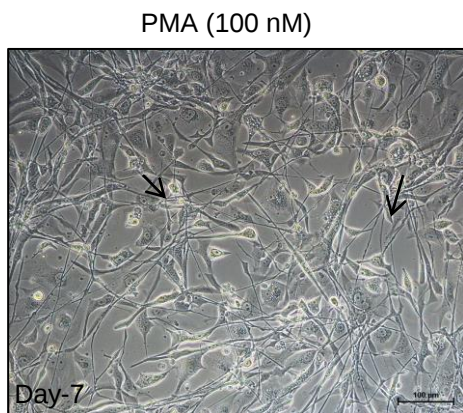
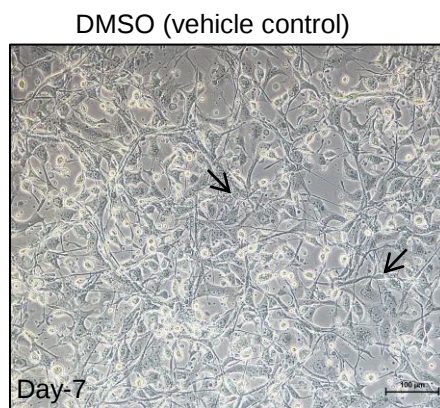


SUPPLEMENTARY DATA

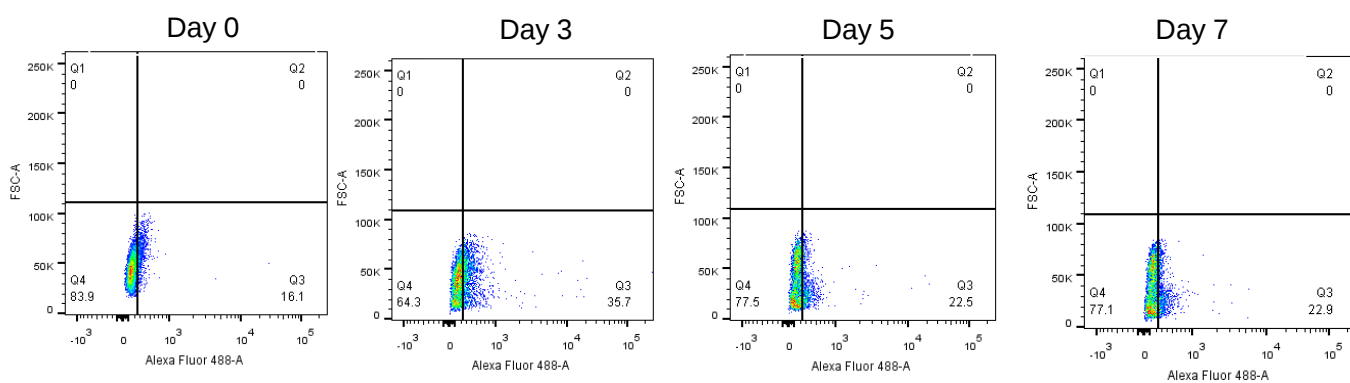
A



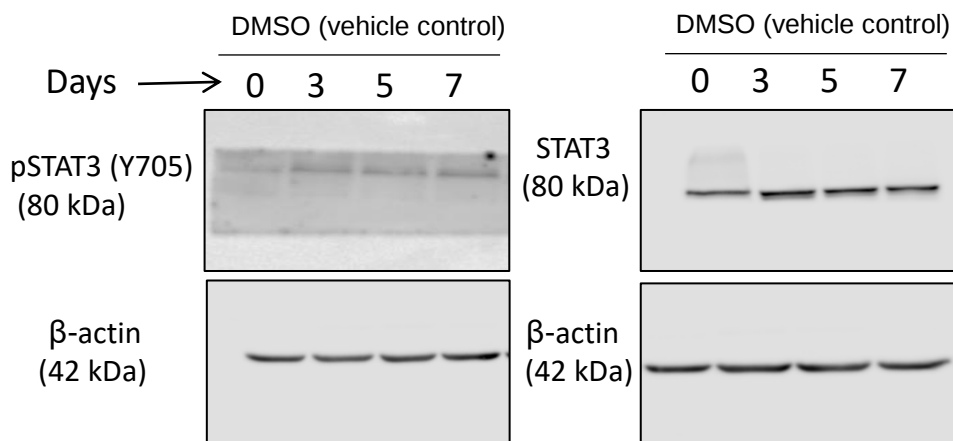
B



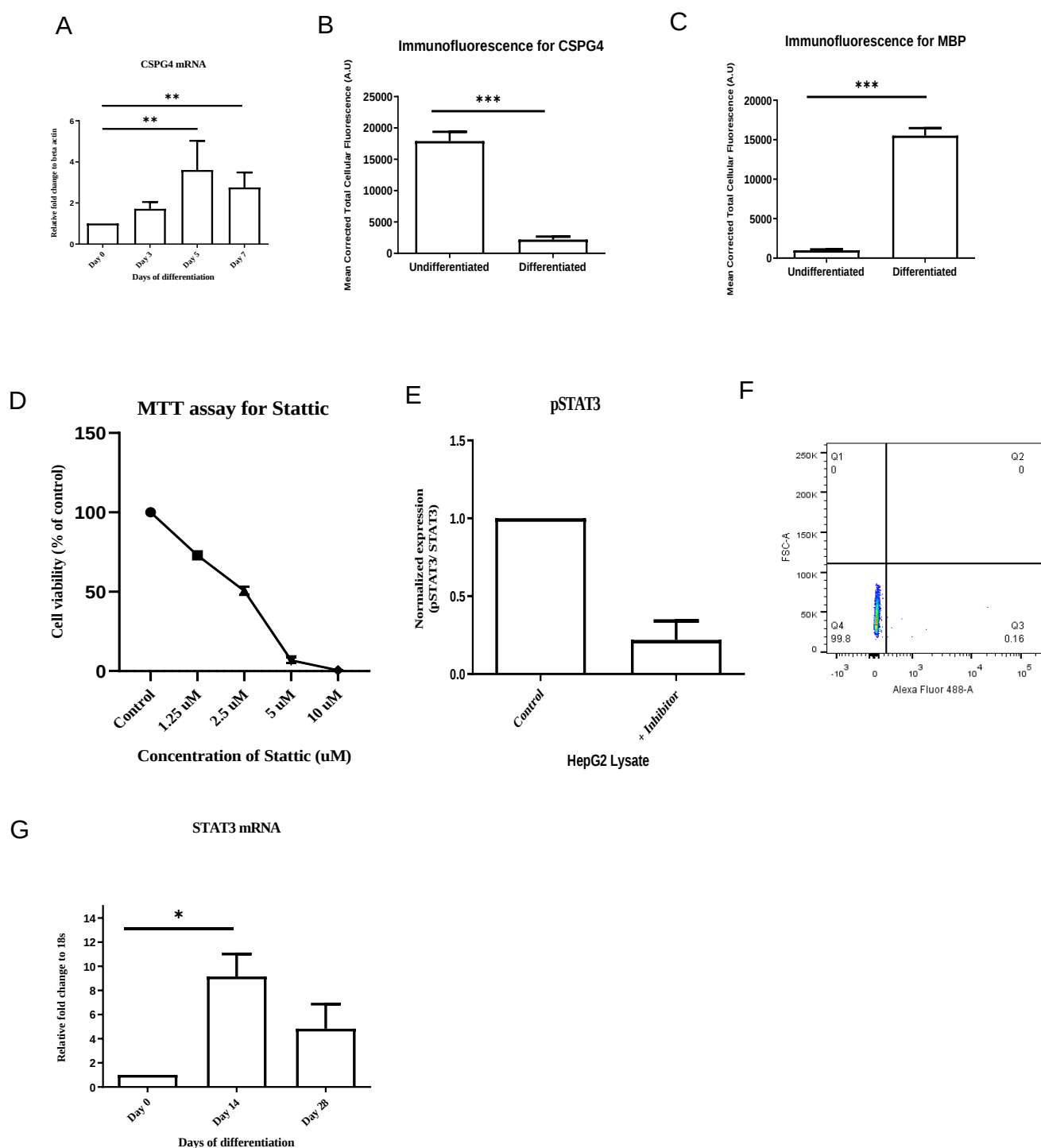
C



D



Supplementary Fig. 1. Representative morphological images of MO3.13 cells treated with 100nM PMA (A) or DMSO (vehicle control) (B) for 7 days. Images were acquired at day 7 using an inverted phase contrast microscope. Quantification of MBP positive cells in MO3.13 cells after DMSO Treatment at 3 different time points day 3, day 5 and day 7 (C). MBP was stained with primary anti-human MBP antibody. FITC conjugated anti-mouse IgG was used as a secondary antibody. Representative western blots of pSTAT3 and STAT3 (D) protein expression in MO3.13 treated with DMSO. B actin was used as a loading control. Normalized pSTAT3 expression was calculated by taking the ratio of protein level of pSTAT3 and STAT3.



Supplementary Fig.2. qPCR analysis of gene expression of *CSPG4* (n=5) (A). β actin was used as reference gene. The graphs shows quantitative analysis of 25 cells for *CSPG4* (B) and MBP (C) using Corrected Total Cellular Fluorescence method (CTCF). Measurement of cell viability when MO3.13 cells were treated with 100nM PMA and different doses of Stattic (D). MTT test was performed to calculate the same. Densitometric analysis of pSTAT3 protein levels in MO3.13 treated with PMA (100nM) alone or treated with PMA (100nM) and Stattic Inhibitor (1.25 μ M) (E). β actin was used as loading control. Normalized pSTAT3 expression was calculated by taking the ratio of protein level of pSTAT3 and STAT3. Representative dot blot of unstained MO3.13 in flow cytometry (F). qPCR analysis of gene expression of STAT3 (n=3) during differentiation of primary oligodendrocytes (G). 18S was used as reference gene. Data is represented as Mean $\pm$ SD for MO3.13 and Mean $\pm$ SEM for primary oligodendrocytes. *p < 0.05, **p < 0.01, ***p < 0.001

Direction	GSEA analysis: mature OL vs pre-OL	NES	Genes	adj.Pval
Down	Endocrine and other factor-regulated calcium reabsorption	-1.9843	39	3.90E-03
Down	Nicotine addiction	-1.8753	21	1.60E-02
Down	Morphine addiction	-1.7766	61	7.80E-03
Down	Aldosterone synthesis and secretion	-1.7403	70	1.00E-02
Down	Adrenergic signaling in cardiomyocytes	-1.707	104	6.20E-03
Up	Influenza A	2.6042	105	3.70E-04
Up	NOD-like receptor signaling pathway	2.5201	115	3.70E-04
Up	Coronavirus disease	2.4018	153	3.70E-04
Up	TNF signaling pathway	2.391	88	3.70E-04
Up	Cytokine-cytokine receptor interaction	2.3152	100	3.70E-04
Up	NF-kappa B signaling pathway	2.2775	67	3.70E-04
Up	Viral protein interaction with cytokine and cytokine receptor	2.2728	29	3.70E-04
Up	Hepatitis C	2.2236	109	3.70E-04
Up	Measles	2.2075	93	3.70E-04
Up	Hematopoietic cell lineage	2.1932	29	3.70E-04
Up	Cytosolic DNA-sensing pathway	2.167	32	3.70E-04
Up	Pertussis	2.1281	46	3.70E-04
Up	Epstein-Barr virus infection	2.1279	135	3.70E-04
Up	Complement and coagulation cascades	2.0912	30	1.40E-03
Up	Rheumatoid arthritis	2.0764	41	1.50E-03
Up	Staphylococcus aureus infection	2.0761	16	1.10E-03
Up	Leishmaniasis	2.0492	40	2.10E-03
Up	RIG-I-like receptor signaling pathway	1.9981	41	3.90E-03
Up	Antigen processing and presentation	1.9731	22	6.10E-03
Up	Necroptosis	1.9704	106	3.70E-04
Up	IL-17 signaling pathway	1.9338	59	3.10E-03
Up	Chemokine signaling pathway	1.9031	116	1.30E-03
Up	Th17 cell differentiation	1.8891	57	5.00E-03
Up	Tuberculosis	1.8847	108	1.50E-03
Up	Legionellosis	1.8778	35	1.10E-02
Up	Cell adhesion molecules	1.8666	72	4.90E-03
Up	Toll-like receptor signaling pathway	1.8565	59	6.20E-03
Up	Inflammatory bowel disease	1.8541	21	1.80E-02
Up	Apoptosis	1.848	109	2.10E-03
Up	Intestinal immune network for IgA production	1.8478	11	1.60E-02
Up	Linoleic acid metabolism	1.828	10	1.80E-02
Up	Osteoclast differentiation	1.8277	75	6.20E-03
Up	Cholesterol metabolism	1.8257	29	2.00E-02
Up	B cell receptor signaling pathway	1.8217	46	1.40E-02
Up	Lysosome	1.8137	108	4.50E-03
Up	Systemic lupus erythematosus	1.8118	47	1.40E-02
Up	C-type lectin receptor signaling pathway	1.8011	71	7.80E-03
Up	Arachidonic acid metabolism	1.7981	31	2.30E-02
Up	Ribosome	1.7679	118	5.00E-03
Up	Th1 and Th2 cell differentiation	1.76	48	2.20E-02
Up	Toxoplasmosis	1.746	74	1.40E-02
Up	Kaposi sarcoma-associated herpesvirus infection	1.7459	133	5.00E-03
Up	JAK-STAT signaling pathway	1.7436	81	1.40E-02
Up	Alpha-Linolenic acid metabolism	1.7219	12	5.70E-02

Up	Fat digestion and absorption	1.7072	16	6.30E-02
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Supplementary Table 1. List of upregulated and downregulated pathways in KEGG pathway analysis using GSEA when pre-OL were differentiated into mature OL. (NES: Normalized Enrichment Score)

Direction	Pathways	NES	nGenes	adj.Pval
Down	Ribosome	-2.4379	119	0.0029
Down	Fanconi anemia pathway	-2.1001	47	0.0012
Down	DNA replication	-2.0878	32	0.0016
Down	Homologous recombination	-1.9835	36	0.0032
Down	Cell cycle	-1.7759	117	0.0029
Down	Protein export	-1.7557	21	0.042
Down	Oocyte meiosis	-1.7268	105	0.0026
Down	Mismatch repair	-1.7166	19	0.061
Up	Viral protein interaction with cytokine and cytokine receptor	2.2258	33	0.00029
Up	Cytokine-cytokine receptor interaction	2.1592	120	0.00029
Up	NOD-like receptor signaling pathway	2.1077	119	0.00029
Up	TNF signaling pathway	2.08	91	0.00029
Up	Rheumatoid arthritis	2.0314	47	0.00029
Up	Influenza A	2.0251	106	0.00029
Up	NF-kappa B signaling pathway	2.0157	73	0.00029
Up	Hematopoietic cell lineage	1.9988	33	0.00091
Up	Mineral absorption	1.965	41	0.00053
Up	Leishmaniasis	1.9615	44	0.00029
Up	Pertussis	1.9575	50	0.00029
Up	Toll-like receptor signaling pathway	1.9552	64	0.00029
Up	Complement and coagulation cascades	1.9544	33	0.00091
Up	Cell adhesion molecules	1.9224	81	0.00029
Up	Malaria	1.8938	25	0.0027
Up	Intestinal immune network for IgA production	1.8912	16	0.0032
Up	Legionellosis	1.8888	37	0.0025
Up	Tuberculosis	1.8641	115	0.00029
Up	Staphylococcus aureus infection	1.8621	18	0.0052
Up	Neuroactive ligand-receptor interaction	1.8446	144	0.00029
Up	IL-17 signaling pathway	1.8374	59	0.0024
Up	Antigen processing and presentation	1.8301	23	0.0066
Up	Cytosolic DNA-sensing pathway	1.8138	33	0.0059
Up	JAK-STAT signaling pathway	1.8028	91	0.00067
Up	Inflammatory bowel disease	1.7884	25	0.01
Up	African trypanosomiasis	1.7618	18	0.019
Up	Calcium signaling pathway	1.7543	164	0.00029
Up	Chemokine signaling pathway	1.746	119	0.00092
Up	Ovarian steroidogenesis	1.7358	29	0.019
Up	Toxoplasmosis	1.7302	80	0.0036
Up	Autoimmune thyroid disease	1.688	5	0.0066
Up	RIG-I-like receptor signaling pathway	1.6838	45	0.02
Up	Phenylalanine metabolism	1.6834	10	0.038
Up	Phagosome	1.6802	88	0.0057
Up	Measles	1.6764	96	0.005

Up	Protein digestion and absorption	1.6763	67	0.012
Up	Amoebiasis	1.6681	65	0.015
Up	Arachidonic acid metabolism	1.6672	31	0.035
Up	Hepatitis C	1.6582	115	0.0043
Up	Linoleic acid metabolism	1.6497	10	0.054
Up	Type II diabetes mellitus	1.6331	34	0.043
Up	Chagas disease	1.6317	72	0.019

Supplementary Table 2. List of upregulated and downregulated pathways in KEGG pathway analysis using GSEA when FNSC were differentiated into mature OL. (NES: Normalized Enrichment Score)

Direction	Pathways	NES	nGenes	adj.Pval
Down	Ribosome	-2.8966	118	0.0044
Down	Coronavirus disease	-2.2998	151	0.0052
Down	DNA replication	-2.292	32	0.0039
Down	Fanconi anemia pathway	-2.2169	47	0.0039
Down	Homologous recombination	-2.1254	36	0.0039
Down	Mismatch repair	-2.1172	19	0.011
Down	Base excision repair	-2.007	31	0.017
Down	Cell cycle	-1.9648	115	0.0044
Down	Citrate cycle (TCA cycle)	-1.9055	25	0.027
Down	Systemic lupus erythematosus	-1.9037	45	0.017
Down	Aminoacyl-tRNA biosynthesis	-1.8914	38	0.021
Down	Nucleocytoplasmic transport	-1.787	97	0.01
Down	Porphyrin and chlorophyll metabolism	-1.7738	20	0.081
Down	Carbon metabolism	-1.7358	95	0.013
Down	Glutathione metabolism	-1.7244	39	0.065
Down	Terpenoid backbone biosynthesis	-1.7118	18	0.11
Down	Ribosome biogenesis in eukaryotes	-1.6802	67	0.038
Down	Glyoxylate and dicarboxylate metabolism	-1.6707	24	0.11
Down	Nucleotide excision repair	-1.6614	38	0.086
Down	RNA polymerase	-1.6491	27	0.11
Down	Biosynthesis of amino acids	-1.6325	59	0.065
Down	Proteasome	-1.6274	35	0.11
Down	Nitrogen metabolism	-1.6262	8	0.15
Down	Protein export	-1.6142	21	0.15
Down	Central carbon metabolism in cancer	-1.6084	55	0.081
Down	Pyrimidine metabolism	-1.5829	46	0.11
Down	Protein processing in endoplasmic reticulum	-1.5497	151	0.02
Down	Fatty acid degradation	-1.5382	38	0.14
Down	Vibrio cholerae infection	-1.5154	38	0.15
Down	Oxidative phosphorylation	-1.5086	114	0.056
Up	Mineral absorption	1.8611	39	0.0077
Up	Neuroactive ligand-receptor interaction	1.7946	125	0.0037
Up	Taste transduction	1.7931	28	0.02
Up	Endocrine and other factor-regulated calcium reabsorption	1.7912	39	0.017
Up	Arrhythmogenic right ventricular cardiomyopathy	1.7038	59	0.02

Up	Protein digestion and absorption	1.6964	61	0.02
Up	Calcium signaling pathway	1.6799	155	0.0044
Up	Glutamatergic synapse	1.6772	92	0.017
Up	Hypertrophic cardiomyopathy	1.6557	63	0.035
Up	Nicotine addiction	1.6506	23	0.086
Up	Morphine addiction	1.6505	61	0.038
Up	Pancreatic secretion	1.6505	59	0.038
Up	Serotonergic synapse	1.6251	66	0.041
Up	Malaria	1.6005	21	0.11
Up	Dilated cardiomyopathy	1.5813	69	0.065
Up	GnRH secretion	1.5679	46	0.097
Up	ECM-receptor interaction	1.558	66	0.081
Up	Ovarian steroidogenesis	1.5546	25	0.14
Up	Focal adhesion	1.5504	165	0.02
Up	Hematopoietic cell lineage	1.5441	29	0.14
Up	Cocaine addiction	1.5394	39	0.12
Up	Steroid hormone biosynthesis	1.5364	16	0.17
Up	Rheumatoid arthritis	1.5336	39	0.13
Up	Salivary secretion	1.5221	52	0.12
Up	Cell adhesion molecules	1.5192	74	0.097
Up	Circadian entrainment	1.5043	74	0.11
Up	GABAergic synapse	1.5038	60	0.12
Up	Long-term depression	1.4844	49	0.15
Up	Viral protein interaction with cytokine and cytokine receptor	1.4843	24	0.19
Up	Carbohydrate digestion and absorption	1.4836	27	0.19
Up	Other types of O-glycan biosynthesis	1.478	39	0.17
Up	Amoebiasis	1.4758	61	0.14
Up	CAMP signaling pathway	1.4752	144	0.065
Up	Bile secretion	1.46	40	0.18
Up	Apelin signaling pathway	1.4539	102	0.11
Up	Ras signaling pathway	1.453	164	0.071
Up	Basal cell carcinoma	1.4521	46	0.18
Up	Cardiac muscle contraction	1.4404	59	0.17
Up	Axon guidance	1.4341	157	0.086
Up	Acute myeloid leukemia	1.4331	52	0.18

Supplementary Table 3. List of upregulated and downregulated pathways in Kegg pathway analysis using GSEA when pre-OL were differentiated into mature OL. (NES: Normalized Enrichment Score)

Supplementary Table 4: List of upregulated genes (log 2 fold change >1, adjusted p value <0.1) in pre-OL compared to human fetal neural stem cells (hFNSC)

