068	al365181.2	novel transcript	2.523	0.002136	up
ENSG00000140365	commd4	COMM domain containing 4 [Source:HGNC Symbol;Acc:HGNC:26027]	0.474	0.002183	down
ENSG00000105255	fsd1	fibronectin type III and SPRY domain containing 1 [Source:HGNC Symbol;Acc:HGNC:13745]	0.433	0.002195	down
ENSG00000197417	shpk	sedoheptulokinase [Source:HGNC Symbol;Acc:HGNC:1492]	0.485	0.002226	down
ENSG00000055118	kcnh2	potassium voltage-gated channel subfamily H member 2 [Source:HGNC Symbol;Acc:HGNC:6251]	0.328	0.002238	down
ENSG00000185745	ifit1	interferon induced protein with tetratricopeptide repeats 1 [Source:HGNC Symbol;Acc:HGNC:5407]	0.238	0.002278	down
ENSG00000133069	tmcc2	transmembrane and coiled-coil domain family 2 [Source:HGNC Symbol;Acc:HGNC:24239]	0.443	0.002301	down
ENSG00000180287	pld5	phospholipase D family member 5 [Source:HGNC Symbol;Acc:HGNC:26879]	0.493	0.002366	down
ENSG00000254721	ap000879.1	novel transcript	216.455	0.002407	up
ENSG00000215548	frg1jp	FSHD region gene 1 family member J, pseudogene [Source:HGNC Symbol;Acc:HGNC:51768]	2.356	0.002431	up
ENSG00000261286	atp2c2-as1	ATP2C2 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:53167]	15.436	0.002444	up
ENSG00000119333	wdr34	WD repeat domain 34 [Source:HGNC Symbol;Acc:HGNC:28296]	0.464	0.002478	down
ENSG00000177380	ppfia3	PTPRF interacting protein alpha 3 [Source:HGNC Symbol;Acc:HGNC:9247]	0.441	0.002604	down
ENSG00000116990	mycl	MYCL proto-oncogene, bHLH transcription factor [Source:HGNC Symbol;Acc:HGNC:7555]	2.285	0.002608	up
ENSG00000214575	cpeb1	cytoplasmic polyadenylation element binding protein 1 [Source:HGNC Symbol;Acc:HGNC:21744]	2.126	0.002642	up
ENSG00000092853	clspn	claspin [Source:HGNC Symbol;Acc:HGNC:19715]	0.341	0.002733	down
ENSG00000276087	ac008073.3	novel transcript	3.473	0.002863	up
ENSG00000176532	prf15	proline rich 15 [Source:HGNC Symbol;Acc:HGNC:22310]	0.421	0.003016	down
ENSG00000197275	rad54b	RAD54 homolog B [Source:HGNC Symbol;Acc:HGNC:17228]	0.472	0.003082	down
ENSG00000166833	nav2	neuron navigator 2 [Source:HGNC Symbol;Acc:HGNC:15997]	3.048	0.003147	up
ENSG0000010810	fyn	FYN proto-oncogene, Src family tyrosine kinase [Source:HGNC Symbol;Acc:HGNC:4037]	2.046	0.003216	up
ENSG00000049541	rfc2	replication factor C subunit 2 [Source:HGNC Symbol;Acc:HGNC:9970]	0.445	0.003319	down
ENSG00000154545	maged4	MAGE family member D4 [Source:HGNC Symbol;Acc:HGNC:23793]	0.474	0.003339	down
ENSG00000276266	fp325318.1	novel transcript	6.594	0.003389	up
ENSG00000147155	ebp	EBP cholesterol delta-isomerase [Source:HGNC Symbol;Acc:HGNC:3133]	0.407	0.003412	down
ENSG00000139410	sdsi	serine dehydratase like [Source:HGNC Symbol;Acc:HGNC:30404]	2.166	0.003481	up
ENSG00000109705	nkx3-2	NK3 homeobox 2 [Source:HGNC Symbol;Acc:HGNC:951]	0.145	0.003501	down
ENSG00000150471	adgrl3	adhesion G protein-coupled receptor L3 [Source:HGNC Symbol;Acc:HGNC:20974]	0.269	0.00362	down
ENSG00000164845	fam86fp	family with sequence similarity 86 member F, pseudogene [Source:HGNC Symbol;Acc:HGNC:42357]	2.284	0.00373	up

ENSG00000172575	rasgrp1	RAS guanyl releasing protein 1 [Source:HGNC Symbol;Acc:HGNC:9878]	0.333	0.003952	down