Ensembl ID	Symbol	log2 Fold Change	Adj.Pval	Type
ENSG00000235431		9.034462059	2.12E-07	lncRNA
ENSG00000164129	NPY5R	8.903055986	4.58E-07	protein_coding
ENSG00000249867	LINC02742	8.510552851	1.45E-02	lncRNA
ENSG00000184454	NCMAP	8.439609199	3.62E-06	protein_coding
ENSG00000273301		8.176794218	1.17E-05	lncRNA
ENSG00000197261	C6orf141	8.112893855	2.36E-05	protein_coding
ENSG00000182050	MGAT4C	8.086728186	2.09E-05	protein_coding
ENSG00000167210	LOXHD1	7.822816902	6.38E-05	protein_coding
ENSG00000058335	RASGRF1	7.819363677	6.64E-05	protein_coding
ENSG00000225978	HAR1A	7.757714721	7.19E-05	lncRNA
ENSG00000253576		7.720553834	1.10E-04	lncRNA
ENSG00000255227		7.696647495	1.89E-04	lncRNA
ENSG00000183036	PCP4	7.686113232	2.70E-10	protein_coding
ENSG00000144810	COL8A1	7.67455455	2.31E-04	protein_coding
ENSG00000249484	LINC01470	7.602829364	1.37E-04	lncRNA
ENSG00000235436	DPY19L2P4	7.483220526	2.31E-04	transcribed_unprocessed_pseudogene
ENSG00000260049	NA	7.457818525	4.62E-04	NA
ENSG00000234710		7.431111432	3.34E-04	lncRNA
ENSG00000169507	SLC38A11	7.424595641	3.22E-05	protein_coding
ENSG00000102290	PCDH11X	7.42341048	9.94E-09	protein_coding
ENSG00000110975	SYT10	7.417431911	3.91E-04	protein_coding
ENSG00000232115		7.415797632	2.99E-04	processed_pseudogene
ENSG00000170703	TTLL6	7.406799406	4.30E-05	protein_coding
ENSG00000255450		7.355286319	5.16E-04	processed_pseudogene
ENSG00000254349	MIR2052HG	7.351692525	4.67E-04	lncRNA
ENSG00000155052	CNTNAP5	7.310496811	2.90E-09	protein_coding
ENSG00000213410	NA	7.282757429	5.70E-04	NA
ENSG00000133107	TRPC4	7.25082702	1.24E-08	protein_coding
ENSG00000130037	KCNA5	7.234123291	7.14E-04	protein_coding
ENSG00000189253	TRIM64B	7.231058509	6.18E-04	protein_coding
ENSG00000237994		7.216954946	1.03E-03	lncRNA
ENSG00000186235	LINC02610	7.192221234	7.01E-04	lncRNA
ENSG00000168539	CHRM1	7.187094429	7.83E-05	protein_coding
ENSG00000179869	ABCA13	7.130009465	1.43E-03	protein_coding
ENSG00000078328	RBFOX1	7.108869734	1.52E-03	protein_coding
ENSG00000188064	WNT7B	7.097056409	1.02E-03	protein_coding
ENSG00000169271	HSPB3	7.059144779	1.16E-03	protein_coding
ENSG00000042980	ADAM28	7.052257284	1.28E-03	protein_coding
ENSG00000164692	COL1A2	7.02750656	3.65E-31	protein_coding
ENSG00000128610	FEZF1	6.979427492	2.70E-03	protein_coding
ENSG00000117154	IGSF21	6.954393968	1.80E-03	protein_coding
ENSG00000261211		6.93901677	1.81E-03	lncRNA
ENSG00000157445	CACNA2D3	6.922698498	2.28E-03	protein_coding
ENSG00000253976		6.917677848	2.11E-03	lncRNA
ENSG00000169933	FRMPD4	6.892663073	6.93E-08	protein_coding
ENSG00000267767	LINC01801	6.870522775	2.26E-03	lncRNA
ENSG00000168453	HR	6.851058481	1.14E-03	protein_coding
ENSG00000269783	NA	6.818044203	2.73E-03	NA

ENSG00000018236	CNTN1	6.805158685	8.66E-14	protein_coding
ENSG00000227284	MARK2P10	6.799272102	4.82E-03	processed_pseudogene
ENSG00000256982		6.79489898	3.44E-04	lncRNA
ENSG00000254526		6.792044025	5.32E-03	lncRNA
ENSG00000235884	LINC00941	6.760240606	4.68E-03	lncRNA
ENSG00000185477	GPRIN3 ENSG00000185477	6.751100654	5.05E-20	protein_coding
ENSG00000124143	ARHGAP40	6.747575941	4.38E-03	protein_coding
ENSG00000145242	EPHA5	6.680177689	7.78E-25	protein_coding
ENSG00000118785	SPP1	6.460507243	9.38E-133	protein_coding
ENSG00000146039	SLC17A4	6.433116303	1.51E-06	protein_coding
ENSG00000270615	SGO1P1	6.301165772	2.45E-03	processed_pseudogene
ENSG00000186487	MYT1L	6.295030748	1.71E-21	protein_coding
ENSG00000101438	SLC32A1	6.208444583	1.44E-29	protein_coding
ENSG00000130649	CYP2E1	6.206139543	2.40E-03	protein_coding
ENSG00000152910	CNTNAP4	6.181213233	2.83E-03	protein_coding
ENSG00000115828	QPCT	6.081221718	1.06E-03	protein_coding
ENSG00000019505	SYT13	6.048340948	1.86E-05	protein_coding
ENSG00000184305	CCSER1	5.985943568	5.42E-07	protein_coding
ENSG00000113739	STC2 ENSG00000113739	5.966153199	5.44E-34	protein_coding
ENSG00000128285	MCHR1	5.882008133	1.38E-08	protein_coding
ENSG00000230316	FEZF1-AS1	5.830356112	1.77E-04	lncRNA
ENSG00000172348	RCAN2	5.819850901	9.47E-03	protein_coding
ENSG00000198822	GRM3	5.801131929	1.19E-08	protein_coding
ENSG00000185070	FLRT2	5.791405194	3.50E-11	protein_coding
ENSG00000155265	GOLGA7B	5.762418843	7.92E-07	protein_coding
ENSG00000004468	CD38	5.75094257	2.47E-04	protein_coding
ENSG00000101188	NTSR1	5.732743378	2.61E-08	protein_coding
ENSG00000154764	WNT7A	5.681232222	2.48E-02	protein_coding
ENSG00000226430	USP17L7	5.661529995	1.09E-02	protein_coding
ENSG00000078725	BRINP1	5.647682608	8.26E-05	protein_coding
ENSG00000225619	MYT1L-AS1	5.601935917	1.29E-02	lncRNA
ENSG00000257150	PGAM1P5	5.450919004	2.18E-02	transcribed_processed_pseudogene
ENSG00000153233	PTPRR	5.385135222	5.44E-07	protein_coding
ENSG00000171903	CYP4F11	5.375744837	6.67E-04	protein_coding
ENSG00000006377	DLX6	5.30213734	8.94E-06	protein_coding
ENSG00000054803	CBLN4	5.290472868	2.30E-06	protein_coding
ENSG00000169306	IL1RAPL1	5.27734196	8.20E-23	protein_coding
ENSG00000145824	CXCL14	5.266880583	5.37E-12	protein_coding
ENSG00000131389	SLC6A6	5.24733425	2.61E-33	protein_coding
ENSG00000223841		5.214114493	6.96E-02	processed_pseudogene
ENSG00000167011	NAT16	5.210522045	3.72E-09	protein_coding
ENSG00000089169	RPH3A	5.194315401	9.38E-09	protein_coding
ENSG00000144339	TMEFF2	5.189329434	2.63E-12	protein_coding
ENSG00000165379	LRFN5	5.172526002	1.87E-21	protein_coding
ENSG00000087495	PHACTR3	5.164127819	5.91E-03	protein_coding
ENSG00000074527	NTN4	5.159883666	1.29E-03	protein_coding
ENSG00000095752	IL11	5.148684969	2.88E-03	protein_coding
ENSG00000197106	SLC6A17	5.135072489	1.91E-03	protein_coding

ENSG00000231764	DLX6-AS1	5.108863039	1.49E-04	lncRNA
ENSG00000196091	MYBPC1	5.085731033	8.96E-04	protein_coding
ENSG00000066032	CTNNA2	5.056870516	7.90E-28	protein_coding
ENSG00000153820	SPHKAP	5.054476103	8.85E-05	protein_coding
ENSG00000230327	MTCO1P42	5.036764845	3.58E-03	processed_pseudogene
ENSG00000118473	SGIP1	5.018706661	1.72E-09	protein_coding
ENSG00000182601	HS3ST4	4.981696205	3.83E-03	protein_coding
ENSG00000145451	GLRA3	4.976503898	6.16E-03	protein_coding
ENSG00000118160	SLC8A2	4.97197899	5.41E-24	protein_coding
ENSG00000224223	VSTM2A-OT1	4.958014584	3.52E-04	lncRNA
ENSG00000127152	BCL11B	4.953484819	1.51E-52	protein_coding
ENSG00000170419	VSTM2A	4.907873309	2.05E-15	protein_coding
ENSG00000139211	AMIGO2	4.879080555	3.83E-29	protein_coding
ENSG00000237919	LRRC7-AS1 ENSG00000237919	4.863385946	6.27E-03	lncRNA
ENSG00000104435	STMN2	4.843150608	2.56E-11	protein_coding
ENSG00000134207	SYT6	4.821270785	4.07E-14	protein_coding
ENSG00000105880	DLX5	4.8176397	1.11E-42	protein_coding
ENSG00000204525	HLA-C	4.816511678	1.58E-02	protein_coding
ENSG00000183780	SLC35F3	4.814744894	4.50E-05	protein_coding
ENSG00000102359	SRPX2	4.81111041	5.97E-11	protein_coding
ENSG00000156564	LRFN2	4.808799855	6.69E-03	protein_coding
ENSG00000197837	H4-16	4.794243225	7.44E-05	protein_coding
ENSG00000170381	SEMA3E	4.780077296	5.43E-36	protein_coding
ENSG00000255281		4.748905471	2.07E-03	processed_pseudogene
ENSG00000125144	MT1G	4.726240275	1.11E-02	protein_coding
ENSG00000137571	SLCO5A1 ENSG00000137571	4.71713271	6.09E-05	protein_coding
ENSG00000183960	KCNH8	4.695286937	3.92E-14	protein_coding
ENSG00000136842	TMOD1	4.694615485	2.97E-23	protein_coding
ENSG00000149488	TMC2	4.694555726	1.17E-02	protein_coding
ENSG00000145536	ADAMTS16	4.693664192	3.92E-14	protein_coding
ENSG00000163453	IGFBP7	4.692498315	3.36E-20	protein_coding
ENSG00000182836	PLCXD3	4.687096789	1.08E-02	protein_coding
ENSG00000168447	SCNN1B	4.659509982	1.08E-02	protein_coding
ENSG00000147402	NA	4.657418826	8.36E-41	NA
ENSG00000075223	SEMA3C	4.635336292	1.38E-02	protein_coding
ENSG00000017427	IGF1	4.634907936	1.21E-02	protein_coding
ENSG00000095739	BAMBI	4.61952243	1.37E-02	protein_coding
ENSG00000152377	SPOCK1	4.614510411	2.58E-44	protein_coding
ENSG00000261295	NA	4.613141599	1.47E-02	NA
ENSG00000171502	COL24A1	4.606439108	1.88E-04	protein_coding
ENSG00000229715	EEF1DP3	4.60279043	2.58E-07	transcribed_unprocessed_pseudogene
ENSG00000100302	RASD2	4.595534831	5.89E-11	protein_coding
ENSG00000109047	RCVRN	4.557258907	1.66E-02	protein_coding
ENSG00000121570	DPPA4	4.55616785	2.49E-04	protein_coding
ENSG00000198910	L1CAM	4.555112235	8.16E-23	protein_coding
ENSG00000185736	ADARB2	4.549894927	1.88E-02	protein_coding
ENSG00000112038	OPRM1	4.549294309	8.18E-02	protein_coding
ENSG00000122585	NPY	4.535781372	6.09E-33	protein_coding

ENSG00000136750	GAD2	4.529877344	1.29E-42	protein_coding
ENSG00000174469	CNTNAP2	4.515910773	1.20E-40	protein_coding
ENSG00000184672	RALYL	4.507726373	5.60E-18	protein_coding
ENSG00000229848		4.4716877	2.40E-02	lncRNA
ENSG00000180422	LINC00304	4.468412441	2.03E-02	lncRNA
ENSG00000144619	CNTN4	4.467479152	7.83E-04	protein_coding
ENSG00000033122	LRRC7	4.450374744	5.87E-30	protein_coding
ENSG00000002746	HECW1	4.41895686	2.09E-04	protein_coding
ENSG00000077942	FBLN1	4.406645248	3.27E-16	protein_coding
ENSG00000175267	VWA3A	4.381489799	2.57E-02	protein_coding
ENSG00000177103	DSCAML1	4.375728255	3.67E-27	protein_coding
ENSG00000157064	NMNAT2	4.371520918	1.94E-31	protein_coding
ENSG00000267452	LINC02073 ENSG00000267452	4.341310781	3.92E-02	lncRNA
ENSG00000172137	CALB2	4.338195185	1.57E-06	protein_coding
ENSG00000270192	MRPS35P3	4.327527638	2.10E-03	processed_pseudogene
ENSG00000110675	ELMOD1	4.320424211	5.41E-09	protein_coding
ENSG00000206144	MAPK6P1	4.319766485	1.75E-03	processed_pseudogene
ENSG00000272663	PPP1R21-DT	4.313809643	4.01E-02	lncRNA
ENSG00000008196	TFAP2B	4.299101948	4.78E-02	protein_coding
ENSG00000248174	LINC02268 ENSG00000248174	4.295766001	3.34E-02	lncRNA
ENSG00000104879	CKM	4.279780306	4.52E-02	protein_coding
ENSG00000250257	LDHAL6DP	4.275695001	4.19E-02	unprocessed_pseudogene
ENSG00000198797	BRINP2	4.250409225	7.29E-24	protein_coding
ENSG00000145864	GABRB2	4.248618226	2.02E-07	protein_coding
ENSG00000168843	FSTL5	4.239654377	2.22E-06	protein_coding
ENSG00000270611		4.231938662	4.98E-02	processed_pseudogene
ENSG00000226080	RPL6P4	4.222308622	1.85E-05	processed_pseudogene
ENSG00000164647	STEAP1	4.207114758	2.52E-03	protein_coding
ENSG00000124440	HIF3A	4.205376717	2.88E-06	protein_coding
ENSG00000144407	PTH2R	4.183497399	1.57E-07	protein_coding
ENSG00000101489	CELF4 ENSG00000101489	4.182961402	1.01E-38	protein_coding
ENSG00000248458		4.1604348	4.05E-03	lncRNA
ENSG00000085552	IGSF9	4.142746306	1.18E-06	protein_coding
ENSG00000180613	GSX2	4.129852516	3.68E-21	protein_coding
ENSG00000251306	NDUFB4P2	4.128705568	6.65E-03	processed_pseudogene
ENSG00000168356	SCN11A	4.12142825	5.34E-03	protein_coding
ENSG00000214510	SPINK13	4.116912598	1.25E-02	protein_coding
ENSG00000082293	COL19A1	4.113326707	1.81E-02	protein_coding
ENSG00000237846	ENSG00000237846	4.10304214	1.75E-03	processed_pseudogene
ENSG00000141485	SLC13A5	4.102479977	3.50E-11	protein_coding
ENSG00000079102	RUNX1T1	4.093880806	2.45E-05	protein_coding
ENSG00000166897	ELFN2	4.086006421	6.83E-07	protein_coding
ENSG00000167588	GPD1	4.084034149	5.12E-05	protein_coding
ENSG00000203632	NA	4.082888144	5.16E-04	NA
ENSG00000183023	SLC8A1	4.067544438	6.45E-06	protein_coding

ENSG00000101958	GLRA2	4.064454281	2.25E-16	protein_coding
ENSG00000066735	KIF26A	4.048878644	5.87E-37	protein_coding
ENSG00000185742	C11orf87	4.046782954	1.51E-10	protein_coding
ENSG00000164128	NPY1R	4.039100411	5.66E-07	protein_coding
ENSG00000249362	LINC02488	4.017393969	2.08E-06	lncRNA
ENSG00000154734	ADAMTS1	4.000164682	4.03E-21	protein_coding
ENSG00000151067	CACNA1C	3.987179182	3.25E-20	protein_coding
ENSG00000241359	SYNPR-AS1	3.980347515	8.13E-03	lncRNA
ENSG00000163630	SYNPR	3.98026277	7.71E-38	protein_coding
ENSG00000166750	SLFN5	3.973339396	3.95E-12	protein_coding
ENSG00000158560	DYNC1H1	3.960801065	7.79E-18	protein_coding
ENSG00000189223	PAX8-AS1	3.949078931	1.25E-08	lncRNA
ENSG00000139219	COL2A1	3.941223435	6.71E-15	protein_coding
ENSG00000140332	TLE3	3.938247475	1.87E-17	protein_coding
ENSG00000205143	ARID3C	3.937200575	3.43E-03	protein_coding
ENSG00000111058	ACSS3	3.933207383	3.12E-46	protein_coding
ENSG00000258844		3.931037489	2.15E-02	lncRNA
ENSG00000157087	ATP2B2	3.92623583	5.60E-18	protein_coding
ENSG00000253230	MIR124-1HG	3.92461057	6.05E-04	lncRNA
ENSG00000169247	SH3TC2	3.918787901	4.49E-04	protein_coding
ENSG00000226230	ENSG00000226230	3.918680819	1.17E-02	processed_pseudogene
ENSG00000174576	NPAS4	3.896172791	5.68E-06	protein_coding
ENSG00000255220	DDX18P5	3.895990696	2.55E-02	processed_pseudogene
ENSG00000120729	MYOT	3.893177321	3.03E-04	protein_coding
ENSG00000005884	ITGA3	3.888253234	4.80E-37	protein_coding
ENSG00000073849	ST6GAL1	3.880034659	3.26E-23	protein_coding
ENSG00000206579	XKR4	3.868298218	6.12E-17	protein_coding
ENSG00000124507	PACSIN1	3.865887253	2.18E-04	protein_coding
ENSG00000270020		3.858141986	6.68E-03	lncRNA
ENSG00000203386	NA	3.855194529	9.06E-03	NA
ENSG00000101160	CTSZ	3.850114195	4.15E-02	protein_coding
ENSG00000185915	KLHL34	3.84950346	9.84E-04	protein_coding
ENSG00000159167	STC1	3.848300876	5.46E-39	protein_coding
ENSG00000167306	MYO5B	3.83184625	1.01E-24	protein_coding
ENSG00000196371	FUT4	3.822622804	1.01E-02	protein_coding
ENSG00000189266	PNRC2 ENSG00000189266	3.82041819	7.13E-14	protein_coding
ENSG00000173530	TNFRSF10D	3.804548328	3.57E-18	protein_coding
ENSG00000129990	SYT5	3.798327856	6.43E-07	protein_coding
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ENSG00000164175	SLC45A2	3.762012962	2.07E-02	protein_coding
ENSG00000124493	GRM4	3.761929409	8.85E-04	protein_coding
ENSG00000160223	ICOSLG	3.754877968	1.26E-02	protein_coding
ENSG00000107731	UNC5B	3.7478435	2.46E-39	protein_coding
ENSG00000238057	ZEB2-AS1	3.74191851	2.84E-05	lncRNA
ENSG00000149131	SERPING1	3.739093591	1.15E-02	protein_coding
ENSG00000079689	SCGN	3.723006516	7.96E-07	protein_coding
ENSG00000204065	TCEAL5	3.720416048	7.95E-04	protein_coding
ENSG00000117318	ID3	3.7176031	3.17E-12	protein_coding

ENSG00000185275	CD24P4	3.70843701	8.30E-26	processed_pseudogene
ENSG00000229400	CNIH3-AS1	3.706022729	4.77E-02	lncRNA
ENSG00000176399	DMRTA1	3.696043748	3.16E-02	protein_coding
ENSG00000201831	SNORD115-1	3.690402958	7.12E-03	snoRNA
ENSG00000101349	PAK5	3.679635316	3.10E-03	protein_coding
ENSG00000144057	ST6GAL2	3.676662513	9.45E-08	protein_coding
ENSG00000155897	ADCY8	3.675592987	9.45E-13	protein_coding
ENSG00000131095	GFAP	3.65680499	1.09E-52	protein_coding
ENSG00000163071	SPATA18	3.651217457	1.10E-09	protein_coding
ENSG00000167642	SPINT2	3.640809969	1.16E-03	protein_coding
ENSG00000181211	HECW1-IT1	3.634264627	4.79E-03	lncRNA
ENSG00000170091	NSG2	3.632855499	6.07E-31	protein_coding
ENSG00000250371		3.621680811	2.18E-02	lncRNA
ENSG00000204277	LINC01993	3.619475981	1.20E-06	lncRNA
ENSG00000127329	PTPRB	3.617313934	2.27E-04	protein_coding
ENSG00000268241	NA	3.613652953	3.65E-05	NA
ENSG00000185133	INPP5J	3.60520316	4.65E-03	protein_coding
ENSG00000120645	IQSEC3	3.587720014	6.89E-07	protein_coding
ENSG00000100678	SLC8A3	3.576426351	7.70E-08	protein_coding
ENSG00000173918	C1QTNF1	3.575092027	6.19E-20	protein_coding
ENSG00000150656	CNDP1	3.574810444	4.04E-02	protein_coding
ENSG00000110786	PTPN5	3.565733363	4.52E-02	protein_coding
ENSG00000067842	ATP2B3	3.565319431	8.20E-04	protein_coding
ENSG00000158486	DNAH3	3.564955226	3.53E-03	protein_coding
ENSG00000217236	SP9	3.564044837	2.99E-22	protein_coding
ENSG00000006432	MAP3K9	3.551551446	5.75E-26	protein_coding
ENSG00000132359	RAP1GAP2	3.551311786	7.17E-05	protein_coding
ENSG00000158715	SLC45A3	3.54412791	3.91E-13	protein_coding
ENSG00000176840	MIR7-3HG	3.54373232	3.09E-08	lncRNA
ENSG00000165588	OTX2	3.532392042	1.28E-03	protein_coding
ENSG00000176884	GRIN1	3.522630278	4.71E-06	protein_coding
ENSG00000136869	TLR4	3.522093416	3.32E-32	protein_coding
ENSG00000157214	STEAP2	3.516443898	1.14E-21	protein_coding
ENSG00000091622	PITPNM3	3.513363163	1.07E-24	protein_coding
ENSG00000223764	LINC02593	3.506221212	1.72E-03	lncRNA
ENSG00000119283	TRIM67	3.495062341	9.22E-05	protein_coding
ENSG00000168824	NSG1	3.488627093	2.83E-18	protein_coding
ENSG00000169715	MT1E	3.487802018	5.09E-17	protein_coding
ENSG00000178171	AMER3 ENSG00000178171	3.486797232	1.14E-06	protein_coding
ENSG00000246528		3.480164221	4.10E-03	lncRNA
ENSG00000217408	PRELID1P2	3.479993929	8.32E-03	processed_pseudogene
ENSG00000102007	PLP2	3.471196436	2.40E-03	protein_coding
ENSG00000237940	LINC01238 ENSG00000237940	3.470830443	4.93E-06	lncRNA
ENSG00000119508	NR4A3	3.468417267	3.41E-07	protein_coding
ENSG00000233766	CAVIN2-AS1	3.468366984	2.92E-02	lncRNA
ENSG00000260555		3.467145394	6.62E-02	lncRNA
ENSG00000241322	CDRT1	3.465601207	5.98E-02	protein_coding
ENSG00000111913	RIPOR2	3.457920899	2.47E-36	protein_coding

ENSG00000196878	LAMB3	3.457356071	1.07E-06	protein_coding
ENSG00000123612	ACVR1C	3.451273072	2.16E-03	protein_coding
ENSG00000224940	PRRT4	3.450372139	8.24E-04	protein_coding
ENSG00000183018	SPNS2	3.449205416	1.66E-09	protein_coding
ENSG00000146674	IGFBP3	3.446991436	6.08E-03	protein_coding
ENSG00000163814	CDCP1	3.434262743	7.29E-03	protein_coding
ENSG00000236709	DAPK1-IT1	3.431448687	5.56E-02	lncRNA
ENSG00000166501	PRKCB	3.430791744	1.59E-02	protein_coding
ENSG00000227617	CERS6-AS1	3.423037028	6.07E-03	lncRNA
ENSG00000147488	ST18	3.420139249	1.77E-16	protein_coding
ENSG00000178522	AMBN	3.418675811	3.27E-03	protein_coding
ENSG00000064687	ABCA7	3.414262198	5.43E-12	protein_coding
ENSG00000215397	SCRT2	3.413140923	5.66E-15	protein_coding
ENSG00000104953	TLE6	3.412354903	1.15E-03	protein_coding
ENSG00000235568	NFAM1	3.411542462	5.12E-03	protein_coding
ENSG00000215845	TSTD1	3.409139132	1.13E-06	protein_coding
ENSG00000134668	SPOCD1	3.407522457	2.51E-05	protein_coding
ENSG00000165186	PTCHD1	3.404703481	2.08E-13	protein_coding
ENSG00000214381	LINC00488	3.38753116	1.25E-02	lncRNA
ENSG00000184408	KCND2	3.382463246	9.64E-08	protein_coding
ENSG00000219404		3.382055701	4.29E-02	processed_pseudogene
ENSG00000198535	C2CD4A	3.37256018	5.80E-09	protein_coding
ENSG00000151892	GFRA1	3.372406513	3.65E-05	protein_coding
ENSG00000116254	CHD5	3.372287751	2.15E-02	protein_coding
ENSG00000163873	GRIK3	3.369989646	2.04E-37	protein_coding
ENSG00000104689	TNFRSF10A	3.366147855	1.25E-03	protein_coding
ENSG00000115380	EFEMP1	3.361045479	1.28E-02	protein_coding
ENSG00000238165		3.349876892	6.75E-02	processed_pseudogene
ENSG00000144460	NYAP2	3.345225597	1.43E-03	protein_coding
ENSG00000139220	PPFIA2	3.339790305	1.36E-15	protein_coding
ENSG00000230633	NA	3.3390393	4.18E-03	NA
ENSG00000198626	RYR2	3.332911718	2.92E-02	protein_coding
ENSG00000224731		3.327741721	7.52E-02	lncRNA
ENSG00000092758	COL9A3	3.326066138	1.38E-48	protein_coding
ENSG00000144278	GALNT13	3.321596567	1.70E-02	protein_coding
ENSG00000238143	ENSG00000238143	3.320246379	6.47E-02	processed_pseudogene
ENSG00000122733	PHF24	3.317758602	1.18E-19	protein_coding
ENSG00000092345	DAZL	3.316889229	8.23E-02	protein_coding
ENSG00000162951	LRRTM1	3.315169982	3.46E-02	protein_coding
ENSG00000150054	MPP7	3.305888918	7.16E-02	protein_coding
ENSG00000254960	KIRREL3-AS2	3.298041159	1.94E-04	lncRNA
ENSG00000158445	KCNB1	3.29678369	1.07E-20	protein_coding
ENSG00000116132	PRRX1	3.29295473	3.09E-08	protein_coding
ENSG00000254440	PBOV1	3.289694159	1.96E-03	protein_coding
ENSG00000228243	NA	3.288102167	8.26E-02	NA
ENSG00000101638	ST8SIA5	3.287247174	2.28E-24	protein_coding
ENSG00000166268	MYRFL	3.285149825	5.97E-04	protein_coding
ENSG00000132821	VSTM2L	3.278982226	3.21E-02	protein_coding
ENSG00000095777	MYO3A	3.276528148	1.12E-04	protein_coding

ENSG00000155324	GRAMD2B	3.275573209	2.47E-05	protein_coding
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ENSG00000162631	NTNG1	3.262421084	2.52E-08	protein_coding
ENSG00000171408	PDE7B	3.26199386	2.92E-03	protein_coding
ENSG00000175556	LONRF3	3.259894647	1.20E-04	protein_coding
ENSG00000148123	PLPPR1	3.250532307	6.00E-33	protein_coding
ENSG00000258723		3.249597092	1.69E-03	lncRNA
ENSG00000173110	HSPA6	3.247658139	3.92E-03	protein_coding
ENSG00000183570	PCBP3	3.241680897	5.23E-04	protein_coding
ENSG00000223855	HRAT92	3.235834731	3.87E-02	lncRNA
ENSG00000144481	TRPM8	3.230361532	3.96E-21	protein_coding
ENSG00000107742	SPOCK2	3.229523529	1.56E-23	protein_coding
ENSG00000163032	VSNL1	3.228431185	2.73E-04	protein_coding
ENSG00000100557	CCDC198	3.227559298	1.81E-03	protein_coding
ENSG00000178031	ADAMTSL1	3.223806756	4.66E-06	protein_coding
ENSG00000158352	SHROOM4	3.210699743	7.12E-07	protein_coding
ENSG00000112379	ARFGEF3	3.209070397	1.38E-40	protein_coding
ENSG00000021645	NRXN3	3.206928259	1.48E-02	protein_coding
ENSG00000170616	NA	3.204537778	1.24E-10	NA
ENSG00000139890	REM2	3.201184502	7.05E-03	protein_coding
ENSG00000260938	NA	3.197322115	5.16E-02	NA
ENSG00000257835		3.193879728	4.04E-04	lncRNA
ENSG00000147041	SYTL5	3.181487135	2.91E-10	protein_coding
ENSG00000233903	NA	3.179585852	8.23E-02	NA
ENSG00000172554	SNTG2	3.163549977	8.64E-03	protein_coding
ENSG00000270141	TERC	3.163504192	5.49E-16	lncRNA
ENSG00000065717	TLE2	3.162283794	3.50E-11	protein_coding
ENSG00000212456	NA	3.16082869	7.35E-02	NA
ENSG00000113396	SLC27A6	3.156848093	4.96E-02	protein_coding
ENSG00000117602	RCAN3	3.154215368	3.42E-13	protein_coding
ENSG00000125968	ID1	3.151208753	7.86E-04	protein_coding
ENSG00000133135	RNF128	3.147333947	4.23E-04	protein_coding
ENSG00000234690	EPCAM-DT	3.141836922	3.50E-02	lncRNA
ENSG00000159409	CELF3	3.139718506	4.47E-16	protein_coding
ENSG00000142606	MMEL1	3.138744736	2.91E-02	protein_coding
ENSG00000104081	BMF	3.138281645	1.70E-08	protein_coding
ENSG00000158769	F11R ENSG00000158769	3.134517318	3.65E-06	protein_coding
ENSG00000119866	BCL11A	3.131488343	2.13E-29	protein_coding
ENSG00000165929	TC2N	3.127541057	2.52E-03	protein_coding
ENSG00000165061	ZMAT4	3.127314263	8.68E-20	protein_coding
ENSG00000213023	SYT3	3.12726256	1.03E-02	protein_coding
ENSG00000143502	SUSD4	3.124244048	4.20E-02	protein_coding
ENSG00000172936	MYD88	3.100118003	2.46E-14	protein_coding
ENSG00000220666	RCC2P7	3.099390068	4.70E-02	processed_pseudogene
ENSG00000255317		3.096295117	4.49E-03	lncRNA
ENSG00000139178	C1RL	3.095365406	1.17E-10	protein_coding
ENSG00000180730	SHISA2	3.087152021	6.81E-02	protein_coding
ENSG00000152932	RAB3C	3.08615804	4.25E-08	protein_coding
ENSG00000101333	PLCB4	3.085656135	4.61E-24	protein_coding

ENSG00000260785	CASC17	3.074024632	8.41E-02	lncRNA
ENSG00000187398	LUZP2	3.066091993	4.14E-02	protein_coding
ENSG00000266017	MIR4477B	3.066088811	6.67E-02	miRNA
ENSG00000272511	NA	3.065786872	1.05E-07	NA
ENSG00000260903	XKR7	3.064083542	7.12E-02	protein_coding
ENSG00000141750	STAC2	3.063525258	3.71E-02	protein_coding
ENSG00000155849	ELMO1	3.061141303	5.26E-18	protein_coding
ENSG00000147883	CDKN2B	3.056593909	7.97E-13	protein_coding
ENSG00000174460	ZCCHC12	3.055370073	2.79E-11	protein_coding
ENSG00000258636		3.047476182	3.73E-02	lncRNA
ENSG00000132470	ITGB4	3.04583222	4.38E-02	protein_coding
ENSG00000173452	TMEM196	3.042083079	3.19E-11	protein_coding
ENSG00000148053	NTRK2	3.040320767	1.10E-19	protein_coding
ENSG00000107864	CPEB3	3.036300897	1.07E-16	protein_coding
ENSG00000232815	DUX4L50	3.028063547	9.33E-04	unprocessed_pseudogene
ENSG00000065833	ME1	3.023014844	9.62E-13	protein_coding
ENSG00000178965	ERICH3	3.016990408	2.55E-03	protein_coding
ENSG00000100884	CPNE6	3.014985181	5.52E-02	protein_coding
ENSG00000151490	PTPRO	3.011752523	3.40E-11	protein_coding
ENSG00000206503	HLA-A	3.011409321	4.40E-03	protein_coding
ENSG00000250538		3.011025328	1.51E-04	lncRNA
ENSG00000104213	PDGFRL	3.009530087	2.28E-03	protein_coding
ENSG00000257242	LINC01619	3.00705335	4.08E-09	lncRNA
ENSG00000233806	LINC01237	3.005938367	2.27E-02	lncRNA
ENSG00000178718	RPP25	3.005434074	6.89E-10	protein_coding
ENSG00000142549	IGLON5	3.003737644	2.93E-17	protein_coding
ENSG00000095713	CRTAC1	2.996567451	5.41E-04	protein_coding
ENSG00000149926	TLCD3B	2.996236952	4.32E-04	protein_coding
ENSG00000233930	KRTAP5-AS1	2.990273746	2.02E-03	lncRNA
ENSG00000188580	NKAIN2	2.986822344	3.73E-05	protein_coding
ENSG00000145365	TIFA	2.985808569	8.66E-09	protein_coding
ENSG00000237973	MTCO1P12	2.98546038	4.65E-08	unprocessed_pseudogene
ENSG00000138378	STAT4 ENSG00000138378	2.98445675	2.50E-02	protein_coding
ENSG00000153902	LGI4	2.983188608	3.41E-04	protein_coding
ENSG00000243304		2.980258415	8.61E-02	processed_pseudogene
ENSG00000230830	ARPP21-AS1	2.975111136	6.63E-03	lncRNA
ENSG00000115896	PLCL1	2.974146153	1.61E-06	protein_coding
ENSG00000170396	ZNF804A	2.972264015	3.56E-09	protein_coding
ENSG00000111249	CUX2	2.964428765	6.39E-02	protein_coding
ENSG00000085563	ABCB1	2.960647918	1.70E-13	protein_coding
ENSG00000158816	VWA5B1	2.959469565	5.85E-02	protein_coding
ENSG00000108551	RASD1	2.958546727	3.28E-04	protein_coding
ENSG00000169908	TM4SF1	2.954430688	1.82E-02	protein_coding
ENSG00000095370	SH2D3C	2.952891169	1.03E-04	protein_coding
ENSG00000073910	FRY	2.947743778	5.26E-30	protein_coding
ENSG00000225849	MKRN7P	2.947669972	1.27E-04	transcribed_processed_pseudogene
ENSG00000135740	SLC9A5	2.935492103	9.16E-05	protein_coding
ENSG00000161681	SHANK1	2.931270437	4.62E-04	protein_coding
ENSG00000165238	WNK2	2.920978331	1.51E-16	protein_coding

ENSG00000252324	NA	2.916027829	8.27E-02	NA
ENSG00000116852	KIF21B	2.914860062	5.05E-20	protein_coding
ENSG00000007062	PROM1	2.914388395	6.48E-14	protein_coding
ENSG00000189431	RASSF10	2.912750347	3.01E-03	protein_coding
ENSG00000232044	SILC1	2.908933851	7.16E-03	lncRNA
ENSG00000214279	SCART1	2.906517562	1.78E-04	protein_coding
ENSG00000176438	SYNE3	2.899968303	7.05E-03	protein_coding
ENSG00000077279	DCX	2.899573606	1.94E-50	protein_coding
ENSG00000160179	ABCG1	2.898700013	7.60E-08	protein_coding
ENSG00000178568	ERBB4	2.894596103	8.12E-19	protein_coding
ENSG00000148704	VAX1	2.889277991	2.19E-02	protein_coding
ENSG00000127328	RAB3IP	2.888944475	7.46E-03	protein_coding
ENSG00000171766	GATM	2.885765216	2.47E-10	protein_coding
ENSG00000167553	TUBA1C	2.885350808	5.46E-27	protein_coding
ENSG00000117266	CDK18	2.872745536	9.05E-05	protein_coding
ENSG00000118322	ATP10B	2.870183224	3.81E-13	protein_coding
ENSG00000162981	LRATD1	2.867787529	5.44E-34	protein_coding
ENSG00000258986	TMEM179	2.856811259	4.86E-05	protein_coding
ENSG00000019991	HGF	2.855294315	3.84E-04	protein_coding
ENSG00000149571	KIRREL3	2.854587941	3.49E-15	protein_coding
ENSG00000165072	MAMDC2	2.852538266	8.88E-10	protein_coding
ENSG00000104722	NEFM	2.851190089	3.72E-14	protein_coding
ENSG00000261839		2.845191825	3.97E-03	lncRNA
ENSG00000178623	GPR35	2.842462383	9.06E-02	protein_coding
ENSG00000105825	TFPI2	2.840890886	1.09E-02	protein_coding
ENSG00000166111	SVOP	2.839665143	2.32E-09	protein_coding
ENSG00000185149	NPY2R ENSG00000185149	2.83650421	9.54E-13	protein_coding
ENSG00000135525	MAP7	2.826661547	1.01E-04	protein_coding
ENSG00000135905	DOCK10	2.822068638	4.65E-03	protein_coding
ENSG00000198732	SMOC1	2.821361201	2.23E-30	protein_coding
ENSG00000164604	GPR85	2.818854472	2.56E-07	protein_coding
ENSG00000128045	RASL11B	2.817637714	6.96E-06	protein_coding
ENSG00000197442	MAP3K5	2.81308101	2.61E-06	protein_coding
ENSG00000250156	LINC02060	2.804958026	5.71E-06	lncRNA
ENSG00000152402	GUCY1A2	2.799084857	1.03E-02	protein_coding
ENSG00000137474	MYO7A	2.78970125	2.84E-06	protein_coding
ENSG00000164076	CAMKV	2.788569422	3.28E-11	protein_coding
ENSG00000118596	SLC16A7	2.787867069	5.01E-05	protein_coding
ENSG00000233644	ARHGEF7-IT1	2.784240393	5.32E-02	lncRNA
ENSG00000204950	LRRC10B	2.784220156	2.88E-14	protein_coding
ENSG00000248429	FAM198B-AS1	2.782131049	5.14E-02	lncRNA
ENSG00000135824	RGS8	2.780068464	3.72E-07	protein_coding
ENSG00000230445	LRRC37A6P	2.770780201	2.27E-02	transcribed_processed_pseudogene
ENSG00000206676	Y_RNA	2.764154902	6.36E-02	misc_RNA
ENSG00000133878	DUSP26	2.760114879	5.81E-05	protein_coding
ENSG00000237637	FRY-AS1 ENSG00000237637	2.75314169	6.92E-02	lncRNA
ENSG00000238113	LINC01410	2.741181463	4.69E-06	lncRNA
ENSG00000260672		2.740248967	2.54E-02	lncRNA

ENSG00000067066	SP100	2.736610417	4.97E-04	protein_coding
ENSG00000258026		2.735830413	7.79E-02	lncRNA
ENSG00000158856	DMTN	2.735780205	4.80E-02	protein_coding
ENSG00000159216	RUNX1	2.734011197	2.93E-03	protein_coding
ENSG00000110455	ACCS	2.732099391	1.04E-06	protein_coding
ENSG00000151789	ZNF385D	2.726562116	2.67E-21	protein_coding
ENSG00000198216	CACNA1E	2.726045399	6.33E-05	protein_coding
ENSG00000162645	GBP2	2.723012065	1.71E-03	protein_coding
ENSG00000176824	NA	2.712692727	4.10E-08	NA
ENSG00000125845	BMP2	2.708901031	9.35E-04	protein_coding
ENSG00000197320		2.70235013	4.49E-03	processed_pseudogene
ENSG00000242193	CRYZL2P	2.696906747	5.87E-03	transcribed_unitary_pseudogene
ENSG00000171303	KCNK3	2.693376959	2.02E-05	protein_coding
ENSG00000164220	F2RL2	2.689485355	2.82E-02	protein_coding
ENSG00000184905	TCEAL2	2.681916046	2.36E-05	protein_coding
ENSG00000260910	LINC00565	2.680263441	8.89E-03	lncRNA
ENSG00000260837	NA	2.675606183	4.84E-03	NA
ENSG00000174521	TTC9B	2.670616716	5.23E-07	protein_coding
ENSG00000178803	ADORA2A-AS1	2.670283231	6.49E-02	lncRNA
ENSG00000183196	CHST6	2.668884448	8.97E-15	protein_coding
ENSG00000072133	RPS6KA6	2.666633436	1.01E-03	protein_coding
ENSG00000256637	LINC01965	2.665961526	1.11E-03	lncRNA
ENSG00000007001	UPP2	2.664202863	2.36E-02	protein_coding
ENSG00000175906	ARL4D	2.662156751	1.63E-20	protein_coding
ENSG00000171435	KSR2	2.661650213	1.10E-02	protein_coding
ENSG00000161082	CELF5	2.652982259	6.37E-15	protein_coding
ENSG00000163565	IFI16	2.649048959	4.03E-21	protein_coding
ENSG00000116774	OLFML3	2.647148304	3.92E-03	protein_coding
ENSG00000080709	KCNN2	2.646072573	1.63E-02	protein_coding
ENSG00000202354	RNY3	2.643879465	8.69E-03	misc_RNA
ENSG00000255650	FAM222A-AS1	2.632217273	3.14E-03	lncRNA
ENSG00000159712	ANKRD18CP	2.631414945	4.95E-02	unprocessed_pseudogene
ENSG00000110723	EXPH5	2.629516554	5.41E-02	protein_coding
ENSG00000204310	AGPAT1	2.626544419	1.16E-04	protein_coding
ENSG00000187672	ERC2	2.621103117	1.78E-05	protein_coding
ENSG00000023445	BIRC3	2.617773166	4.52E-03	protein_coding
ENSG00000215039	CD27-AS1	2.616707939	1.49E-03	lncRNA
ENSG00000196132	MYT1	2.615721143	1.28E-14	protein_coding
ENSG00000253284		2.611659294	1.56E-06	lncRNA
ENSG00000261185	NA	2.61006057	1.32E-04	NA
ENSG00000080854	IGSF9B	2.605552525	1.63E-05	protein_coding
ENSG00000124602	UNC5CL	2.59951725	7.29E-02	protein_coding
ENSG00000265623	MIR3139	2.589863608	6.31E-02	miRNA
ENSG00000137843	PAK6	2.58981476	4.35E-03	protein_coding
ENSG00000179057	IGSF22	2.582797924	2.33E-02	protein_coding
ENSG00000186765	FSCN2	2.58180476	7.82E-03	protein_coding
ENSG00000270112	ST8SIA5-DT	2.580253956	3.49E-02	lncRNA
ENSG00000188158	NHS	2.580160328	1.47E-08	protein_coding
ENSG00000168386	FILIP1L	2.579867061	1.83E-18	protein_coding
ENSG00000116299	ELAPOR1	2.577143559	1.48E-04	protein_coding
ENSG00000069696	DRD4	2.575477124	9.58E-02	protein_coding