ENSG00000213886	ubd	ubiquitin D [Source:HGNC Symbol;Acc:HGNC:18795]	0.03	0.004028	down
ENSG00000171084	fam86jp	family with sequence similarity 86 member J, pseudogene [Source:HGNC Symbol;Acc:HGNC:44097]	2.098	0.004255	up
ENSG00000280191	linc01669	long intergenic non-protein coding RNA 1669 [Source:HGNC Symbol;Acc:HGNC:52457]	2.173	0.004337	up
ENSG00000157654	palm2akap2	PALM2 and AKAP2 fusion [Source:HGNC Symbol;Acc:HGNC:33529]	2.181	0.004763	up
ENSG00000149591	tagln	transgelin [Source:HGNC Symbol;Acc:HGNC:11553]	2.233	0.004789	up
ENSG00000181634	tnfsf15	TNF superfamily member 15 [Source:HGNC Symbol;Acc:HGNC:11931]	0.362	0.004849	down
ENSG00000189057	fam111b	family with sequence similarity 111 member B [Source:HGNC Symbol;Acc:HGNC:24200]	0.214	0.005031	down
ENSG00000182985	cadm1	cell adhesion molecule 1 [Source:HGNC Symbol;Acc:HGNC:5951]	0.482	0.005246	down
ENSG00000229425	aj009632.2	novel transcript	0.149	0.005315	down
ENSG00000000971	cfh	complement factor H [Source:HGNC Symbol;Acc:HGNC:4883]	0.444	0.00551	down
ENSG00000161642	znf385a	zinc finger protein 385A [Source:HGNC Symbol;Acc:HGNC:17521]	0.41	0.005561	down
ENSG00000167244	igf2	insulin like growth factor 2 [Source:HGNC Symbol;Acc:HGNC:5466]	2.042	0.005801	up
ENSG00000215218	ube2ql1	ubiquitin conjugating enzyme E2 Q family like 1 [Source:HGNC Symbol;Acc:HGNC:37269]	3.341	0.00606	up
ENSG00000068615	reep1	receptor accessory protein 1 [Source:HGNC Symbol;Acc:HGNC:25786]	0.216	0.006282	down
ENSG00000126217	mcf2l	MCF.2 cell line derived transforming sequence like [Source:HGNC Symbol;Acc:HGNC:14576]	0.307	0.006315	down
ENSG00000099810	mtap	methylthioadenosine phosphorylase [Source:HGNC Symbol;Acc:HGNC:7413]	2.011	0.006354	up
ENSG00000253428	linc01942	long intergenic non-protein coding RNA 1942 [Source:HGNC Symbol;Acc:HGNC:52766]	0.346	0.006448	down
ENSG00000230615	al139220.2	novel transcript	2.495	0.006563	up
ENSG00000108684	asic2	acid sensing ion channel subunit 2 [Source:HGNC Symbol;Acc:HGNC:99]	2.366	0.006979	up
ENSG00000184489	ptp4a3	protein tyrosine phosphatase 4A3 [Source:HGNC Symbol;Acc:HGNC:9636]	2.211	0.007046	up
ENSG00000163393	slc22a15	solute carrier family 22 member 15 [Source:HGNC Symbol;Acc:HGNC:20301]	3.598	0.007207	up
ENSG00000134278	spire1	spire type actin nucleation factor 1 [Source:HGNC Symbol;Acc:HGNC:30622]	2.034	0.007352	up
ENSG00000127920	gng11	G protein subunit gamma 11 [Source:HGNC Symbol;Acc:HGNC:4403]	0.465	0.007396	down
ENSG00000251562	malat1	metastasis associated lung adenocarcinoma transcript 1 [Source:HGNC Symbol;Acc:HGNC:29665]	2.054	0.007576	up
ENSG00000149243	klhl35	kelch like family member 35 [Source:HGNC Symbol;Acc:HGNC:26597]	2.665	0.007721	up
ENSG00000231105	ece1-as1	ECE1 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:40203]	4.697	0.008197	up
ENSG00000177679	srrm3	serine/arginine repetitive matrix 3 [Source:HGNC Symbol;Acc:HGNC:26729]	0.399	0.008429	down
ENSG00000174808	btc	betacellulin [Source:HGNC Symbol;Acc:HGNC:1121]	2.594	0.008733	up
ENSG00000142961	mob3c	MOB kinase activator 3C [Source:HGNC Symbol;Acc:HGNC:29800]	2.082	0.009119	up
ENSG00000214145	linc00887	long intergenic non-protein coding RNA 887 [Source:HGNC Symbol;Acc:HGNC:48574]	0.487	0.009324	down
ENSG00000020181	adgra2	adhesion G protein-coupled receptor A2 [Source:HGNC Symbol;Acc:HGNC:17849]	0.488	0.009382	down
ENSG00000244219	tmem225b	transmembrane protein 225B [Source:HGNC Symbol;Acc:HGNC:53075]	20.574	0.009402	up
ENSG00000221817	ppp3cb-as1	PPP3CB antisense RNA 1 (head to head) [Source:HGNC Symbol;Acc:HGNC:50750]	2.289	0.009465	up
ENSG00000164125	gask1b	golgi associated kinase 1B [Source:HGNC Symbol;Acc:HGNC:25312]	0.29	0.009568	down
ENSG00000188766	spred3	sprouty related EVH1 domain containing 3 [Source:HGNC Symbol;Acc:HGNC:31041]	2.775	0.009762	up
ENSG00000146411	slc2a12	solute carrier family 2 member 12 [Source:HGNC Symbol;Acc:HGNC:18067]	0.214	0.009908	down
ENSG00000064787	bcas1	brain enriched myelin associated protein 1 [Source:HGNC Symbol;Acc:HGNC:974]	0.019	0.010063	down
ENSG00000023902	plekho1	pleckstrin homology domain containing O1 [Source:HGNC Symbol;Acc:HGNC:24310]	0.409	0.010482	down
ENSG00000127129	edn2	endothelin 2 [Source:HGNC Symbol;Acc:HGNC:3177]	0.271	0.010557	down
ENSG00000250697	ac010343.3	novel transcript	5.446	0.010664	up
ENSG00000105516	dbp	D-box binding PAR bZIP transcription factor [Source:HGNC Symbol;Acc:HGNC:2697]	0.315	0.010834	down
ENSG00000109846	cryab	crystallin alpha B [Source:HGNC Symbol;Acc:HGNC:2389]	8.985	0.010889	up
ENSG00000164128	npy1r	neuropeptide Y receptor Y1 [Source:HGNC Symbol;Acc:HGNC:7956]	0.11	0.011135	down
ENSG00000183186	c2cd4c	C2 calcium dependent domain containing 4C [Source:HGNC Symbol;Acc:HGNC:29417]	0.35	0.01114	down
ENSG00000125735	tnfsf14	TNF superfamily member 14 [Source:HGNC Symbol;Acc:HGNC:11930]	0.17	0.011293	down
ENSG00000163395	igfn1	immunoglobulin like and fibronectin type III domain containing 1 [Source:HGNC Symbol;Acc:HGNC:24607]	9.225	0.011531	up
ENSG00000171658	nmral2p	NmrA like redox sensor 2, pseudogene [Source:HGNC Symbol;Acc:HGNC:52332]	2.168	0.011958	up
ENSG00000115221	itgb6	integrin subunit beta 6 [Source:HGNC Symbol;Acc:HGNC:6161]	0.384	0.012053	down
ENSG00000182870	galnt9	polypeptide N-acetylgalactosaminyltransferase 9 [Source:HGNC Symbol;Acc:HGNC:4131]	5.345	0.012152	up
ENSG00000068078	fgfr3	fibroblast growth factor receptor 3 [Source:HGNC Symbol;Acc:HGNC:3690]	0.39	0.012255	down
ENSG00000079435	lipe	lipase E, hormone sensitive type [Source:HGNC Symbol;Acc:HGNC:6621]	0.344	0.012371	down
ENSG00000135097	msi1	musashi RNA binding protein 1 [Source:HGNC Symbol;Acc:HGNC:7330]	0.362	0.012587	down
ENSG00000251003	zfpm2-as1	ZFPM2 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:50698]	2.309	0.012931	up
ENSG00000159184	hoxb13	homeobox B13 [Source:HGNC Symbol;Acc:HGNC:5112]	0.462	0.013114	down
ENSG00000250634	linc01182	long intergenic non-protein coding RNA 1182 [Source:HGNC Symbol;Acc:HGNC:49564]	0.129	0.013138	down
ENSG00000118849	rarres1	retinoic acid receptor responder 1 [Source:HGNC Symbol;Acc:HGNC:9867]	0.49	0.013751	down

ENSG00000119888	epcam	epithelial cell adhesion molecule [Source:HGNC Symbol;Acc:HGNC:11529]	0.451	0.013872	down
ENSG00000267374	mir924hg	MIR924 host gene [Source:HGNC Symbol;Acc:HGNC:44332]	0.264	0.013964	down