ENSG00000158815	FGF17	2.567794173	1.56E-02	protein_coding
ENSG00000228389	NA	2.566930579	7.50E-03	NA
ENSG00000259221		2.566510372	7.93E-02	lncRNA
ENSG00000126500	FLRT1	2.563798965	3.93E-07	protein_coding
ENSG00000152583	SPARCL1	2.557804674	1.02E-14	protein_coding
ENSG00000162595	DIRAS3	2.556095632	2.52E-07	protein_coding
ENSG00000259106		2.554803716	6.81E-02	lncRNA
ENSG00000273018	FAM106A	2.554178278	1.17E-03	lncRNA
ENSG00000176956	LY6H	2.550968438	3.46E-05	protein_coding
ENSG00000147724	FAM135B ENSG00000147724	2.537677701	3.01E-03	protein_coding
ENSG00000145721	LIX1	2.534902656	4.60E-09	protein_coding
ENSG00000093072	ADA2	2.533869349	5.67E-02	protein_coding
ENSG00000112280	COL9A1	2.529258433	9.91E-04	protein_coding
ENSG00000145063		2.529218588	5.34E-02	lncRNA
ENSG00000162997	PRORS1P	2.526189764	4.57E-05	transcribed_unitary_pseudogene
ENSG00000117114	ADGRL2	2.525804035	1.54E-21	protein_coding
ENSG00000232762		2.525691943	2.88E-02	lncRNA
ENSG00000172995	ARPP21	2.523019415	2.39E-12	protein_coding
ENSG00000102924	CBLN1	2.520380104	7.84E-03	protein_coding
ENSG00000176681	LRRC37A	2.517475017	4.90E-02	protein_coding
ENSG00000270248		2.515411649	6.38E-02	processed_pseudogene
ENSG00000187479	C11orf96	2.514501381	9.23E-14	protein_coding
ENSG00000230461	PROX1-AS1	2.51096025	3.12E-04	lncRNA
ENSG00000105464	GRIN2D	2.509078083	7.74E-08	protein_coding
ENSG00000001617	SEMA3F	2.501283075	4.69E-02	protein_coding
ENSG00000263982		2.490629547	8.60E-02	lncRNA
ENSG00000188859	FAM78B	2.490317546	6.79E-02	protein_coding
ENSG00000167037	SGSM1	2.489180464	4.71E-06	protein_coding
ENSG00000173535	TNFRSF10C	2.48571908	1.31E-04	protein_coding
ENSG00000082497	SERTAD4	2.484028411	2.41E-09	protein_coding
ENSG00000074276	CDHR2	2.480235438	7.87E-04	protein_coding
ENSG00000113448	PDE4D	2.474853152	1.32E-22	protein_coding
ENSG00000164659	ELAPOR2	2.47085165	2.83E-15	protein_coding
ENSG00000152092	ASTN1	2.469986733	4.09E-31	protein_coding
ENSG00000067715	SYT1	2.467304606	5.45E-19	protein_coding
ENSG00000132872	SYT4	2.465255864	2.32E-06	protein_coding
ENSG00000135127	BICDL1	2.462668862	3.45E-06	protein_coding
ENSG00000225614	ZNF469	2.461457257	2.75E-04	protein_coding
ENSG00000203685	STUM	2.461184262	2.85E-05	protein_coding
ENSG00000183908	LRRC55	2.459407246	3.18E-02	protein_coding
ENSG00000089199	CHGB	2.458315515	5.70E-08	protein_coding
ENSG00000064201	TSPAN32	2.456751357	1.44E-02	protein_coding
ENSG00000267325	LINC01415	2.455859436	6.49E-02	lncRNA
ENSG00000250305	TRMT9B	2.453832159	1.66E-22	protein_coding
ENSG00000174844	DNAH12	2.451200671	4.91E-02	protein_coding
ENSG00000105278	ZFR2	2.448797566	9.03E-03	protein_coding
ENSG00000135929	CYP27A1	2.446056056	2.43E-02	protein_coding
ENSG00000255153	TOLLIP-AS1	2.444645989	4.94E-02	lncRNA
ENSG00000001461	NIPAL3	2.443816427	5.42E-10	protein_coding

ENSG00000108231	LGI1	2.443131376	1.25E-07	protein_coding
ENSG00000185274	GALNT17	2.44240129	8.47E-13	protein_coding
ENSG00000160190	SLC37A1	2.439638764	1.43E-05	protein_coding
ENSG00000166106	ADAMTS15	2.436449915	1.53E-03	protein_coding
ENSG00000231121	NA	2.435153194	3.81E-06	NA
ENSG00000213930	GALT	2.434651606	5.76E-05	protein_coding
ENSG00000272377	NA	2.434115061	5.48E-02	NA
ENSG00000244953		2.432453097	8.50E-02	lncRNA
ENSG00000063180	CA11	2.421701897	4.75E-10	protein_coding
ENSG00000164796	CSMD3 ENSG00000164796	2.420499779	7.93E-27	protein_coding
ENSG00000164574	GALNT10	2.418426818	3.05E-15	protein_coding
ENSG00000104112	SCG3	2.414961384	1.87E-17	protein_coding
ENSG00000148798	INA	2.414750668	2.29E-20	protein_coding
ENSG00000130707	ASS1	2.410563733	1.30E-04	protein_coding
ENSG00000183742	MACC1	2.406081722	3.56E-02	protein_coding
ENSG00000162426	SLC45A1	2.403127942	7.36E-03	protein_coding
ENSG00000172716	SLFN11	2.402402645	8.04E-02	protein_coding
ENSG00000114541	FRMD4B ENSG00000114541	2.398460577	1.28E-05	protein_coding
ENSG00000258637		2.393250973	6.46E-02	lncRNA
ENSG00000166922	SCG5	2.39152707	8.03E-03	protein_coding
ENSG00000172247	C1QTNF4	2.389725519	3.58E-02	protein_coding
ENSG00000169554	ZEB2	2.375874976	7.36E-33	protein_coding
ENSG00000137857	DUOX1	2.37542253	5.78E-10	protein_coding
ENSG00000205078	SYCE1L	2.370281182	5.80E-03	protein_coding
ENSG00000114115	RBP1	2.36754721	1.93E-06	protein_coding
ENSG00000052126	PLEKHA5	2.358440597	3.23E-17	protein_coding
ENSG00000099957	P2RX6	2.35783974	7.60E-03	protein_coding
ENSG00000258342		2.355001845	9.23E-02	lncRNA
ENSG00000141837	CACNA1A ENSG00000141837	2.353710117	4.76E-03	protein_coding
ENSG00000178662	CSRNP3	2.352759018	7.08E-25	protein_coding
ENSG00000100077	GRK3	2.349499913	2.99E-10	protein_coding
ENSG00000266378		2.346596607	7.29E-02	lncRNA
ENSG00000255794	RMST	2.343412045	1.12E-09	lncRNA
ENSG00000150275	PCDH15	2.340686724	6.32E-03	protein_coding
ENSG00000261496	NA	2.338857927	1.37E-06	NA
ENSG00000011422	PLAUR	2.338023725	6.77E-02	protein_coding
ENSG00000163288	GABRB1	2.335008021	2.98E-03	protein_coding
ENSG00000162493	PDPN	2.333139738	9.46E-07	protein_coding
ENSG00000127084	FGD3	2.331358825	2.02E-04	protein_coding
ENSG00000163864	NMNAT3	2.330775658	1.73E-04	protein_coding
ENSG00000137070	IL11RA	2.329751223	6.08E-04	protein_coding
ENSG00000141505	ASGR1	2.32609216	1.31E-03	protein_coding
ENSG00000174963	ZIC4	2.31903164	5.02E-04	protein_coding
ENSG00000232599		2.313225641	8.68E-02	processed_pseudogene
ENSG00000261568	NA	2.305202358	3.88E-03	NA
ENSG00000091128	LAMB4	2.297773491	4.01E-04	protein_coding
ENSG00000053438	NNAT	2.297308184	1.44E-27	protein_coding

ENSG00000215452	ZNF663P	2.294435971	4.11E-06	transcribed_unitary_pseudogene
ENSG00000182718	ANXA2	2.292243696	5.34E-22	protein_coding
ENSG00000163686	ABHD6	2.283157762	2.22E-09	protein_coding
ENSG00000010310	GIPR	2.280978159	1.53E-02	protein_coding
ENSG00000189221	MAOA	2.280536549	1.10E-03	protein_coding
ENSG00000105784	RUNDC3B	2.275657862	2.22E-05	protein_coding
ENSG00000185666	SYN3	2.273631653	9.71E-02	protein_coding
ENSG00000112139	MDGA1	2.270412474	8.87E-20	protein_coding
ENSG00000198838	RYR3	2.265375623	1.05E-10	protein_coding
ENSG00000250616		2.264676813	7.01E-02	lncRNA
ENSG00000177679	SRRM3	2.262659934	2.73E-06	protein_coding
ENSG00000189212	DPY19L2P1	2.259022489	7.00E-02	transcribed_unprocessed_pseudogene
ENSG00000254245	PCDHGA3	2.255078796	3.87E-09	protein_coding
ENSG00000252835	SCARNA21	2.251212257	5.58E-18	scaRNA
ENSG00000104369	JPH1	2.245619477	1.88E-04	protein_coding
ENSG00000137142	IGFBPL1	2.244147015	7.54E-17	protein_coding
ENSG00000246465		2.240783745	6.04E-02	lncRNA
ENSG00000163536	SERPINI1	2.239566113	5.04E-02	protein_coding
ENSG00000236397	DDX11L2	2.237441329	5.56E-03	unprocessed_pseudogene
ENSG00000147571	CRH	2.236387254	3.99E-02	protein_coding
ENSG00000103056	SMPD3	2.234049205	6.63E-06	protein_coding
ENSG00000042493	CAPG	2.227840681	1.85E-03	protein_coding
ENSG00000178695	KCTD12	2.227486656	4.68E-08	protein_coding
ENSG00000176927	EFCAB5	2.224935164	5.93E-03	protein_coding
ENSG00000144355	DLX1	2.222817248	2.83E-28	protein_coding
ENSG00000204169	NA	2.222523447	3.62E-02	NA
ENSG00000184617	ZNF840P	2.221721144	7.90E-02	unprocessed_pseudogene
ENSG00000261520	DLGAP1-AS5	2.21620577	2.06E-02	lncRNA
ENSG00000151778	SERP2	2.208199477	2.00E-02	protein_coding
ENSG00000105877	DNAH11	2.206604287	9.11E-17	protein_coding
ENSG00000234383	CTBP2P8	2.206112215	6.96E-02	processed_pseudogene
ENSG00000257095		2.204958414	9.61E-02	lncRNA
ENSG00000237088		2.201522235	5.11E-02	processed_pseudogene
ENSG00000174939	ASPHD1 ENSG00000174939	2.200408111	9.41E-04	protein_coding
ENSG00000157570	TSPAN18	2.196001451	1.48E-03	protein_coding
ENSG00000158859	ADAMTS4	2.193815256	7.31E-04	protein_coding
ENSG00000162728	KCNJ9	2.193789238	2.39E-05	protein_coding
ENSG00000176978	DPP7	2.192665593	3.96E-12	protein_coding
ENSG00000243319	FGF14-IT1	2.183642032	3.04E-02	lncRNA
ENSG00000166900	STX3	2.17903836	1.61E-07	protein_coding
ENSG00000145920	CPLX2	2.178481267	4.88E-13	protein_coding
ENSG00000184838	PRR16	2.178324644	2.09E-05	protein_coding
ENSG00000246662	LINC00535	2.164863489	7.95E-02	lncRNA
ENSG00000187134	AKR1C1	2.159781644	2.84E-05	protein_coding
ENSG00000081138	CDH7	2.159513535	9.35E-03	protein_coding
ENSG00000176761	ZNF285B	2.152069327	5.39E-02	unprocessed_pseudogene
ENSG00000143842	SOX13 ENSG00000143842	2.14516347	3.09E-02	protein_coding
ENSG00000028277	POU2F2	2.144897349	2.49E-03	protein_coding

ENSG00000187627	RGPD1	2.144581799	7.00E-02	protein_coding
ENSG00000185304	RGPD2	2.143916549	2.33E-03	protein_coding
ENSG00000196139	AKR1C3	2.142537792	1.31E-02	protein_coding
ENSG00000206557	TRIM71	2.141930118	1.53E-05	protein_coding
ENSG00000057657	PRDM1	2.140261626	4.70E-02	protein_coding
ENSG00000001460	STPG1	2.134892241	8.65E-02	protein_coding
ENSG00000188517	COL25A1	2.13177768	1.64E-02	protein_coding
ENSG00000234584	ENSG00000234584	2.131625258	6.43E-02	lncRNA
ENSG00000165478	HEPACAM	2.13124416	3.94E-10	protein_coding
ENSG00000143786	CNIH3 ENSG00000143786	2.129666186	4.25E-11	protein_coding
ENSG00000163618	CADPS	2.12715641	2.59E-09	protein_coding
ENSG00000156298	TSPAN7	2.126276986	6.10E-07	protein_coding
ENSG00000137642	SORL1	2.120026414	1.94E-15	protein_coding
ENSG00000179044	EXOC3L1	2.114309547	3.28E-02	protein_coding
ENSG00000205663	NA	2.11337338	4.31E-02	NA
ENSG00000131620	ANO1	2.112978995	1.39E-03	protein_coding
ENSG00000173040	EVC2	2.10920081	2.11E-02	protein_coding
ENSG00000144115	THNSL2	2.100053822	1.37E-04	protein_coding
ENSG00000179630	LACC1	2.099896219	9.34E-02	protein_coding
ENSG00000102678	FGF9	2.09584525	1.13E-04	protein_coding
ENSG00000042832	TG	2.095609798	6.68E-03	protein_coding
ENSG00000240401		2.095573253	9.19E-03	lncRNA
ENSG00000197550		2.093555661	3.96E-02	unprocessed_pseudogene
ENSG00000240498	CDKN2B-AS1	2.092318133	7.39E-03	lncRNA
ENSG00000163191	S100A11	2.089225232	6.37E-09	protein_coding
ENSG00000167723	TRPV3	2.089220203	1.58E-02	protein_coding
ENSG00000182223	ZAR1	2.088334783	4.98E-04	protein_coding
ENSG00000162706	CADM3	2.086345601	8.03E-08	protein_coding
ENSG00000254266	PKIA-AS1	2.084630093	4.41E-03	lncRNA
ENSG00000117226	GBP3	2.082383758	3.74E-05	protein_coding
ENSG00000153253	SCN3A	2.081473537	1.46E-21	protein_coding
ENSG00000089847	ANKRD24	2.078403892	4.84E-02	protein_coding
ENSG00000162998	FRZB	2.077863444	7.54E-02	protein_coding
ENSG00000249034	NA	2.077630904	4.26E-02	NA
ENSG00000115844	DLX2	2.076799631	5.94E-12	protein_coding
ENSG00000198633	ZNF534	2.07653638	2.27E-02	protein_coding
ENSG00000173258	ZNF483	2.073630064	7.77E-15	protein_coding
ENSG00000253733	LZTS1-AS1	2.071106352	4.70E-02	lncRNA
ENSG00000162374	ELAVL4	2.070304215	2.90E-14	protein_coding
ENSG00000257335	MGAM	2.066963008	9.26E-02	protein_coding
ENSG00000161267	BDH1	2.066007925	2.96E-07	protein_coding
ENSG00000138622	HCN4	2.064795691	2.22E-03	protein_coding
ENSG00000124212	PTGIS	2.061482322	4.52E-02	protein_coding
ENSG00000158258	CLSTN2	2.059796763	3.62E-05	protein_coding
ENSG00000153132	CLGN	2.057809647	2.06E-05	protein_coding
ENSG00000175274	TP53I11	2.05558578	2.97E-15	protein_coding
ENSG00000105409	ATP1A3	2.049828353	2.87E-08	protein_coding
ENSG00000165879	FRAT1	2.047144799	5.86E-04	protein_coding

ENSG00000249853	HS3ST5	2.045758958	1.86E-02	protein_coding
ENSG00000128591	FLNC	2.045746348	4.10E-08	protein_coding
ENSG00000100604	CHGA	2.045279154	8.06E-04	protein_coding
ENSG00000109854	HTATIP2	2.044354596	4.96E-02	protein_coding
ENSG00000197959	DNM3	2.04245904	2.90E-13	protein_coding
ENSG00000125869	LAMP5	2.040258407	6.41E-06	protein_coding
ENSG00000162825	NBPF20	2.039269251	7.07E-02	protein_coding
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ENSG00000147234	FRMPD3	2.035723809	3.87E-03	protein_coding
ENSG00000198133	TMEM229B	2.034492497	2.45E-07	protein_coding
ENSG00000186088	GSAP	2.031385064	4.50E-02	protein_coding
ENSG00000072182	ASIC4	2.027325112	6.96E-03	protein_coding
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ENSG00000181656	GPR88	2.025770365	8.94E-02	protein_coding
ENSG00000172346	CSDC2	2.024661292	2.07E-09	protein_coding
ENSG00000224596	ZMIZ1-AS1	2.023819268	9.96E-02	lncRNA
ENSG00000117600	PLPPR4	2.015425363	6.40E-14	protein_coding
ENSG00000143858	SYT2	2.015340469	6.34E-03	protein_coding
ENSG00000196074	SYCP2	2.014509575	2.83E-04	protein_coding
ENSG00000147459	DOCK5	2.012670405	1.28E-11	protein_coding
ENSG00000182022	CHST15	2.008191511	1.78E-02	protein_coding
ENSG00000163131	CTSS	2.007779297	6.69E-02	protein_coding
ENSG00000269657	NA	2.007356008	4.89E-02	NA
ENSG00000198796	ALPK2	2.007039093	1.01E-07	protein_coding
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ENSG00000163331	DAPL1	2.000960229	7.57E-02	protein_coding
ENSG00000113212	PCDHB7	1.999754198	8.57E-04	protein_coding
ENSG00000142178	SIK1	1.998616698	6.62E-11	protein_coding
ENSG00000079337	RAPGEF3	1.997636688	1.84E-05	protein_coding
ENSG00000175175	PPM1E	1.994594339	1.97E-15	protein_coding
ENSG00000139117	CPNE8	1.991550691	1.49E-10	protein_coding
ENSG00000227740	LINC02803	1.990859769	6.67E-02	lncRNA
ENSG00000102466	FGF14	1.989698765	4.91E-02	protein_coding
ENSG00000143226	FCGR2A	1.98769588	7.96E-02	protein_coding
ENSG00000183914	DNAH2	1.986818599	9.74E-02	protein_coding
ENSG00000048540	LMO3	1.986237903	6.76E-05	protein_coding
ENSG00000164309	CMYA5	1.98436615	4.43E-03	protein_coding
ENSG00000128833	MYO5C	1.980429667	4.17E-08	protein_coding
ENSG00000047662	FAM184B	1.976442714	1.42E-08	protein_coding
ENSG00000172878	METAP1D	1.973920235	2.38E-15	protein_coding
ENSG00000135678	CPM	1.973054133	2.40E-03	protein_coding
ENSG00000026508	CD44	1.972348188	2.10E-20	protein_coding
ENSG00000106069	CHN2	1.969869396	4.17E-08	protein_coding
ENSG00000197769	MAP1LC3C	1.966068511	2.83E-04	protein_coding
ENSG00000133401	PDZD2	1.963000463	1.70E-06	protein_coding
ENSG00000110076	NRXN2	1.962997104	3.86E-18	protein_coding
ENSG00000242267	SKINT1L	1.961375499	8.18E-02	transcribed_unprocessed_pseudogene
ENSG00000127125	PPCS	1.960742305	4.45E-02	protein_coding
ENSG00000101746	NOL4	1.960403061	4.70E-14	protein_coding
ENSG00000112137	PHACTR1	1.959811119	5.45E-06	protein_coding

ENSG00000227987		1.958889984	6.43E-02	lncRNA
ENSG00000187902	SHISA7	1.95699858	6.06E-03	protein_coding
ENSG00000159399	HK2	1.955330709	2.13E-13	protein_coding
ENSG00000133958	UNC79	1.953749302	5.55E-07	protein_coding
ENSG00000185774	KCNIP4	1.951422682	5.42E-07	protein_coding
ENSG00000234231	ANAPC1P4	1.950164159	1.54E-02	transcribed_unprocessed_pseudogene
ENSG00000155980	KIF5A	1.949992535	5.11E-18	protein_coding
ENSG00000251675		1.94990391	3.26E-03	lncRNA
ENSG00000162545	CAMK2N1	1.94730859	4.13E-12	protein_coding
ENSG00000229422		1.94492771	1.92E-02	lncRNA
ENSG00000109158	GABRA4	1.944455258	2.10E-06	protein_coding
ENSG00000154358	OBSCN	1.941285201	6.64E-05	protein_coding
ENSG00000204909	SPINK9	1.939830054	3.98E-02	protein_coding
ENSG00000260261		1.938012766	1.35E-02	transcribed_unprocessed_pseudogene
ENSG00000184261	KCNK12	1.937632483	8.06E-03	protein_coding
ENSG00000259935		1.936394366	1.87E-02	lncRNA
ENSG00000198417	MT1F	1.935735486	3.73E-05	protein_coding
ENSG00000162975	KCNF1	1.93510882	1.92E-09	protein_coding
ENSG00000141431	ASXL3	1.933832002	3.49E-15	protein_coding
ENSG00000146005	PSD2	1.930294583	4.22E-05	protein_coding
ENSG00000147889	CDKN2A	1.929306277	1.17E-09	protein_coding
ENSG00000005471	ABCB4	1.928618338	9.90E-03	protein_coding
ENSG00000231991	ANXA2P2 ENSG00000231991	1.927168917	7.90E-03	processed_pseudogene
ENSG00000145945	FAM50B	1.926922774	1.74E-02	protein_coding
ENSG00000183943	PRKX	1.926112326	1.09E-13	protein_coding
ENSG00000200959	SNORA74A	1.92591325	7.70E-03	snoRNA
ENSG00000132334	PTPRE	1.916019035	5.62E-07	protein_coding
ENSG00000160321	ZNF208	1.915241872	4.15E-02	protein_coding
ENSG00000226763	SRRM5	1.910324045	6.32E-02	protein_coding
ENSG00000137558	PI15	1.909902806	8.00E-03	protein_coding
ENSG00000233821	ENOX1-AS1	1.908627684	3.69E-02	lncRNA
ENSG00000177144	NUDT4B ENSG00000177144	1.907276155	6.07E-02	protein_coding
ENSG00000260918		1.902535495	1.58E-02	lncRNA
ENSG00000167100	SAMD14	1.902240599	2.52E-07	protein_coding
ENSG00000215380		1.901663066	2.90E-02	processed_pseudogene
ENSG00000134531	EMP1	1.89988852	9.83E-02	protein_coding
ENSG00000234345	ELF2P1	1.899831463	9.83E-02	processed_pseudogene
ENSG00000124313	IQSEC2	1.89933074	3.80E-04	protein_coding
ENSG00000131242	RAB11FIP4	1.898897285	6.16E-07	protein_coding
ENSG00000176971	FIBIN	1.897228525	6.71E-07	protein_coding
ENSG000000065609	SNAP91	1.896493465	9.41E-07	protein_coding
ENSG00000112182	BACH2	1.891029449	1.30E-11	protein_coding
ENSG00000237390		1.888024076	2.33E-02	lncRNA
ENSG00000061337	LZTS1	1.885851263	3.02E-16	protein_coding
ENSG00000214595	EML6	1.885160606	1.25E-10	protein_coding
ENSG00000166292	TMEM100	1.884275432	6.18E-03	protein_coding
ENSG00000260455	NBAT1	1.884207262	5.75E-03	lncRNA
ENSG00000167861	HID1	1.878285647	3.16E-04	protein_coding

ENSG00000138829	FBN2	1.87525731	1.54E-16	protein_coding
ENSG00000253457	SMIM18	1.875085235	3.60E-02	protein_coding
ENSG00000006740	ARHGAP44	1.874009935	6.32E-02	protein_coding
ENSG00000115461	IGFBP5	1.873958011	2.88E-08	protein_coding
ENSG00000151632	AKR1C2	1.872499999	3.85E-02	protein_coding
ENSG00000183691	NOG	1.870515686	1.93E-03	protein_coding
ENSG00000167680	SEMA6B	1.86977382	3.16E-03	protein_coding
ENSG00000136542	GALNT5	1.868932666	8.92E-02	protein_coding
ENSG00000272977		1.865434725	9.97E-04	lncRNA
ENSG00000166924	NYAP1	1.861336349	5.71E-06	protein_coding
ENSG00000198680	TUSC1	1.859415709	4.91E-05	protein_coding
ENSG00000165495	PKNOX2	1.859333664	1.44E-04	protein_coding
ENSG00000185215	TNFAIP2	1.855564836	8.32E-04	protein_coding
ENSG00000089472	HEPH	1.853183793	8.64E-03	protein_coding
ENSG00000165434	PGM2L1	1.852097584	1.07E-11	protein_coding
ENSG00000264630	PRKCA-AS1	1.849477032	1.75E-02	lncRNA
ENSG00000138606	SHF	1.848465812	3.40E-09	protein_coding
ENSG00000066923	STAG3	1.843844551	8.38E-11	protein_coding
ENSG00000266709		1.842430381	3.76E-03	lncRNA
ENSG00000240891	PLCXD2	1.841997297	5.55E-05	protein_coding
ENSG00000258739	ENO1P2	1.841803953	8.17E-02	transcribed_processed_pseudogene
ENSG00000133639	BTG1	1.840986437	4.48E-13	protein_coding
ENSG00000133134	BEX2	1.839788542	2.55E-05	protein_coding
ENSG00000130038	CRACR2A ENSG00000130038	1.833820539	3.03E-02	protein_coding
ENSG00000203335		1.833294495	3.51E-02	lncRNA
ENSG00000145248	SLC10A4	1.832260737	7.00E-11	protein_coding
ENSG00000168490	PHYHIP	1.82979699	1.78E-02	protein_coding
ENSG00000219891	ZSCAN12P1	1.827717614	5.77E-02	transcribed_unprocessed_pseudogene
ENSG00000151690	MFSD6	1.822909885	6.10E-06	protein_coding
ENSG00000267746		1.820568253	1.48E-02	lncRNA
ENSG00000204961	PCDHA9	1.820251208	4.24E-05	protein_coding
ENSG00000163462	TRIM46	1.819710865	1.01E-04	protein_coding
ENSG00000057704	TMCC3	1.816979599	3.09E-05	protein_coding
ENSG00000133169	BEX1	1.814192088	9.03E-16	protein_coding
ENSG00000008056	SYN1	1.812219449	1.35E-05	protein_coding
ENSG00000270823		1.810601061	7.16E-02	lncRNA
ENSG00000233058	LINC00884	1.809750229	8.25E-02	lncRNA
ENSG00000203326	ZNF525	1.80865526	6.54E-04	protein_coding
ENSG00000142235	LMTK3	1.807160426	1.81E-05	protein_coding
ENSG00000187824	TMEM220	1.804505174	2.11E-02	protein_coding
ENSG00000110328	GALNT18	1.804103489	2.06E-02	protein_coding
ENSG00000003249	DBNDD1	1.803360448	5.45E-09	protein_coding
ENSG00000114251	WNT5A	1.802591654	3.06E-03	protein_coding
ENSG00000069424	KCNAB2	1.801036483	9.03E-04	protein_coding
ENSG00000120328	PCDHB12	1.796146071	2.17E-08	protein_coding
ENSG00000235920	THRAP3P3	1.795684419	8.09E-02	processed_pseudogene
ENSG00000119547	ONECUT2	1.794995634	7.60E-08	protein_coding
ENSG00000187372	PCDHB13	1.792938749	1.18E-06	protein_coding
ENSG00000077157	PPP1R12B	1.79154989	2.86E-17	protein_coding

ENSG00000213199	ASIC3	1.788880217	1.55E-02	protein_coding
ENSG00000183114	FAM43B	1.785251737	6.87E-02	protein_coding
ENSG00000180881	CAPS2	1.784212075	2.96E-04	protein_coding
ENSG00000272379		1.783546897	5.62E-02	lncRNA
ENSG00000260852	FBXL19-AS1	1.780850327	7.11E-04	lncRNA
ENSG00000155254	MARVELD1	1.778620901	2.06E-05	protein_coding
ENSG00000145990	GFOD1	1.776302512	7.95E-05	protein_coding
ENSG00000129167	TPH1	1.774537056	5.91E-02	protein_coding
ENSG00000182257	PRR34	1.773572454	6.02E-02	lncRNA
ENSG00000232561	NA	1.773208309	3.09E-08	NA
ENSG00000132329	RAMP1	1.77310031	2.83E-03	protein_coding
ENSG00000060982	BCAT1	1.771146013	5.49E-17	protein_coding
ENSG00000196090	PTPRT	1.769829838	1.17E-10	protein_coding
ENSG00000215218	UBE2QL1	1.768724605	9.80E-06	protein_coding
ENSG00000107518	ATRNL1	1.765613244	3.69E-12	protein_coding
ENSG00000141639	MAPK4	1.765330256	9.11E-08	protein_coding
ENSG00000145808	ADAMTS19	1.761612601	4.87E-02	protein_coding
ENSG00000131370	SH3BP5	1.761322163	2.04E-03	protein_coding
ENSG00000083067	TRPM3	1.761126451	1.25E-05	protein_coding
ENSG00000165716	DIPK1B	1.759326933	4.87E-04	protein_coding
ENSG00000168917	SLC35G2	1.756698456	1.01E-07	protein_coding
ENSG00000137968	SLC44A5	1.75627038	7.14E-04	protein_coding
ENSG00000112309	B3GAT2	1.75371376	2.56E-07	protein_coding
ENSG00000125430	HS3ST3B1	1.750116054	1.66E-08	protein_coding
ENSG00000196218	RYR1	1.749108496	6.50E-02	protein_coding
ENSG00000204965	PCDHA5	1.748984598	5.36E-03	protein_coding
ENSG00000169621	APLF	1.744118463	3.27E-02	protein_coding
ENSG00000173801	JUP	1.744087766	4.78E-06	protein_coding
ENSG00000250722	SELENOP	1.743904079	3.55E-02	protein_coding
ENSG00000144191	CNGA3	1.74278951	7.99E-14	protein_coding
ENSG00000170681	CAVIN4	1.741719486	1.61E-05	protein_coding
ENSG00000109265	CRACD	1.738768876	5.29E-16	protein_coding
ENSG00000162618	ADGRL4	1.737670602	5.76E-07	protein_coding
ENSG00000075213	SEMA3A	1.733708608	2.45E-14	protein_coding
ENSG00000205403	CFI	1.733165254	1.69E-04	protein_coding
ENSG00000204962	PCDHA8	1.732027613	4.24E-03	protein_coding
ENSG00000162630	B3GALT2	1.731650482	6.96E-05	protein_coding
ENSG00000182871	COL18A1	1.731186495	4.50E-02	protein_coding
ENSG00000136717	BIN1	1.731029647	1.10E-05	protein_coding
ENSG00000171843	MLLT3	1.729208187	8.26E-13	protein_coding
ENSG00000151117	TMEM86A	1.727878033	1.77E-03	protein_coding
ENSG00000142449	FBN3	1.727181242	1.02E-07	protein_coding
ENSG00000171450	CDK5R2	1.727015439	8.21E-02	protein_coding
ENSG00000110092	CCND1 ENSG00000110092	1.726572094	6.89E-08	protein_coding
ENSG00000270223	NA	1.721361646	1.34E-03	NA
ENSG00000149243	KLHL35	1.720356227	2.69E-04	protein_coding
ENSG00000169313	P2RY12	1.719764285	6.94E-02	protein_coding
ENSG00000089820	ARHGAP4	1.718434088	4.81E-02	protein_coding
ENSG00000175445	LPL	1.717658881	3.99E-06	protein_coding

ENSG00000187720	THSD4	1.717311949	4.20E-02	protein_coding
ENSG00000227906	SNAP25-AS1	1.714344125	3.68E-02	lncRNA
ENSG00000235934		1.713765981	1.46E-03	lncRNA
ENSG00000100433	KCNK10	1.712448137	9.33E-04	protein_coding
ENSG00000138639	ARHGAP24	1.712211474	4.00E-02	protein_coding
ENSG00000120658	ENOX1	1.710503567	1.05E-05	protein_coding
ENSG00000122584	NXPH1	1.704637133	1.86E-13	protein_coding
ENSG00000188322	SBK1	1.700339099	1.17E-11	protein_coding
ENSG00000140015	KCNH5	1.696804845	2.60E-02	protein_coding
ENSG00000267651		1.69512806	6.17E-02	lncRNA
ENSG00000233974		1.694661053	2.68E-02	processed_pseudogene
ENSG00000074416	MGLL	1.692953005	2.15E-06	protein_coding
ENSG00000181291	TMEM132E	1.692497103	2.33E-03	protein_coding
ENSG00000176658	MYO1D	1.687025488	4.34E-02	protein_coding
ENSG00000261168		1.686820265	4.47E-02	lncRNA
ENSG00000168016	TRANK1	1.683363792	8.51E-04	protein_coding
ENSG00000163710	PCOLCE2	1.682970029	4.12E-02	protein_coding
ENSG00000260398		1.681381603	1.89E-05	lncRNA
ENSG00000186806	VSIG10L	1.675655652	5.02E-03	protein_coding
ENSG00000253485	PCDHGA5	1.675587087	4.02E-04	protein_coding
ENSG00000109906	ZBTB16	1.675246728	5.20E-03	protein_coding
ENSG00000107338	SHB	1.674748342	8.84E-04	protein_coding
ENSG00000123560	PLP1	1.672587547	1.40E-03	protein_coding
ENSG00000167178	ISLR2	1.670431427	2.35E-03	protein_coding
ENSG00000105649	RAB3A	1.667726854	1.19E-05	protein_coding
ENSG00000149328	GLB1L2	1.667541755	3.97E-08	protein_coding
ENSG00000169432	SCN9A	1.664715759	1.90E-03	protein_coding
ENSG00000166448	TMEM130	1.662490813	1.95E-02	protein_coding
ENSG00000225880	LINC00115	1.657903593	4.34E-02	lncRNA
ENSG00000187164	SHTN1	1.655780134	7.28E-11	protein_coding
ENSG00000172159	FRMD3 ENSG00000172159	1.655234073	1.64E-05	protein_coding
ENSG00000127124	HIVEP3	1.653803891	1.62E-11	protein_coding
ENSG00000090339	ICAM1	1.647196256	1.74E-03	protein_coding
ENSG00000237887	RPL23AP32	1.642971437	9.03E-02	processed_pseudogene
ENSG00000157423	HYDIN	1.639171116	4.32E-04	protein_coding
ENSG00000170439	METTL7B	1.639053788	3.72E-04	protein_coding
ENSG00000184557	SOCS3	1.637506232	5.43E-04	protein_coding
ENSG00000172497	ACOT12	1.635447536	3.74E-02	protein_coding
ENSG00000067798	NAV3	1.633480995	6.42E-12	protein_coding
ENSG00000106078	COBL	1.629648618	3.72E-06	protein_coding
ENSG00000187714	SLC18A3	1.628393738	3.05E-02	protein_coding
ENSG00000233723	LINC01122	1.627101028	1.63E-02	lncRNA
ENSG00000272267		1.62314441	4.50E-02	lncRNA
ENSG00000138604	GLCE	1.621042017	1.38E-09	protein_coding
ENSG00000259976		1.62084773	8.09E-07	lncRNA
ENSG00000154429	CCSAP	1.620497722	3.89E-11	protein_coding
ENSG00000130943	PKDREJ	1.619578298	4.66E-02	protein_coding
ENSG00000188316	ENO4	1.617867654	3.54E-02	protein_coding
ENSG00000166257	SCN3B	1.61418171	4.67E-04	protein_coding

ENSG00000078687	TNRC6C	1.613282475	3.10E-10	protein_coding
ENSG00000202538	RNU4-2	1.612068969	1.73E-09	snRNA
ENSG00000272505		1.611743257	1.57E-04	lncRNA
ENSG00000131759	RARA	1.609984561	7.86E-06	protein_coding
ENSG00000076826	CAMSAP3	1.609623825	6.74E-03	protein_coding
ENSG00000170004	CHD3	1.609381489	1.41E-10	protein_coding
ENSG00000139946	PELI2	1.608264455	4.20E-11	protein_coding
ENSG00000226742	HSBP1L1	1.606034144	7.34E-03	protein_coding
ENSG00000171608	PIK3CD	1.598745176	1.89E-03	protein_coding
ENSG00000117425	PTCH2	1.598371427	8.37E-02	protein_coding
ENSG00000273156		1.597899948	6.96E-02	lncRNA
ENSG00000237096	NA	1.595711988	6.67E-02	NA
ENSG00000188732	FAM221A	1.593220509	9.14E-04	protein_coding
ENSG00000188993	LRRC66	1.593022774	1.36E-02	protein_coding
ENSG00000108387	SEPTIN4	1.591000668	1.04E-02	protein_coding
ENSG00000004848	ARX	1.589883478	6.97E-12	protein_coding
ENSG00000170962	PDGFD	1.589437475	5.10E-04	protein_coding
ENSG00000170482	SLC23A1	1.586996576	5.93E-02	protein_coding
ENSG00000131781	FMO5	1.586157743	7.62E-02	protein_coding
ENSG00000204963	PCDHA7	1.584036782	8.32E-03	protein_coding
ENSG00000102452	NALCN	1.582085408	2.94E-02	protein_coding
ENSG00000092051	JPH4	1.581778946	3.13E-08	protein_coding
ENSG00000204969	PCDHA2	1.580885951	1.31E-03	protein_coding
ENSG00000131398	KCNC3	1.57703116	6.50E-02	protein_coding
ENSG00000182218	HHIPL1	1.576973902	1.78E-02	protein_coding
ENSG00000267161	NA	1.574158656	5.56E-03	NA
ENSG00000179588	ZFPM1	1.573668815	5.27E-03	protein_coding
ENSG00000077264	PAK3	1.573294276	2.32E-12	protein_coding
ENSG00000272168	CASC15	1.569905283	7.95E-05	lncRNA
ENSG00000185567	AHNAK2	1.56778458	1.53E-06	protein_coding
ENSG00000078804	TP53INP2 ENSG00000078804	1.567022823	3.56E-08	protein_coding
ENSG00000253641	LINCRA-0001	1.56673443	3.59E-02	lncRNA
ENSG00000079931	MOXD1	1.563893741	2.11E-07	protein_coding
ENSG00000100336	APOL4	1.563060981	1.11E-02	protein_coding
ENSG00000255004	SLC1A2-AS1	1.556535636	4.67E-02	lncRNA
ENSG00000139767	SRRM4	1.555689455	8.38E-05	protein_coding
ENSG00000154930	ACSS1	1.551591856	3.17E-08	protein_coding
ENSG00000156650	KAT6B	1.550677396	1.28E-14	protein_coding
ENSG00000119138	KLF9	1.550430793	3.42E-04	protein_coding
ENSG00000115170	ACVR1	1.547491724	3.99E-08	protein_coding
ENSG00000127325	BEST3	1.547352779	4.44E-03	protein_coding
ENSG00000253276	CCDC71L	1.546107987	1.99E-06	protein_coding
ENSG00000141622	RNF165	1.541018924	2.68E-09	protein_coding
ENSG00000085831	TTC39A	1.540203341	5.28E-04	protein_coding
ENSG00000177511	ST8SIA3	1.537914907	7.04E-10	protein_coding
ENSG00000074706	IPCEF1	1.537764668	2.68E-02	protein_coding
ENSG00000265727	RN7SL648P	1.537494415	8.59E-02	misc_RNA
ENSG00000134245	WNT2B	1.537154148	2.91E-04	protein_coding
ENSG00000188888	NA	1.535495874	4.92E-02	NA

ENSG00000132510	KDM6B	1.527304261	7.43E-06	protein_coding
ENSG00000081148	IMPG2	1.525855925	1.74E-04	protein_coding
ENSG00000125148	MT2A	1.524722958	5.10E-05	protein_coding
ENSG00000213413	PVRIG	1.523118131	9.14E-02	protein_coding
ENSG00000163491	NEK10	1.52271162	7.30E-03	protein_coding
ENSG00000081189	MEF2C	1.519447976	1.15E-08	protein_coding
ENSG00000255408	PCDHA3	1.518187872	5.50E-03	protein_coding
ENSG00000150672	DLG2	1.517523814	2.22E-06	protein_coding
ENSG00000111834	RSPH4A ENSG00000111834	1.516919589	1.84E-02	protein_coding
ENSG00000134508	CABLES1	1.5161894	9.41E-07	protein_coding
ENSG00000272167		1.514788536	6.01E-02	lncRNA
ENSG00000136383	ALPK3	1.514070025	4.46E-02	protein_coding
ENSG00000129422	MTUS1	1.512603301	1.72E-09	protein_coding
ENSG00000214872	SMTNL1	1.510251977	4.26E-02	protein_coding
ENSG00000169169	CPT1C	1.505478632	3.32E-05	protein_coding
ENSG00000114019	AMOTL2	1.50474029	2.07E-07	protein_coding
ENSG00000210082	MT-RNR2	1.500842653	1.42E-04	Mt_rRNA
ENSG00000167654	ATCAY	1.49651856	1.95E-12	protein_coding
ENSG00000128203	ASPHD2	1.494176401	1.17E-02	protein_coding
ENSG00000115355	CCDC88A	1.49017512	4.24E-09	protein_coding
ENSG00000149970	CNKS2	1.489808801	2.40E-09	protein_coding
ENSG00000157680	DGKI	1.4878551	4.65E-08	protein_coding
ENSG00000140839	CLEC18B	1.48636285	3.41E-02	protein_coding
ENSG00000119699	TGFB3	1.484886017	1.05E-03	protein_coding
ENSG00000153404	PLEKHG4B	1.484086687	2.53E-02	protein_coding
ENSG00000143494	VASH2	1.482338106	1.20E-05	protein_coding
ENSG00000044524	EPHA3	1.481250095	2.06E-05	protein_coding
ENSG00000144802	NFKBIZ	1.481146947	2.93E-05	protein_coding
ENSG00000171587	DSCAM	1.481035568	9.25E-05	protein_coding
ENSG00000196843	ARID5A	1.480154756	1.44E-03	protein_coding
ENSG00000187193	MT1X	1.479874315	4.85E-03	protein_coding
ENSG00000086570	FAT2	1.479479947	6.76E-02	protein_coding
ENSG00000007237	GAS7	1.47679435	8.48E-06	protein_coding
ENSG00000074590	NUAK1	1.476579545	5.13E-08	protein_coding
ENSG00000156804	FBXO32 ENSG00000156804	1.473077991	1.72E-06	protein_coding
ENSG00000255864	NA	1.472957609	5.51E-03	NA
ENSG00000245275	SAP30L-AS1	1.469288061	8.37E-02	lncRNA
ENSG00000188549	CCDC9B	1.467485549	4.79E-04	protein_coding
ENSG00000155974	GRIP1	1.466775616	2.50E-07	protein_coding
ENSG00000104450	SPAG1	1.465983123	3.92E-02	protein_coding
ENSG00000178233	TMEM151B	1.465607973	1.27E-03	protein_coding
ENSG00000177839	PCDHB9	1.464967105	2.87E-04	protein_coding
ENSG00000226367	ST7-AS2 ENSG00000226367	1.464551421	5.57E-02	lncRNA
ENSG00000157150	TIMP4	1.463761551	1.54E-02	protein_coding
ENSG00000146094	DOK3 ENSG00000146094	1.462310323	1.98E-02	protein_coding

ENSG00000254377	MIR124-2HG	1.462056083	5.32E-07	lncRNA
ENSG00000248019	FAM13A-AS1	1.458322722	4.15E-02	lncRNA
ENSG00000211459	MT-RNR1	1.457971504	5.76E-02	Mt_rRNA
ENSG00000180638	SLC47A2	1.4579393	3.47E-02	protein_coding
ENSG00000064309	CDON	1.457928484	3.14E-04	protein_coding
ENSG00000197479	PCDHB11	1.45709909	4.50E-05	protein_coding
ENSG00000084731	KIF3C	1.456671087	1.42E-11	protein_coding
ENSG00000082438	COBLL1	1.45626238	2.84E-05	protein_coding
ENSG00000125966	MMP24	1.454359434	1.91E-05	protein_coding
ENSG00000048052	HDAC9	1.454297227	1.73E-09	protein_coding
ENSG00000154229	PRKCA	1.453333033	8.65E-10	protein_coding
ENSG00000184545	DUSP8	1.450429257	5.01E-04	protein_coding
ENSG00000162551	ALPL	1.450205893	6.37E-03	protein_coding
ENSG00000075035	WSCD2	1.449719716	7.62E-02	protein_coding
ENSG00000160145	KALRN	1.449527255	4.06E-08	protein_coding
ENSG00000187605	TET3	1.449209137	3.36E-09	protein_coding
ENSG00000111817	DSE ENSG00000111817	1.447978759	1.92E-04	protein_coding
ENSG00000173442	EHBP1L1	1.447415012	4.90E-02	protein_coding
ENSG00000261087	ZNNT1	1.446239376	1.97E-02	lncRNA
ENSG00000164651	SP8	1.445412713	5.00E-09	protein_coding
ENSG00000120318	ARAP3	1.443760791	2.57E-03	protein_coding
ENSG00000124766	SOX4	1.443750196	9.35E-13	protein_coding
ENSG00000136490	LIMD2	1.443033805	2.40E-04	protein_coding
ENSG00000253767	PCDHGA8	1.442950016	3.26E-03	protein_coding
ENSG00000143850	PLEKHA6	1.44065929	2.22E-02	protein_coding
ENSG00000183248	PRR36	1.437950273	6.28E-02	protein_coding
ENSG00000253649	PRSS51	1.437299446	4.01E-02	protein_coding
ENSG00000130224	LRCH2	1.437230555	1.14E-07	protein_coding
ENSG00000234964	FABP5P7	1.436328081	6.68E-03	processed_pseudogene
ENSG00000164442	CITED2	1.433373743	1.45E-09	protein_coding
ENSG00000157388	CACNA1D	1.429740039	6.43E-02	protein_coding
ENSG00000240764	PCDHGC5 ENSG00000240764	1.429129335	1.73E-03	protein_coding
ENSG00000166676	TVP23A	1.428787813	1.07E-02	protein_coding
ENSG00000106484	MEST	1.427773268	8.16E-09	protein_coding
ENSG00000164930	FZD6	1.425062002	5.97E-05	protein_coding
ENSG00000100031	GGT1	1.423819029	8.56E-02	protein_coding
ENSG00000183091	NEB	1.423564463	4.10E-05	protein_coding
ENSG00000164061	BSN ENSG00000164061	1.422196407	2.50E-06	protein_coding
ENSG00000069712	NA	1.421462622	7.95E-04	NA
ENSG00000115339	GALNT3	1.420985603	8.08E-02	protein_coding
ENSG00000163171	CDC42EP3	1.419533379	3.26E-07	protein_coding
ENSG00000196277	GRM7	1.415514111	2.21E-02	protein_coding
ENSG00000136531	SCN2A	1.413246292	1.19E-06	protein_coding
ENSG00000176788	BASP1	1.411581257	5.44E-10	protein_coding
ENSG00000177054	ZDHHC13	1.410962735	5.95E-04	protein_coding
ENSG00000106089	STX1A	1.410875318	8.39E-03	protein_coding
ENSG00000059915	PSD	1.409709294	1.26E-05	protein_coding