ENSG00000260231	kdm7a-dt	KDM7A divergent transcript [Source:HGNC Symbol;Acc:HGNC:48959]	2.663	0.014136	up
ENSG00000131016	akap12	A-kinase anchoring protein 12 [Source:HGNC Symbol;Acc:HGNC:370]	2.512	0.015312	up
ENSG00000131711	map1b	microtubule associated protein 1B [Source:HGNC Symbol;Acc:HGNC:6836]	2.435	0.015394	up
ENSG00000218336	tenm3	teneurin transmembrane protein 3 [Source:HGNC Symbol;Acc:HGNC:29944]	0.392	0.015633	down
ENSG00000241635	ugt1a1	UDP glucuronosyltransferase family 1 member A1 [Source:HGNC Symbol;Acc:HGNC:12530]	0.17	0.015731	down
ENSG00000179148	aloxe3	arachidonate lipoxygenase 3 [Source:HGNC Symbol;Acc:HGNC:13743]	2.113	0.015817	up
ENSG00000121858	tnfsf10	TNF superfamily member 10 [Source:HGNC Symbol;Acc:HGNC:11925]	0.132	0.016087	down
ENSG00000122591	fam126a	family with sequence similarity 126 member A [Source:HGNC Symbol;Acc:HGNC:24587]	2.091	0.016359	up
ENSG00000121211	mnd1	meiotic nuclear divisions 1 [Source:HGNC Symbol;Acc:HGNC:24839]	0.492	0.017124	down
ENSG00000273443	al645608.8	novel transcript	4.816	0.017596	up
ENSG00000087258	gnao1	G protein subunit alpha o1 [Source:HGNC Symbol;Acc:HGNC:4389]	0.145	0.017743	down
ENSG00000135378	prrg4	proline rich and Gla domain 4 [Source:HGNC Symbol;Acc:HGNC:30799]	0.423	0.018051	down
ENSG00000077063	cttnbp2	cortactin binding protein 2 [Source:HGNC Symbol;Acc:HGNC:15679]	0.321	0.018959	down
ENSG00000113749	hrh2	histamine receptor H2 [Source:HGNC Symbol;Acc:HGNC:5183]	0.304	0.018963	down
ENSG00000066468	fgfr2	fibroblast growth factor receptor 2 [Source:HGNC Symbol;Acc:HGNC:3689]	0.429	0.019233	down
ENSG00000107518	atrnl1	attractin like 1 [Source:HGNC Symbol;Acc:HGNC:29063]	0.462	0.019564	down
ENSG00000170482	slc23a1	solute carrier family 23 member 1 [Source:HGNC Symbol;Acc:HGNC:10974]	0.372	0.019578	down
ENSG00000146918	ncapg2	non-SMC condensin II complex subunit G2 [Source:HGNC Symbol;Acc:HGNC:21904]	0.486	0.01963	down
ENSG00000183798	emilin3	elastin microfibril interfacer 3 [Source:HGNC Symbol;Acc:HGNC:16123]	0.098	0.020097	down
ENSG00000123219	cenpk	centromere protein K [Source:HGNC Symbol;Acc:HGNC:29479]	0.475	0.020176	down
ENSG00000188916	insyn2a	inhibitory synaptic factor 2A [Source:HGNC Symbol;Acc:HGNC:33859]	6.46	0.02056	up
ENSG00000231311	pryp2	PTPN13 like Y-linked pseudogene 2 [Source:HGNC Symbol;Acc:HGNC:34019]	0.212	0.023216	down
ENSG00000234678	elf3-as1	ELF3 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:40211]	0.463	0.023249	down
ENSG00000225206	mir137hg	MIR137 host gene [Source:HGNC Symbol;Acc:HGNC:42871]	2.338	0.023507	up
ENSG00000111247	rad51ap1	RAD51 associated protein 1 [Source:HGNC Symbol;Acc:HGNC:16956]	0.406	0.024472	down
ENSG00000179403	vwa1	von Willebrand factor A domain containing 1 [Source:HGNC Symbol;Acc:HGNC:30910]	0.447	0.025165	down
ENSG00000115594	il1r1	interleukin 1 receptor type 1 [Source:HGNC Symbol;Acc:HGNC:5993]	0.452	0.025602	down
ENSG00000198018	entpd7	ectonucleoside triphosphate diphosphohydrolase 7 [Source:HGNC Symbol;Acc:HGNC:19745]	2.051	0.025909	up
ENSG00000167604	nfkbid	NFKB inhibitor delta [Source:HGNC Symbol;Acc:HGNC:15671]	0.428	0.02592	down