ENSG00000138735	PDE5A	1.406206041	8.16E-05	protein_coding
ENSG00000272070		1.405664589	5.22E-03	lncRNA
ENSG00000152503	TRIM36	1.405383443	1.34E-06	protein_coding
ENSG00000144834	TAGLN3	1.404628051	5.64E-09	protein_coding
ENSG00000138769	CDKL2	1.40379331	6.57E-03	protein_coding
ENSG00000133874	RNF122	1.398897333	1.23E-02	protein_coding
ENSG00000118242	MREG	1.398025801	1.07E-04	protein_coding
ENSG00000087085	ACHE	1.395917133	4.62E-03	protein_coding
ENSG00000247828	TMEM161B-AS1	1.395155551	4.05E-07	lncRNA
ENSG00000180543	TSPYL5	1.394066897	3.96E-04	protein_coding
ENSG00000124145	SDC4	1.392060421	7.56E-04	protein_coding
ENSG00000113083	LOX	1.391904238	5.54E-04	protein_coding
ENSG00000152527	PLEKHH2	1.389347561	1.90E-05	protein_coding
ENSG00000203688	LINC02487	1.384023071	5.90E-02	lncRNA
ENSG00000261716	H2BC20P	1.38331873	1.80E-04	transcribed_unprocessed_pseudogene
ENSG00000249459	ZNF286B	1.383169281	9.73E-06	transcribed_unprocessed_pseudogene
ENSG00000154188	ANGPT1	1.379477866	3.79E-02	protein_coding
ENSG00000125744	RTN2	1.379184888	3.94E-03	protein_coding
ENSG00000273038	NA	1.377737639	3.69E-02	NA
ENSG00000205664	NA	1.372432561	4.71E-06	NA
ENSG00000134317	GRHL1	1.370915236	2.17E-03	protein_coding
ENSG00000159403	C1R	1.370533759	3.34E-02	protein_coding
ENSG00000185634	SHC4	1.369795139	1.27E-04	protein_coding
ENSG00000259953		1.36864707	8.77E-02	lncRNA
ENSG00000163485	ADORA1	1.366829733	1.32E-03	protein_coding
ENSG00000187105	HEATR4 ENSG00000187105	1.365077652	9.06E-02	protein_coding
ENSG00000149269	PAK1	1.364253254	2.01E-06	protein_coding
ENSG00000120594	PLXDC2	1.364112174	5.87E-03	protein_coding
ENSG00000158710	TAGLN2	1.363990726	1.84E-06	protein_coding
ENSG00000253731	PCDHGA6	1.35821066	2.21E-04	protein_coding
ENSG00000235609		1.354582732	5.31E-03	lncRNA
ENSG00000182902	SLC25A18	1.354462587	2.41E-04	protein_coding
ENSG00000072201	LNX1	1.35430198	5.00E-02	protein_coding
ENSG00000242419	PCDHGC4	1.352476964	4.15E-04	protein_coding
ENSG00000143434	SEMA6C	1.349733144	2.58E-06	protein_coding
ENSG00000175229	GAL3ST3	1.345914199	1.98E-02	protein_coding
ENSG00000262096	PCDHB19P	1.345671553	3.24E-02	transcribed_unprocessed_pseudogene
ENSG00000003987	MTMR7	1.345142106	8.69E-03	protein_coding
ENSG00000266019	MIR3609	1.344085387	1.09E-04	miRNA
ENSG00000156395	SORCS3 ENSG00000156395	1.341505078	4.97E-03	protein_coding
ENSG00000252481	SCARNA13	1.340927721	5.87E-02	scaRNA
ENSG00000214796	TUBA5P	1.340867622	4.56E-02	transcribed_unprocessed_pseudogene
ENSG00000146072	TNFRSF21	1.338943391	4.83E-07	protein_coding
ENSG00000127914	AKAP9	1.337003029	5.53E-05	protein_coding
ENSG00000205927	OLIG2	1.336188729	6.06E-05	protein_coding
ENSG00000140937	CDH11	1.3360459	2.27E-02	protein_coding
ENSG00000115616	SLC9A2	1.333177606	7.30E-03	protein_coding
ENSG00000270172	NA	1.329960485	1.07E-04	NA

ENSG00000225783	MIAT	1.328681883	4.03E-08	lncRNA
ENSG00000102362	SYTL4	1.328119254	6.86E-02	protein_coding
ENSG00000197747	S100A10	1.323575526	4.20E-02	protein_coding
ENSG00000114805	PLCH1	1.323068231	2.69E-06	protein_coding
ENSG00000124194	GDAP1L1	1.322959982	2.32E-03	protein_coding
ENSG00000104324	CPQ ENSG00000104324	1.322797238	1.28E-02	protein_coding
ENSG00000204956	PCDHGA1	1.321060711	1.87E-02	protein_coding
ENSG00000235370	DNM1P51	1.320021022	8.57E-02	transcribed_unprocessed_pseudogene
ENSG00000008086	CDKL5	1.317848405	1.76E-03	protein_coding
ENSG00000268575	ENSG00000268575	1.317180756	1.41E-02	lncRNA
ENSG00000186174	BCL9L	1.312894382	1.90E-04	protein_coding
ENSG00000229891	LINC01315	1.311761586	4.57E-02	lncRNA
ENSG00000159842	ABR	1.307896077	3.71E-07	protein_coding
ENSG00000101846	STS	1.304098321	5.91E-05	protein_coding
ENSG00000102349	KLF8 ENSG00000102349	1.302252726	3.11E-02	protein_coding
ENSG00000249992	TMEM158	1.299456479	7.24E-04	protein_coding
ENSG00000176749	CDK5R1	1.299336766	3.61E-07	protein_coding
ENSG00000189292	ALKAL2	1.299228264	8.43E-02	protein_coding
ENSG00000135472	FAIM2	1.297893183	5.11E-03	protein_coding
ENSG00000203950	RTL8A	1.29724838	3.89E-03	protein_coding
ENSG00000143333	RGS16	1.296667245	1.36E-03	protein_coding
ENSG00000248449	PCDHGB8P	1.295410351	8.00E-03	transcribed_unitary_pseudogene
ENSG00000125170	DOK4	1.295136559	5.09E-03	protein_coding
ENSG00000120324	PCDHB10	1.294056352	9.35E-04	protein_coding
ENSG00000196628	TCF4	1.292229946	1.06E-10	protein_coding
ENSG00000140961	OSGIN1	1.292079175	8.55E-02	protein_coding
ENSG00000173805	HAP1	1.290773259	1.63E-04	protein_coding
ENSG00000244567	NA	1.290088378	4.94E-02	NA
ENSG00000105613	MAST1	1.28889713	3.97E-05	protein_coding
ENSG00000101298	SNPH	1.287208619	5.75E-05	protein_coding
ENSG00000187391	MAGI2 ENSG00000187391	1.286452923	1.65E-06	protein_coding
ENSG00000268175	NA	1.28641809	3.80E-03	NA
ENSG00000056661	NA	1.285192235	4.97E-03	NA
ENSG00000184611	KCNH7	1.284780917	2.45E-03	protein_coding
ENSG00000126217	MCF2L	1.281300568	2.01E-06	protein_coding
ENSG00000196517	SLC6A9	1.280184657	4.48E-04	protein_coding
ENSG00000049759	NEDD4L	1.278455869	2.26E-08	protein_coding
ENSG00000110318	CEP126	1.276222432	3.20E-03	protein_coding
ENSG00000111490	TBC1D30	1.271729899	2.11E-02	protein_coding
ENSG00000105767	CADM4	1.271529096	3.78E-08	protein_coding
ENSG00000154639	CXADR	1.267742334	2.00E-08	protein_coding
ENSG00000113578	FGF1	1.267023571	1.62E-05	protein_coding
ENSG00000087076	HSD17B14	1.265996511	1.93E-02	protein_coding
ENSG00000163399	ATP1A1	1.263950455	5.29E-08	protein_coding
ENSG00000163449	TMEM169	1.263846817	6.66E-04	protein_coding

ENSG00000134594	RAB33A	1.260856401	1.30E-02	protein_coding
ENSG00000179915	NRXN1	1.258985864	1.06E-04	protein_coding
ENSG00000042286	AIFM2	1.25883733	1.44E-03	protein_coding
ENSG00000149403	GRIK4	1.256068594	1.69E-02	protein_coding
ENSG00000164161	HHIP	1.254910441	6.59E-02	protein_coding
ENSG00000008300	CELSR3	1.254657389	6.98E-08	protein_coding
ENSG00000105290	APLP1	1.251600692	1.03E-06	protein_coding
ENSG00000124406	ATP8A1	1.250691368	2.49E-02	protein_coding
ENSG00000241360	PDXP	1.248137878	2.87E-02	protein_coding
ENSG00000175611	LINC00476 ENSG00000175611	1.246054805	6.75E-02	lncRNA
ENSG00000261534		1.245950987	8.02E-02	lncRNA
ENSG00000154678	PDE1C	1.245738459	9.81E-04	protein_coding
ENSG00000157514	TSC22D3	1.242798146	5.32E-03	protein_coding
ENSG00000138111	MFSD13A	1.236463305	4.59E-03	protein_coding
ENSG00000121440	PDZRN3	1.235372925	5.88E-09	protein_coding
ENSG00000151090	THRB	1.23517894	8.60E-02	protein_coding
ENSG00000122778	KIAA1549	1.234715711	1.64E-07	protein_coding
ENSG00000109339	MAPK10 ENSG00000109339	1.233172833	2.58E-06	protein_coding
ENSG00000084764	MAPRE3	1.231824945	2.90E-05	protein_coding
ENSG00000142599	RERE ENSG00000142599	1.231434917	1.12E-07	protein_coding
ENSG00000138623	SEMA7A	1.230391751	9.03E-02	protein_coding
ENSG00000147408	CSGALNACT1	1.229390541	2.04E-02	protein_coding
ENSG00000117707	PROX1	1.229031389	3.01E-07	protein_coding
ENSG00000168646	AXIN2	1.228436979	8.32E-03	protein_coding
ENSG00000145335	SNCA	1.226637106	3.13E-02	protein_coding
ENSG00000105499	PLA2G4C	1.226283032	1.47E-02	protein_coding
ENSG00000197956	S100A6	1.225163088	1.33E-03	protein_coding
ENSG00000184949	FAM227A ENSG00000184949	1.223850595	1.15E-02	protein_coding
ENSG00000115266	APC2	1.222892017	5.75E-07	protein_coding
ENSG00000104432	IL7	1.222709947	6.07E-02	protein_coding
ENSG00000262209	PCDHGB3	1.220315431	1.11E-02	protein_coding
ENSG00000177181	RIMKLA	1.218738788	1.56E-05	protein_coding
ENSG00000106366	SERPINE1 ENSG00000106366	1.217280135	8.18E-03	protein_coding
ENSG00000272091	NA	1.216709916	1.50E-02	NA
ENSG00000091879	ANGPT2	1.212303798	7.76E-02	protein_coding
ENSG00000125898	FAM110A	1.211964765	9.52E-02	protein_coding
ENSG00000171282	NA	1.208313326	5.53E-04	NA
ENSG00000260604		1.207497062	6.44E-02	lncRNA
ENSG00000124496	TRERF1	1.207400685	5.13E-04	protein_coding
ENSG00000150967	ABCB9	1.207367397	8.72E-03	protein_coding
ENSG00000134986	NREP	1.204215938	2.31E-06	protein_coding
ENSG00000118514	ALDH8A1	1.203154785	6.78E-02	protein_coding
ENSG00000091972	CD200	1.202460912	3.69E-03	protein_coding
ENSG00000175497	DPP10	1.201259825	3.02E-03	protein_coding

ENSG00000136367	ZFHX2	1.200657255	6.82E-04	protein_coding
ENSG00000227124	ZNF717	1.198907738	9.65E-03	protein_coding
ENSG00000160716	CHRNA2	1.196231434	9.03E-03	protein_coding
ENSG00000257647		1.195596865	6.29E-02	lncRNA
ENSG00000235655	H3P6	1.195574296	1.77E-04	processed_pseudogene
ENSG00000185842	DNAH14	1.195130899	4.05E-04	protein_coding
ENSG00000174776	WDR49	1.194762961	9.72E-02	protein_coding
ENSG00000173406	DAB1	1.19214488	9.22E-02	protein_coding
ENSG00000076716	GPC4	1.191604223	3.31E-03	protein_coding
ENSG00000181722	ZBTB20	1.190816899	7.02E-04	protein_coding
ENSG00000260966		1.190259492	2.11E-03	lncRNA
ENSG00000104833	TUBB4A ENSG00000104833	1.18895903	1.27E-03	protein_coding
ENSG00000132932	ATP8A2	1.185001734	3.69E-02	protein_coding
ENSG00000169249	ZRSR2	1.184914497	1.84E-02	protein_coding
ENSG00000254615	NA	1.181393324	1.12E-03	NA
ENSG00000146001	PCDHB18P	1.180418073	1.64E-02	transcribed_unprocessed_pseudogene
ENSG00000102934	PLLP	1.180226084	4.05E-02	protein_coding
ENSG00000115963	RND3	1.178295833	9.78E-07	protein_coding
ENSG00000090238	YPEL3	1.17749856	7.37E-03	protein_coding
ENSG00000214425	LRRC37A4P	1.177324327	2.25E-03	transcribed_unprocessed_pseudogene
ENSG00000183778	B3GALT5	1.176696377	1.68E-03	protein_coding
ENSG00000157890	MEGF11	1.175218031	1.44E-05	protein_coding
ENSG00000006283	CACNA1G	1.173796966	5.77E-03	protein_coding
ENSG00000169258	GPRIN1	1.17244893	3.06E-04	protein_coding
ENSG00000150722	PPP1R1C	1.171458798	4.41E-02	protein_coding
ENSG00000132975	GPR12	1.170221652	6.20E-03	protein_coding
ENSG00000242779	ZNF702P	1.164611782	1.98E-02	transcribed_processed_pseudogene
ENSG00000169302	STK32A	1.161758865	1.12E-02	protein_coding
ENSG00000271948	NA	1.160362561	8.30E-02	NA
ENSG00000067606	PRKCZ	1.157690463	8.48E-03	protein_coding
ENSG00000146757	ZNF92	1.156043845	2.48E-04	protein_coding
ENSG00000197183	NOL4L	1.154750413	7.32E-05	protein_coding
ENSG00000145632	PLK2	1.154404768	2.52E-05	protein_coding
ENSG00000173281	PPP1R3B	1.151567738	1.50E-04	protein_coding
ENSG00000116285	ERRFI1	1.150416054	1.20E-03	protein_coding
ENSG00000147174	GCNA	1.149415909	3.74E-02	protein_coding
ENSG00000203875	SNHG5	1.146022063	6.29E-04	lncRNA
ENSG00000113657	DPYSL3	1.145218339	2.54E-05	protein_coding
ENSG00000105379	ETFB	1.144996356	2.52E-02	protein_coding
ENSG00000204650	LINC02210	1.143654921	9.48E-03	transcribed_unitary_pseudogene
ENSG00000184985	SORCS2	1.142943609	6.37E-03	protein_coding
ENSG00000267473	NA	1.142523008	1.11E-02	NA
ENSG00000081181	ARG2	1.142281561	9.76E-02	protein_coding
ENSG00000106992	AK1	1.141793148	3.60E-02	protein_coding
ENSG00000183186	C2CD4C	1.141571407	1.02E-03	protein_coding
ENSG00000176485	PLAAT3	1.14149588	3.28E-04	protein_coding
ENSG00000271147	ARMCX5- GPRASP2	1.141207778	4.75E-02	lncRNA
ENSG00000143195	ILDR2	1.141170462	8.19E-06	protein_coding
ENSG00000075426	FOSL2	1.140314123	4.90E-04	protein_coding

ENSG00000164687	FABP5	1.140090763	5.55E-05	protein_coding
ENSG00000187260	WDR86	1.140032313	8.52E-03	protein_coding
ENSG00000188766	SPRED3	1.139145342	1.73E-02	protein_coding
ENSG00000219626	FAM228B ENSG00000219626	1.138128167	3.38E-02	protein_coding
ENSG00000150471	ADGRL3	1.133847854	4.58E-03	protein_coding
ENSG00000102547	CAB39L	1.132536718	8.17E-04	protein_coding
ENSG00000056487	PHF21B	1.132294694	5.34E-05	protein_coding
ENSG00000239521	CASTOR3	1.131903359	1.42E-03	transcribed_unprocessed_pseudogene
ENSG00000182580	EPHB3	1.128297623	1.94E-03	protein_coding
ENSG00000165030	NFIL3	1.128072712	9.76E-03	protein_coding
ENSG00000006459	KDM7A	1.124993725	1.94E-04	protein_coding
ENSG00000081818	PCDHB4	1.124860624	8.27E-02	protein_coding
ENSG00000244694	PTCHD4	1.12435459	1.97E-04	protein_coding
ENSG00000087303	NID2	1.124200576	3.04E-02	protein_coding
ENSG00000089159	PXN	1.123859577	1.78E-04	protein_coding
ENSG00000158321	AUTS2	1.122496848	9.74E-04	protein_coding
ENSG00000198739	LRRTM3	1.121922797	1.49E-05	protein_coding
ENSG00000120322	PCDHB8	1.118593347	3.83E-02	protein_coding
ENSG00000234338	ENSG00000234338	1.118579441	5.96E-02	processed_pseudogene
ENSG00000175806	MSRA	1.117667664	7.96E-04	protein_coding
ENSG00000167548	KMT2D	1.116977584	3.49E-05	protein_coding
ENSG00000146267	FAXC	1.113968805	2.02E-04	protein_coding
ENSG00000273274	ZBTB8B	1.110928266	1.16E-02	protein_coding
ENSG00000174938	SEZ6L2	1.106896047	1.20E-02	protein_coding
ENSG00000273033	LINC02035	1.104314322	4.98E-03	lncRNA
ENSG00000205730	ITPRIPL2	1.102398003	7.41E-03	protein_coding
ENSG00000112290	WASF1	1.102226399	3.35E-04	protein_coding
ENSG00000214338	SOGA3	1.101799769	5.78E-02	protein_coding
ENSG00000146006	LRRTM2	1.101510356	3.47E-05	protein_coding
ENSG00000136153	LMO7	1.100977776	5.76E-02	protein_coding
ENSG00000165966	PDZRN4	1.097692744	1.90E-04	protein_coding
ENSG00000108309	RUNDC3A	1.091154549	5.80E-04	protein_coding
ENSG00000241560	ZBTB20-AS1	1.091135411	5.30E-02	lncRNA
ENSG00000100003	SEC14L2	1.089186474	1.99E-03	protein_coding
ENSG00000213626	LBH	1.088953268	9.22E-05	protein_coding
ENSG00000004846	ABCB5	1.087141947	5.93E-02	protein_coding
ENSG00000228624	HDAC2-AS2	1.086812563	4.30E-02	lncRNA
ENSG00000091844	RGS17	1.0859106	8.25E-05	protein_coding
ENSG00000008277	ADAM22	1.085726233	4.36E-06	protein_coding
ENSG00000107872	FBXL15	1.082020508	7.33E-02	protein_coding
ENSG00000138641	HERC3 ENSG00000138641	1.080255125	2.17E-03	protein_coding
ENSG00000119771	KLHL29	1.079007007	2.49E-02	protein_coding
ENSG00000161682	FAM171A2	1.078226747	8.35E-05	protein_coding
ENSG00000213190	MLLT11	1.077141787	1.16E-06	protein_coding
ENSG00000162458	FBLIM1 ENSG00000162458	1.076883647	4.41E-03	protein_coding

ENSG00000110436	SLC1A2	1.076190454	3.79E-07	protein_coding
ENSG00000075391	RASAL2	1.075422456	1.67E-06	protein_coding
ENSG00000118515	SGK1	1.075271988	3.98E-02	protein_coding
ENSG00000126464	PRR12	1.074274682	5.36E-03	protein_coding
ENSG00000111110	PPM1H	1.072145828	2.80E-03	protein_coding
ENSG00000086062	B4GALT1	1.07189495	1.51E-02	protein_coding
ENSG00000272077		1.071274934	1.89E-02	lncRNA
ENSG00000154545	MAGED4	1.070828694	9.27E-02	protein_coding
ENSG00000116147	TNR	1.068924263	1.99E-02	protein_coding
ENSG00000050438	SLC4A8	1.068054152	6.39E-06	protein_coding
ENSG00000184271	POU6F1	1.067770133	1.55E-03	protein_coding
ENSG00000188573	FBLL1	1.067414279	2.53E-02	protein_coding
ENSG00000108669	CYTH1	1.065109993	4.70E-05	protein_coding
ENSG00000272796	NA	1.062140802	4.27E-02	NA
ENSG00000260920		1.0609308	1.38E-02	lncRNA
ENSG00000131437	KIF3A	1.060891627	1.60E-05	protein_coding
ENSG00000204262	COL5A2	1.059259521	2.37E-04	protein_coding
ENSG00000033867	SLC4A7	1.058020977	8.35E-05	protein_coding
ENSG00000063176	SPHK2	1.056454974	1.78E-03	protein_coding
ENSG00000015592	STMN4	1.055397313	2.50E-06	protein_coding
ENSG00000119280	C1orf198	1.054718579	3.11E-04	protein_coding
ENSG00000241697	TMEFF1	1.052807316	8.92E-02	protein_coding
ENSG00000134138	MEIS2	1.051225212	3.40E-06	protein_coding
ENSG00000170525	PFKFB3	1.050137923	3.74E-05	protein_coding
ENSG00000163539	CLASP2	1.048930761	7.21E-07	protein_coding
ENSG00000110237	ARHGEF17	1.048386608	6.19E-05	protein_coding
ENSG00000168300	PCMTD1	1.04816971	1.93E-04	protein_coding
ENSG00000227775		1.047261081	1.62E-02	transcribed_processed_pseudogene
ENSG00000164300	SERINC5	1.046617269	6.65E-06	protein_coding
ENSG00000132639	SNAP25	1.042556989	3.09E-04	protein_coding
ENSG00000189180	ZNF33A	1.041742205	7.86E-04	protein_coding
ENSG00000164663	USP49	1.040942237	7.83E-05	protein_coding
ENSG00000143190	POU2F1	1.039805156	1.70E-05	protein_coding
ENSG00000082458	DLG3	1.039405557	7.75E-04	protein_coding
ENSG00000134532	SOX5	1.039376735	5.71E-06	protein_coding
ENSG00000173064	HECTD4	1.038776159	1.40E-05	protein_coding
ENSG00000111885	MAN1A1	1.03820329	3.10E-02	protein_coding
ENSG00000173404	INSM1	1.038153307	1.56E-04	protein_coding
ENSG00000146021	KLHL3	1.037935947	5.10E-03	protein_coding
ENSG00000242808	SOX2-OT	1.037830277	3.47E-05	lncRNA
ENSG00000132003	ZSWIM4 ENSG00000132003	1.037797003	4.63E-03	protein_coding
ENSG00000139278	GLIPR1	1.037417932	2.32E-02	protein_coding
ENSG00000080603	SRCAP	1.034369058	2.61E-04	protein_coding
ENSG00000197321	SVIL	1.032235849	5.17E-03	protein_coding
ENSG00000204442	FAM155A	1.030153067	3.83E-02	protein_coding
ENSG00000008283	CYB561	1.029031462	8.85E-02	protein_coding
ENSG00000130066	SAT1	1.028919095	1.59E-05	protein_coding
ENSG00000157193	LRP8	1.023844514	2.45E-04	protein_coding
ENSG00000240038	AMY2B	1.023654466	3.71E-02	protein_coding

ENSG00000092054	MYH7	1.02364517	3.54E-02	protein_coding
ENSG00000164542	KIAA0895	1.023530778	1.08E-02	protein_coding
ENSG00000146426	TIAM2	1.022607052	7.55E-05	protein_coding
ENSG00000122644	ARL4A	1.022023539	2.15E-02	protein_coding
ENSG00000135048	CEMP2	1.02171624	1.84E-05	protein_coding
ENSG00000154122	ANKH	1.019968445	1.30E-03	protein_coding
ENSG00000173451	THAP2	1.018455373	1.24E-03	protein_coding
ENSG00000127955	GNAI1	1.017639804	2.48E-02	protein_coding
ENSG00000163644	PPM1K	1.01737672	8.80E-04	protein_coding
ENSG00000075275	CELSR1	1.016728876	8.92E-04	protein_coding
ENSG00000049769	PPP1R3F	1.01407933	3.38E-03	protein_coding
ENSG00000200087	SNORA73B	1.011605789	2.01E-05	snoRNA
ENSG00000141441	GAREM1	1.008691946	1.68E-03	protein_coding
ENSG00000143126	CELSR2	1.008544053	1.94E-03	protein_coding
ENSG00000178852	EFCAB13	1.008492191	7.92E-02	protein_coding
ENSG00000233369	GTF2IP4	1.006237364	8.59E-02	transcribed_processed_pseudogene
ENSG00000153815	CMIP	1.005799142	1.30E-03	protein_coding
ENSG00000172915	NBEA	1.004973528	8.00E-05	protein_coding
ENSG00000236901	MIR600HG	1.004114094	5.03E-03	lncRNA
ENSG00000123358	NR4A1	1.002901265	3.47E-02	protein_coding
ENSG00000069188	SDK2	1.002396865	9.67E-05	protein_coding

Supplementary Table 5: List of downregulated genes (log 2 fold change <-1, adjusted p value <0.1) in pre-OL compared to human fetal neural stem cells (hFNSC)

Ensembl ID	Symbol	log2 Fold Change	Adj.Pval	Type
ENSG00000183878	UTY	-10.0587	1.89E-19	protein_coding
ENSG00000260412		-9.79824	6.38E-09	lncRNA
ENSG00000092377	TBL1Y	-9.35439	6.06E-08	protein_coding
ENSG00000176728	TTY14	-9.32837	7.80E-08	lncRNA
ENSG00000226555	AGKP1	-8.73653	2.96E-06	processed_pseudogene
ENSG00000114374	USP9Y	-8.69556	6.02E-39	protein_coding
ENSG00000129824	RPS4Y1	-8.67948	1.69E-92	protein_coding

ENSG00000241859	ANOS2P	-8.6203	2.57E-07	transcribed_unprocessed_pseudogene
ENSG00000067646	ZFY	-8.31641	1.25E-12	protein_coding
ENSG00000198692	EIF1AY	-8.25903	3.40E-18	protein_coding
ENSG00000012817	KDM5D	-8.11094	1.45E-47	protein_coding
ENSG00000260197		-7.71415	1.36E-04	lncRNA
ENSG00000233864	NA	-7.26305	2.56E-32	NA
ENSG00000099725	PRKY	-7.23964	3.64E-28	transcribed_unitary_pseudogene
ENSG00000228411	CDY4P	-7.18497	1.61E-03	processed_pseudogene
ENSG00000067048	DDX3Y	-7.15915	8.35E-62	protein_coding
ENSG00000131002	TXLNGY	-7.06587	4.36E-08	transcribed_unprocessed_pseudogene
ENSG00000165246	NLGN4Y	-6.58376	7.10E-17	protein_coding
ENSG00000154620	TMSB4Y	-6.50582	1.35E-06	protein_coding
ENSG00000188856	RPSAP47	-6.05456	1.92E-25	processed_pseudogene
ENSG00000242607	RPS3AP34	-5.54115	1.97E-02	processed_pseudogene
ENSG00000123496	IL13RA2	-5.50272	8.34E-07	protein_coding
ENSG00000214776		-4.8464	9.55E-04	transcribed_unprocessed_pseudogene
ENSG00000108932	SLC16A6	-4.75559	4.87E-23	protein_coding
ENSG00000237280		-4.69521	1.91E-02	lncRNA
ENSG00000258751		-4.68354	1.34E-02	lncRNA
ENSG00000163520	FBLN2	-4.63593	3.33E-06	protein_coding
ENSG00000157542	KCNJ6	-4.57302	4.78E-30	protein_coding
ENSG00000174482	LINGO2	-4.5716	5.43E-14	protein_coding
ENSG00000235531	MSC-AS1	-4.56147	3.15E-02	lncRNA
ENSG00000244257	PKD1P1	-4.20138	7.56E-03	unprocessed_pseudogene
ENSG00000188505	NCCRP1	-4.19149	6.62E-03	protein_coding
ENSG00000188372	ZP3	-3.99101	2.61E-04	protein_coding
ENSG00000141338	ABCA8	-3.86752	1.79E-24	protein_coding
ENSG00000070159	PTPN3	-3.86678	1.75E-17	protein_coding
ENSG00000188933	USP32P1	-3.83075	3.43E-02	transcribed_unprocessed_pseudogene
ENSG00000152726	NA	-3.82702	1.96E-33	NA
ENSG00000153446	C16orf89	-3.82627	5.33E-05	protein_coding
ENSG00000259867		-3.79716	8.39E-03	lncRNA
ENSG00000165731	RET	-3.65173	8.23E-16	protein_coding
ENSG00000170160	CCDC144A	-3.63833	4.12E-04	protein_coding
ENSG00000169840	GSX1	-3.60658	7.77E-02	protein_coding
ENSG00000225886		-3.51317	4.52E-02	lncRNA
ENSG00000215018	COL28A1	-3.50783	2.66E-13	protein_coding
ENSG00000170775	GPR37	-3.46524	8.84E-12	protein_coding
ENSG00000206532	NA	-3.36038	8.32E-04	NA
ENSG00000228305	PRELID1P6	-3.35726	1.62E-03	processed_pseudogene
ENSG00000154864	PIEZO2	-3.32115	2.93E-04	protein_coding
ENSG00000206176	NA	-3.31458	5.58E-02	NA
ENSG00000118946	PCDH17	-3.26117	3.51E-16	protein_coding
ENSG00000156925	ZIC3	-3.25173	1.24E-21	protein_coding
ENSG00000043591	ADRB1	-3.22972	4.74E-02	protein_coding
ENSG00000198342	ZNF442	-3.20533	1.88E-15	protein_coding
ENSG00000142700	DMRTA2	-3.16145	1.88E-15	protein_coding
ENSG00000151623	NR3C2	-3.12826	1.81E-08	protein_coding
ENSG00000150394	CDH8	-3.09906	2.70E-13	protein_coding
ENSG00000237506	RPSAP15	-3.08939	8.07E-14	processed_pseudogene
ENSG00000107984	DKK1	-3.04735	6.36E-02	protein_coding

ENSG00000272016	NA	-3.0336	2.28E-03	NA
ENSG00000153250	RBMS1	-3.02467	4.65E-03	protein_coding
ENSG00000249605		-3.02201	7.31E-02	lncRNA
ENSG00000125257	ABCC4	-3.01223	3.95E-17	protein_coding
ENSG00000241956		-2.97326	1.70E-04	lncRNA
ENSG00000250906		-2.91459	7.83E-02	lncRNA
ENSG00000139329	LUM	-2.89983	1.53E-03	protein_coding
ENSG00000130529	TRPM4	-2.88284	7.48E-10	protein_coding
ENSG00000172164	SNTB1	-2.87095	1.02E-24	protein_coding
ENSG00000124942	AHNAK	-2.86943	5.70E-43	protein_coding
ENSG00000187323	DCC	-2.84508	1.97E-06	protein_coding
ENSG00000248318		-2.84482	5.36E-04	lncRNA
ENSG00000086205	FOLH1	-2.83069	7.07E-13	protein_coding
ENSG00000174640	SLCO2A1	-2.81721	2.01E-02	protein_coding
ENSG00000176842	IRX5	-2.76316	2.68E-08	protein_coding
ENSG00000169684	CHRNA5	-2.7348	2.31E-03	protein_coding
ENSG00000105281	SLC1A5	-2.71003	7.54E-17	protein_coding
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ENSG00000236682	MAP3K2-DT	-2.695	1.64E-05	lncRNA
ENSG00000107796	ACTA2	-2.6541	9.13E-14	protein_coding
ENSG00000251364		-2.64796	1.09E-02	lncRNA
ENSG00000037280	FLT4	-2.64018	1.91E-02	protein_coding
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ENSG00000196872	CRACDL	-2.60688	5.78E-10	protein_coding
ENSG00000183783	KCTD8	-2.60191	1.01E-02	protein_coding
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ENSG00000154065	ANKRD29	-2.56295	9.81E-03	protein_coding
ENSG00000259690		-2.56026	7.44E-02	lncRNA
ENSG00000225937	PCA3	-2.5499	1.46E-02	lncRNA
ENSG00000231918		-2.54652	6.54E-02	lncRNA
ENSG00000137825	ITPKA	-2.5426	1.20E-02	protein_coding
ENSG00000138741	TRPC3	-2.53608	3.16E-05	protein_coding
ENSG00000228232	GAPDHP1	-2.51965	2.26E-04	processed_pseudogene
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ENSG00000178878	APOLD1	-2.48866	3.90E-12	protein_coding
ENSG00000261280	NA	-2.47959	2.70E-03	NA
ENSG00000166407	LMO1	-2.47366	8.29E-12	protein_coding
ENSG00000138944	SHISAL1	-2.46879	1.12E-02	protein_coding
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ENSG00000178162	FAR2P2	-2.40069	7.62E-02	transcribed_unprocessed_pseudogene
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ENSG00000154102	C16orf74	-2.36493	5.28E-04	protein_coding
ENSG00000178150	ZNF114	-2.33025	3.08E-06	protein_coding
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ENSG00000134184	GSTM1	-2.27785	4.12E-06	protein_coding
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ENSG00000125520	SLC2A4RG	-2.27143	1.18E-16	protein_coding
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ENSG00000063438	AHRR	-2.23507	7.98E-09	protein_coding
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ENSG00000213949	ITGA1	-2.20413	2.80E-02	protein_coding
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ENSG00000197712	FAM114A1	-2.19393	8.05E-10	protein_coding
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ENSG00000206538	VGLL3	-2.16763	6.50E-03	protein_coding
ENSG00000253764		-2.16676	8.64E-02	lncRNA
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ENSG00000131386	GALNT15	-2.14193	1.10E-06	protein_coding
ENSG00000172062	SMN1	-2.14118	5.71E-07	protein_coding
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ENSG00000146648	EGFR	-2.1196	2.19E-02	protein_coding
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ENSG00000214940	NPIPA8	-2.10541	4.58E-02	protein_coding
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ENSG00000112414	ADGRG6	-2.08962	3.45E-02	protein_coding
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ENSG00000270001		-2.06211	4.51E-02	lncRNA
ENSG00000137098	SPAG8	-2.05631	5.42E-02	protein_coding
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ENSG00000174721	FGFBP3	-2.0502	3.90E-20	protein_coding
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ENSG00000187416	LHFPL3	-1.98845	3.99E-15	protein_coding
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ENSG00000122694	GLIPR2	-1.98545	2.16E-15	protein_coding
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ENSG00000137561	TTPA	-1.97291	2.03E-03	protein_coding
ENSG00000059804	SLC2A3	-1.97239	1.12E-12	protein_coding
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ENSG00000172197	MBOAT1	-1.96644	3.29E-03	protein_coding
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ENSG00000183604	SMG1P5	-1.95401	8.99E-09	transcribed_unprocessed_pseudogene
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ENSG00000250358	LINC02200	-1.95211	6.83E-03	lncRNA
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ENSG00000168743	NPNT	-1.94658	1.10E-14	protein_coding
ENSG00000142945	KIF2C	-1.94633	1.10E-09	protein_coding
ENSG00000152256	PDK1	-1.94505	7.60E-11	protein_coding
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ENSG00000134595	SOX3	-1.92186	1.28E-02	protein_coding
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ENSG00000149599	DUSP15	-1.91133	1.43E-05	protein_coding
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ENSG00000186297	GABRA5	-1.90249	1.09E-14	protein_coding
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ENSG00000171004	HS6ST2	-1.84881	3.23E-10	protein_coding
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ENSG00000227888	FAM66A	-1.84145	6.23E-03	lncRNA
ENSG00000105143	SLC1A6	-1.83445	7.01E-03	protein_coding
ENSG00000236830	CBR3-AS1	-1.83206	8.59E-02	lncRNA
ENSG00000175832	ETV4	-1.82403	1.60E-10	protein_coding
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ENSG00000107968	MAP3K8	-1.8149	2.16E-05	protein_coding
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ENSG00000256018	NA	-1.79621	1.13E-09	NA
ENSG00000186314	PRELID2	-1.79224	6.74E-03	protein_coding
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ENSG00000141540	TTYH2	-1.78927	8.45E-06	protein_coding
ENSG00000184661	CDCA2	-1.78915	1.09E-08	protein_coding
ENSG00000187994	RINL	-1.7837	1.04E-02	protein_coding
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ENSG00000137804	NUSAP1	-1.75564	8.67E-09	protein_coding
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ENSG00000105251	SHD	-1.74263	9.92E-03	protein_coding
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ENSG00000153179	RASSF3	-1.72097	5.11E-05	protein_coding
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ENSG00000090889	KIF4A	-1.7158	2.56E-08	protein_coding
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ENSG00000159307	SCUBE1	-1.71362	1.44E-11	protein_coding
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ENSG00000171724	VAT1L	-1.70571	6.91E-13	protein_coding
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ENSG00000134363	FST	-1.69597	1.09E-02	protein_coding
ENSG00000176771	NCKAP5	-1.69514	5.80E-07	protein_coding
ENSG00000237654		-1.69298	1.15E-02	lncRNA
ENSG00000180229	HERC2P3	-1.69138	4.54E-02	transcribed_unprocessed_pseudogene
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ENSG00000115290	GRB14	-1.67846	9.55E-04	protein_coding
ENSG00000218336	TENM3	-1.67779	2.65E-07	protein_coding
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ENSG00000254705		-1.6721	7.27E-03	lncRNA
ENSG00000187608	ISG15	-1.67171	2.61E-06	protein_coding

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ENSG00000157617	C2CD2	-1.60688	1.89E-07	protein_coding
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ENSG00000248445	SEMA6A-AS1	-1.58927	1.13E-04	lncRNA
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ENSG00000144199	FAHD2B	-1.55986	2.23E-03	protein_coding
ENSG00000166402	TUB	-1.55824	6.20E-10	protein_coding
ENSG00000111335	OAS2	-1.55595	4.64E-02	protein_coding

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ENSG00000183605	SFXN4	-1.5547	6.02E-06	protein_coding
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ENSG00000126787	DLGAP5	-1.54698	5.62E-08	protein_coding
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ENSG00000168242	NA	-1.53955	5.64E-06	NA
ENSG00000152642	GPD1L	-1.53937	3.61E-07	protein_coding
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ENSG00000131747	TOP2A	-1.52497	3.10E-08	protein_coding
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ENSG00000169607	CKAP2L	-1.52033	6.27E-06	protein_coding
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ENSG00000174145	NWD2	-1.51214	1.04E-05	protein_coding
ENSG00000185483	ROR1	-1.5115	1.70E-04	protein_coding
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ENSG00000196787	H2AC11	-1.50646	2.13E-06	protein_coding
ENSG00000164440	TXLNB	-1.50556	7.64E-04	protein_coding
ENSG00000142279	WTIP	-1.50341	8.52E-05	protein_coding
ENSG00000112759	SLC29A1	-1.50135	1.58E-04	protein_coding
ENSG00000137033	IL33	-1.49886	6.82E-04	protein_coding
ENSG00000173218	VANGL1	-1.49819	5.53E-04	protein_coding
ENSG00000124588	NQO2	-1.49779	4.08E-05	protein_coding
ENSG00000024526	DEPDC1	-1.49687	4.66E-05	protein_coding
ENSG00000196839	ADA	-1.48716	3.14E-04	protein_coding
ENSG00000251370	SEMA5A-AS1	-1.48706	2.35E-02	lncRNA
ENSG00000037897	METTL1	-1.4864	2.25E-02	protein_coding
ENSG00000184357	H1-5	-1.48558	1.61E-06	protein_coding
ENSG00000164109	MAD2L1	-1.47928	1.09E-05	protein_coding
ENSG00000182132	KCNIP1	-1.47897	7.92E-06	protein_coding
ENSG00000123700	KCNJ2	-1.47464	2.51E-05	protein_coding
ENSG00000183793	NPIPA5	-1.47451	6.49E-02	protein_coding

ENSG00000124635	H2BC11	-1.47209	3.12E-06	protein_coding
ENSG00000203852	H3C15	-1.46843	1.37E-02	protein_coding
ENSG00000184903	IMMP2L	-1.46606	5.19E-05	protein_coding
ENSG00000168309	FAM107A	-1.46472	1.67E-06	protein_coding
ENSG00000124529	NA	-1.46433	8.19E-06	NA
ENSG00000104738	MCM4	-1.46341	3.11E-08	protein_coding
ENSG00000170382	LRRN2	-1.46141	5.53E-04	protein_coding
ENSG00000165071	TMEM71	-1.461	9.96E-03	protein_coding
ENSG00000164294	GPX8	-1.45996	7.18E-05	protein_coding
ENSG00000119042	SATB2	-1.45881	1.80E-06	protein_coding
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ENSG00000184825	NA	-1.45569	2.22E-06	NA
ENSG00000135828	RNASEL	-1.45562	8.64E-03	protein_coding
ENSG00000197061	H4C3	-1.45508	1.08E-05	protein_coding
ENSG00000176014	TUBB6	-1.45507	2.81E-09	protein_coding
ENSG00000125534	PPDPF	-1.45382	5.37E-04	protein_coding
ENSG00000075218	GTSE1	-1.45343	6.93E-06	protein_coding
ENSG00000185985	SLITRK2	-1.45336	2.54E-07	protein_coding
ENSG00000117791	MTARC2	-1.453	8.97E-04	protein_coding
ENSG00000213963		-1.45255	3.79E-02	lncRNA
ENSG00000135476	ESPL1	-1.45113	1.10E-05	protein_coding
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ENSG00000218426		-1.44627	1.72E-03	processed_pseudogene
ENSG00000162817	C1orf115	-1.43738	3.74E-02	protein_coding
ENSG00000225746	MEG8	-1.43691	9.22E-05	lncRNA
ENSG00000164611	PTTG1	-1.43632	1.53E-05	protein_coding
ENSG00000227615		-1.43523	2.97E-03	processed_pseudogene
ENSG00000243547	HNRNPKP4	-1.43432	8.02E-03	processed_pseudogene
ENSG00000168528	SERINC2	-1.43312	3.43E-03	protein_coding
ENSG00000100504	PYGL	-1.43103	8.50E-04	protein_coding
ENSG00000176046	NUPR1	-1.43078	1.27E-03	protein_coding
ENSG00000266638	NA	-1.42901	8.48E-02	NA
ENSG00000233012	HDAC1P2	-1.42689	1.17E-02	transcribed_processed_pseudogene
ENSG00000160172	FAM86C2P	-1.42471	6.65E-02	transcribed_unprocessed_pseudogene
ENSG00000259498	TPM1-AS	-1.42378	2.82E-02	lncRNA
ENSG00000006607	FARP2	-1.42335	1.22E-08	protein_coding
ENSG00000155016	CYP2U1	-1.42159	2.55E-04	protein_coding
ENSG00000101003	GINS1	-1.42074	4.68E-06	protein_coding
ENSG00000230897	RPS18P12	-1.41932	1.59E-10	processed_pseudogene
ENSG00000138696	BMPR1B	-1.41901	8.84E-06	protein_coding
ENSG00000183856	IQGAP3	-1.41359	4.28E-05	protein_coding
ENSG00000169255	B3GALNT1	-1.41328	1.97E-05	protein_coding
ENSG00000244026	FAM86DP	-1.41265	5.59E-03	transcribed_unprocessed_pseudogene
ENSG00000150961	SEC24D	-1.41192	1.38E-03	protein_coding
ENSG00000162976	SLC66A3	-1.40951	1.20E-03	protein_coding
ENSG00000183077	AFMID	-1.40625	1.44E-03	protein_coding
ENSG00000107537	PHYH	-1.40526	1.86E-04	protein_coding
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ENSG00000183941	NA	-1.39881	9.04E-02	NA
ENSG00000183558	NA	-1.39342	9.97E-04	NA