ENSG00000143816	wnt9a	Wnt family member 9A [Source:HGNC Symbol;Acc:HGNC:12778]	2.107	0.026786	up
ENSG00000182010	rtnk2	rhotekin 2 [Source:HGNC Symbol;Acc:HGNC:19364]	0.409	0.026833	down
ENSG00000119125	gda	guanine deaminase [Source:HGNC Symbol;Acc:HGNC:4212]	0.467	0.027057	down
ENSG00000187957	dner	delta/notch like EGF repeat containing [Source:HGNC Symbol;Acc:HGNC:24456]	2.37	0.027081	up
ENSG00000102595	uggt2	UDP-glucose glycoprotein glucosyltransferase 2 [Source:HGNC Symbol;Acc:HGNC:15664]	2.186	0.027569	up
ENSG00000260077	ac104794.3	novel transcript	2.612	0.029193	up
ENSG00000073670	adam11	ADAM metalloproteinase domain 11 [Source:HGNC Symbol;Acc:HGNC:189]	0.485	0.030133	down
ENSG00000099998	ggt5	gamma-glutamyltransferase 5 [Source:HGNC Symbol;Acc:HGNC:4260]	0.255	0.033257	down
ENSG00000006611	ush1c	USH1 protein network component harmonin [Source:HGNC Symbol;Acc:HGNC:12597]	0.28	0.034374	down
ENSG00000114790	arhgef26	Rho guanine nucleotide exchange factor 26 [Source:HGNC Symbol;Acc:HGNC:24490]	0.364	0.035094	down
ENSG00000143669	lyst	lysosomal trafficking regulator [Source:HGNC Symbol;Acc:HGNC:1968]	2.631	0.03736	up
ENSG00000126353	ccr7	C-C motif chemokine receptor 7 [Source:HGNC Symbol;Acc:HGNC:1608]	0.41	0.037481	down
ENSG00000162745	olfml2b	olfactomedin like 2B [Source:HGNC Symbol;Acc:HGNC:24558]	0.139	0.038434	down
ENSG00000139269	inhbe	inhibin subunit beta E [Source:HGNC Symbol;Acc:HGNC:24029]	4.242	0.039406	up
ENSG00000236095	al807757.2	novel transcript	0.105	0.040495	down
ENSG00000274020	linc01138	long intergenic non-protein coding RNA 1138 [Source:HGNC Symbol;Acc:HGNC:49454]	3.158	0.041002	up
ENSG00000144712	cand2	cullin associated and neddylation dissociated 2 (putative) [Source:HGNC Symbol;Acc:HGNC:30689]	0.238	0.041158	down
ENSG00000181444	znf467	zinc finger protein 467 [Source:HGNC Symbol;Acc:HGNC:23154]	0.37	0.042822	down
ENSG00000163576	efhb	EF-hand domain family member B [Source:HGNC Symbol;Acc:HGNC:26330]	0.175	0.042878	down
ENSG00000248383	pcdhac1	protocadherin alpha subfamily C, 1 [Source:HGNC Symbol;Acc:HGNC:8676]	2.542	0.043263	up
ENSG00000240065	psmb9	proteasome 20S subunit beta 9 [Source:HGNC Symbol;Acc:HGNC:9546]	0.46	0.04517	down
ENSG00000049192	adamts6	ADAM metalloproteinase with thrombospondin type 1 motif 6 [Source:HGNC Symbol;Acc:HGNC:222]	3.729	0.045868	up
ENSG00000174738	nr1d2	nuclear receptor subfamily 1 group D member 2 [Source:HGNC Symbol;Acc:HGNC:7963]	2.212	0.047002	up
ENSG00000077232	dnajc10	DnaJ heat shock protein family (Hsp40) member C10 [Source:HGNC Symbol;Acc:HGNC:24637]	2.024	0.047397	up
ENSG00000277879	al391988.1	novel transcript, antisense to SLC18A2	0.287	0.048712	down
ENSG00000134470	il15ra	interleukin 15 receptor subunit alpha [Source:HGNC Symbol;Acc:HGNC:5978]	2.167	0.04894	up
ENSG00000056736	il17rb	interleukin 17 receptor B [Source:HGNC Symbol;Acc:HGNC:18015]	0.349	0.049466	down
ENSG00000147162	ogt	O-linked N-acetylglucosamine (GlcNAc) transferase [Source:HGNC Symbol;Acc:HGNC:8127]	2.516	0.049758	up
ENSG00000237036	zeb1-as1	ZEB1 antisense RNA 1 [Source:HGNC Symbol;Acc:HGNC:42354]	2.505	0.049892	up