ENSG00000137962	ARHGAP29	-1.39237	1.70E-05	protein_coding
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ENSG00000100600	LGMN	-1.39021	1.26E-05	protein_coding
ENSG00000112742	TTK	-1.38937	1.25E-04	protein_coding
ENSG00000223547	ZNF844	-1.38793	8.35E-09	protein_coding
ENSG00000167900	TK1	-1.38529	3.32E-03	protein_coding
ENSG00000007516	BAIAP3	-1.38434	1.75E-03	protein_coding
ENSG00000100065	CARD10	-1.38424	5.30E-02	protein_coding
ENSG00000187741	FANCA	-1.38318	6.05E-05	protein_coding
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ENSG00000111665	CDCA3	-1.38199	1.83E-03	protein_coding
ENSG00000078549	ADCYAP1R1	-1.37891	2.07E-03	protein_coding
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ENSG00000151725	CENPU	-1.37823	4.16E-05	protein_coding
ENSG00000196747	H2AC13	-1.3743	1.13E-04	protein_coding
ENSG00000183798	EMILIN3	-1.37412	2.78E-03	protein_coding
ENSG00000104490	NCALD	-1.37294	4.20E-06	protein_coding
ENSG00000184348	NA	-1.37117	3.15E-05	NA
ENSG00000143036	SLC44A3	-1.37072	1.05E-02	protein_coding
ENSG00000116396	KCNC4	-1.37051	8.59E-02	protein_coding
ENSG00000149257	SERPINH1	-1.36822	7.13E-11	protein_coding
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ENSG00000154556	SORBS2	-1.36802	1.93E-05	protein_coding
ENSG00000198901	PRC1	-1.36691	3.65E-06	protein_coding
ENSG00000179958	DCTPP1	-1.36621	6.25E-05	protein_coding
ENSG00000124479	NDP	-1.36571	1.82E-04	protein_coding
ENSG00000092421	SEMA6A	-1.36567	4.69E-06	protein_coding
ENSG00000182572	NA	-1.36479	3.50E-05	NA
ENSG00000185361	TNFAIP8L1	-1.36429	2.18E-03	protein_coding
ENSG00000118292	C1orf54	-1.36377	7.05E-05	protein_coding
ENSG00000242615		-1.36229	2.61E-02	transcribed_processed_pseudogene
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ENSG00000152784	PRDM8	-1.3599	7.27E-02	protein_coding
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ENSG00000186815	TPCN1	-1.35458	7.41E-05	protein_coding
ENSG00000101911	PRPS2	-1.35333	2.02E-04	protein_coding
ENSG00000096060	FKBP5	-1.35194	7.85E-06	protein_coding
ENSG00000146540	C7orf50	-1.3513	3.27E-08	protein_coding
ENSG00000167123	CERCAM	-1.34803	1.32E-05	protein_coding
ENSG00000146918	NCAPG2	-1.34781	2.33E-07	protein_coding
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ENSG00000154080	CHST9	-1.34444	1.48E-02	protein_coding
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ENSG00000183527	PSMG1	-1.34237	5.16E-04	protein_coding
ENSG00000148600	CDHR1	-1.34209	4.68E-03	protein_coding

ENSG00000160746	ANO10	-1.34173	9.48E-07	protein_coding
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ENSG00000198879	SFMBT2	-1.32949	1.26E-04	protein_coding
ENSG00000110057	UNC93B1	-1.32917	1.94E-03	protein_coding
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ENSG00000160111	CPAMD8	-1.32526	6.30E-04	protein_coding
ENSG00000067057	PFKP	-1.32434	1.85E-07	protein_coding
ENSG00000214189	ZNF788P	-1.32417	8.49E-02	transcribed_unprocessed_pseudogene
ENSG00000167747	C19orf48	-1.32378	8.39E-06	transcribed_unitary_pseudogene
ENSG00000104889	RNASEH2A	-1.32218	9.74E-05	protein_coding
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ENSG00000169230	PRELID1	-1.31866	8.43E-03	protein_coding
ENSG00000018625	ATP1A2	-1.31615	4.17E-05	protein_coding
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ENSG00000159259	CHAF1B	-1.31485	1.47E-03	protein_coding
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ENSG00000197459	NA	-1.31082	9.30E-05	NA
ENSG00000154328	NEIL2	-1.30886	8.67E-05	protein_coding
ENSG00000166979	EVA1C	-1.30697	4.27E-04	protein_coding
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ENSG00000122870	BICC1	-1.3035	7.77E-03	protein_coding
ENSG00000132842	AP3B1	-1.30347	2.82E-07	protein_coding
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ENSG00000049540	ELN	-1.29476	1.31E-02	protein_coding
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ENSG00000271270	TMCC1-DT	-1.28553	5.27E-03	lncRNA
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ENSG00000169679	BUB1	-1.27857	1.88E-05	protein_coding
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ENSG00000123416	TUBA1B	-1.27524	4.18E-07	protein_coding
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ENSG00000147027	TMEM47	-1.27386	1.50E-05	protein_coding
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ENSG00000253661	ZFHX4-AS1	-1.2613	2.68E-03	lncRNA
ENSG00000113356	POLR3G	-1.25952	4.23E-02	protein_coding
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ENSG00000145685	LHFPL2	-1.25841	9.60E-07	protein_coding
ENSG00000254656	RTL1	-1.25787	8.17E-02	protein_coding
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ENSG00000136933	RABEPK	-1.25427	3.16E-04	protein_coding
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ENSG00000089157	RPLP0	-1.25307	1.52E-07	protein_coding
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ENSG00000108272	NA	-1.23531	1.57E-02	NA
ENSG00000197879	MYO1C	-1.23466	2.84E-05	protein_coding
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ENSG00000108039	XPNPEP1	-1.22916	7.56E-07	protein_coding
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ENSG00000151131	C12orf45	-1.21856	7.44E-04	protein_coding
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ENSG00000186185	KIF18B	-1.21712	6.59E-04	protein_coding
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ENSG00000163430	FSTL1	-1.21552	1.70E-05	protein_coding
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ENSG00000116353	MECR	-1.21233	9.15E-04	protein_coding
ENSG00000180596	H2BC4	-1.2097	5.17E-05	protein_coding
ENSG00000178921	PFAS	-1.20622	4.25E-07	protein_coding
ENSG00000182199	SHMT2	-1.20581	7.44E-07	protein_coding
ENSG00000064666	CNN2	-1.20431	4.06E-07	protein_coding
ENSG00000091127	PUS7	-1.20409	6.29E-04	protein_coding
ENSG00000121060	TRIM25	-1.20352	4.16E-04	protein_coding
ENSG00000205534	SMG1P2	-1.20334	9.26E-03	transcribed_unprocessed_pseudogene
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ENSG00000136492	BRIP1	-1.19863	3.47E-05	protein_coding
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ENSG00000177425	PAWR	-1.19321	6.58E-05	protein_coding
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ENSG00000226419	SLC16A1-AS1	-1.19198	7.32E-02	lncRNA
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ENSG00000049541	RFC2	-1.18923	6.98E-04	protein_coding
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ENSG00000166451	CENPN	-1.18855	1.44E-03	protein_coding
ENSG00000137124	ALDH1B1	-1.18557	1.46E-05	protein_coding
ENSG00000023697	DERA	-1.18454	1.89E-03	protein_coding
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ENSG00000187951		-1.18112	1.28E-03	lncRNA
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ENSG00000164465	DCBLD1	-1.17773	5.92E-04	protein_coding
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ENSG00000149782	PLCB3	-1.17688	5.94E-06	protein_coding
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ENSG00000151718	WWC2	-1.17279	8.77E-05	protein_coding
ENSG00000112699	GMDS	-1.17274	5.97E-02	protein_coding
ENSG00000160932	LY6E	-1.17252	2.90E-03	protein_coding
ENSG00000198826	ARHGAP11A	-1.17247	8.67E-06	protein_coding

ENSG00000064545	TMEM161A	-1.16899	6.85E-03	protein_coding
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ENSG00000143476	DTL	-1.16672	6.82E-05	protein_coding
ENSG00000031081	ARHGAP31	-1.166	7.35E-06	protein_coding
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ENSG00000157613	CREB3L1	-1.16102	3.82E-02	protein_coding
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ENSG00000185610	DBX2	-1.15944	8.78E-03	protein_coding
ENSG00000168003	SLC3A2	-1.15795	1.32E-06	protein_coding
ENSG00000187239	FNBP1	-1.15724	1.59E-05	protein_coding
ENSG00000106785	TRIM14	-1.15717	9.27E-02	protein_coding
ENSG00000254634	SMG1P6	-1.1565	9.09E-02	unprocessed_pseudogene
ENSG00000198918	RPL39	-1.15631	1.15E-06	protein_coding
ENSG00000011426	ANLN	-1.15603	2.23E-06	protein_coding
ENSG00000198576	ARC	-1.15597	4.54E-05	protein_coding
ENSG00000183598	H3C13	-1.15586	4.04E-03	protein_coding
ENSG00000141556	TBCD	-1.15534	3.15E-07	protein_coding
ENSG00000141682	PMAIP1	-1.15471	7.87E-02	protein_coding
ENSG00000116815	CD58	-1.15285	3.47E-03	protein_coding
ENSG00000242173	ARHGDIG	-1.15227	6.71E-02	protein_coding
ENSG00000189238	LINC00943	-1.15168	2.00E-02	lncRNA
ENSG00000201772	SNORA5C	-1.15113	6.29E-02	snoRNA
ENSG00000167526	RPL13	-1.15103	1.15E-06	protein_coding
ENSG00000085840	ORC1	-1.1501	7.94E-03	protein_coding
ENSG00000137364	TPMT	-1.1487	2.60E-02	protein_coding
ENSG00000197903	H2BC12	-1.14846	1.53E-06	protein_coding
ENSG00000176890	TYMS	-1.14767	1.00E-03	protein_coding
ENSG00000116830	TTF2	-1.14715	4.63E-05	protein_coding
ENSG00000171241	SHCBP1	-1.14668	2.88E-04	protein_coding
ENSG00000141569	TRIM65	-1.1461	2.56E-04	protein_coding
ENSG00000139364	TMEM132B	-1.14603	4.86E-05	protein_coding
ENSG00000142102	PGGHG	-1.1454	7.05E-03	protein_coding
ENSG00000111961	SASH1	-1.14489	2.77E-05	protein_coding
ENSG00000225697	SLC26A6	-1.14468	1.59E-03	protein_coding
ENSG00000116194	ANGPTL1	-1.14182	1.24E-03	protein_coding
ENSG00000101444	AHCY	-1.14178	9.67E-06	protein_coding
ENSG00000142089	IFITM3	-1.14095	1.75E-02	protein_coding
ENSG00000136840	ST6GALNAC4	-1.14062	1.25E-02	protein_coding
ENSG00000128228	SDF2L1	-1.14048	3.36E-02	protein_coding
ENSG00000106628	POLD2	-1.14029	1.95E-06	protein_coding
ENSG00000138771	SHROOM3	-1.1387	6.30E-07	protein_coding
ENSG00000180834	MAP6D1	-1.13718	5.46E-03	protein_coding
ENSG00000011638	TMEM159	-1.13712	8.57E-04	protein_coding
ENSG00000021826	CPS1	-1.13652	1.57E-02	protein_coding
ENSG00000109674	NEIL3	-1.13638	1.83E-02	protein_coding
ENSG00000133131	MORC4	-1.13527	1.79E-03	protein_coding

ENSG00000144677	CTDSPL	-1.13428	2.93E-04	protein_coding
ENSG00000171943	SRGAP2C	-1.1337	6.02E-05	protein_coding
ENSG00000103489	XYLT1	-1.1336	1.09E-02	protein_coding
ENSG00000165060	FXN	-1.13175	4.01E-02	protein_coding
ENSG00000142230	SAE1	-1.13048	1.19E-05	protein_coding
ENSG00000144554	FANCD2	-1.13013	1.76E-04	protein_coding
ENSG00000152253	SPC25	-1.12976	7.78E-03	protein_coding
ENSG00000101400	SNTA1	-1.12951	3.29E-03	protein_coding
ENSG00000124575	H1-3	-1.12887	2.89E-03	protein_coding
ENSG00000142937	RPS8	-1.12804	6.54E-06	protein_coding
ENSG00000010278	CD9	-1.127	8.89E-03	protein_coding
ENSG00000152749	GPR180	-1.12695	1.27E-04	protein_coding
ENSG00000241732	NA	-1.12575	8.04E-02	NA
ENSG00000114790	ARHGEF26	-1.12551	3.41E-05	protein_coding
ENSG00000125637	PSD4	-1.12515	8.67E-03	protein_coding
ENSG00000160209	PDXK	-1.12494	5.67E-06	protein_coding
ENSG00000102119	EMD	-1.12454	1.33E-03	protein_coding
ENSG00000166669	ATF7IP2	-1.12352	4.86E-02	protein_coding
ENSG00000034063	NA	-1.12313	3.66E-05	NA
ENSG00000231119		-1.12297	3.63E-02	lncRNA
ENSG00000077152	UBE2T	-1.12246	1.49E-02	protein_coding
ENSG00000091428	RAPGEF4	-1.12184	1.63E-03	protein_coding
ENSG00000132383	RPA1	-1.12089	2.03E-05	protein_coding
ENSG00000145703	IQGAP2	-1.12034	5.46E-04	protein_coding
ENSG00000132970	WASF3	-1.12014	3.02E-05	protein_coding
ENSG00000122884	P4HA1	-1.11908	1.26E-05	protein_coding
ENSG00000163577	EIF5A2	-1.119	2.07E-03	protein_coding
ENSG00000145425	RPS3A	-1.11816	1.90E-05	protein_coding
ENSG00000188130	MAPK12	-1.11814	1.21E-04	protein_coding
ENSG00000226869	LHFPL3-AS1	-1.11809	7.87E-02	lncRNA
ENSG00000013810	TACC3	-1.11773	4.23E-04	protein_coding
ENSG00000213366	GSTM2	-1.11369	1.03E-03	protein_coding
ENSG00000136205	TNS3	-1.11332	1.38E-03	protein_coding
ENSG00000154856	APCDD1	-1.11189	2.95E-03	protein_coding
ENSG00000196966	NA	-1.1115	1.79E-03	NA
ENSG00000158373	H2BC5	-1.11068	1.21E-03	protein_coding
ENSG00000137812	KNL1	-1.10938	6.63E-06	protein_coding
ENSG00000100292	HMOX1	-1.10889	2.58E-03	protein_coding
ENSG00000112306	RPS12	-1.10883	7.21E-07	protein_coding
ENSG00000122026	RPL21	-1.10736	1.53E-05	protein_coding
ENSG00000140450	ARRDC4	-1.10726	3.60E-05	protein_coding
ENSG00000136240	KDELRL2	-1.10643	1.25E-03	protein_coding
ENSG00000240694	PNMA2	-1.10543	5.38E-06	protein_coding
ENSG00000165443	PHYHIPL	-1.10168	4.77E-04	protein_coding
ENSG00000116962	NID1	-1.10138	4.72E-04	protein_coding
ENSG00000076382	SPAG5	-1.10114	5.53E-04	protein_coding
ENSG00000120738	EGR1	-1.09978	4.06E-03	protein_coding
ENSG00000271417	NA	-1.09735	6.36E-02	NA
ENSG00000123473	STIL	-1.09672	1.77E-03	protein_coding
ENSG00000171729	TMEM51	-1.09623	1.09E-02	protein_coding
ENSG00000026103	FAS	-1.09586	3.68E-03	protein_coding

ENSG00000272761	NA	-1.09491	9.20E-04	NA
ENSG00000183688	RFLNB	-1.09483	6.48E-03	protein_coding
ENSG00000123975	CKS2	-1.09269	9.75E-04	protein_coding
ENSG00000106003	LFNG	-1.09218	6.54E-03	protein_coding
ENSG00000233913	RPL10P9	-1.09144	2.34E-02	processed_pseudogene
ENSG00000169515	CCDC8	-1.08957	7.79E-02	protein_coding
ENSG00000203709	MIR29B2CHG	-1.08888	1.40E-02	lncRNA
ENSG00000184445	KNTC1	-1.08757	1.22E-05	protein_coding
ENSG00000188846	RPL14	-1.08728	1.59E-06	protein_coding
ENSG00000065534	MYLK	-1.08561	1.98E-03	protein_coding
ENSG00000147119	CHST7	-1.0848	8.00E-04	protein_coding
ENSG00000172059	KLF11	-1.08471	2.26E-03	protein_coding
ENSG00000186665	C17orf58	-1.08442	1.10E-02	protein_coding
ENSG00000119638	NEK9	-1.08399	4.90E-05	protein_coding
ENSG00000162063	CCNF	-1.08324	3.45E-03	protein_coding
ENSG00000167601	AXL	-1.08305	4.70E-04	protein_coding
ENSG00000113645	WWC1	-1.08231	2.23E-03	protein_coding
ENSG00000213240	NA	-1.07786	2.51E-05	NA
ENSG00000109099	PMP22	-1.07692	1.35E-04	protein_coding
ENSG00000113580	NR3C1	-1.07617	3.51E-05	protein_coding
ENSG00000214485	RPL7P1	-1.07583	3.69E-05	processed_pseudogene
ENSG00000185052	SLC24A3	-1.07567	1.47E-03	protein_coding
ENSG00000087586	AURKA	-1.07565	2.44E-03	protein_coding
ENSG00000114346	ECT2	-1.07549	7.17E-05	protein_coding
ENSG00000198554	WDHD1	-1.07494	2.56E-04	protein_coding
ENSG00000106772	PRUNE2	-1.07344	4.38E-04	protein_coding
ENSG00000073712	FERMT2	-1.07191	1.97E-05	protein_coding
ENSG00000174099	MSRB3	-1.0717	3.52E-02	protein_coding
ENSG00000183763	TRAIP	-1.07138	5.31E-02	protein_coding
ENSG00000161513	FDXR	-1.07135	2.64E-03	protein_coding
ENSG00000171940	ZNF217	-1.07068	9.61E-05	protein_coding
ENSG00000121940	CLCC1	-1.0705	8.33E-05	protein_coding
ENSG00000155368	DBI	-1.06997	2.99E-05	protein_coding
ENSG00000178573	MAF	-1.06959	6.36E-04	protein_coding
ENSG00000186205	MTARC1	-1.06924	4.57E-04	protein_coding
ENSG00000112559	MDFI	-1.06883	1.11E-02	protein_coding
ENSG00000187123	LYPD6	-1.06698	3.14E-02	protein_coding
ENSG00000066279	ASPM	-1.06675	2.42E-06	protein_coding
ENSG00000162373	BEND5	-1.06619	1.01E-02	protein_coding
ENSG00000141736	ERBB2	-1.06591	2.52E-04	protein_coding
ENSG00000109911	ELP4	-1.06537	3.03E-04	protein_coding
ENSG00000119777	TMEM214	-1.06444	8.65E-04	protein_coding
ENSG00000071967	CYBRD1	-1.06322	7.47E-04	protein_coding
ENSG00000113328	CCNG1	-1.06234	1.18E-04	protein_coding
ENSG00000131669	NINJ1	-1.06232	7.19E-04	protein_coding
ENSG00000100479	POLE2	-1.0619	1.72E-02	protein_coding
ENSG00000140545	MFGE8	-1.06032	2.30E-05	protein_coding
ENSG00000164045	CDC25A	-1.0599	1.57E-03	protein_coding
ENSG00000198755	RPL10A	-1.05971	1.08E-05	protein_coding
ENSG00000197958	RPL12	-1.05889	2.63E-06	protein_coding
ENSG00000143801	PSEN2	-1.05831	1.63E-02	protein_coding

ENSG00000205246	NA	-1.05771	1.44E-02	NA
ENSG00000161835	TAMALIN	-1.05733	9.76E-02	protein_coding
ENSG00000250155		-1.05731	2.28E-02	lncRNA
ENSG00000125247	TMTC4	-1.05591	4.32E-06	protein_coding
ENSG00000234009	RPL5P34	-1.05541	5.35E-02	processed_pseudogene
ENSG00000166228	PCBD1	-1.05516	2.77E-02	protein_coding
ENSG00000152661	GJA1	-1.05497	4.16E-06	protein_coding
ENSG00000163808	KIF15	-1.05413	1.61E-03	protein_coding
ENSG00000196656		-1.05404	1.37E-02	transcribed_processed_pseudogene
ENSG00000161800	RACGAP1	-1.05391	4.59E-04	protein_coding
ENSG00000141753	IGFBP4	-1.05377	3.26E-02	protein_coding
ENSG00000125844	RRBP1	-1.05369	5.29E-05	protein_coding
ENSG00000096080	MRPS18A	-1.05253	7.16E-03	protein_coding
ENSG00000219665	ZNF433-AS1	-1.0516	1.39E-02	lncRNA
ENSG00000014123	UFL1	-1.05095	6.31E-05	protein_coding
ENSG00000198121	LPAR1	-1.05022	3.54E-04	protein_coding
ENSG00000179242	CDH4	-1.05002	2.87E-03	protein_coding
ENSG00000128578	STRIP2	-1.04934	5.65E-02	protein_coding
ENSG00000156802	ATAD2	-1.04878	3.46E-05	protein_coding
ENSG00000150907	FOXO1	-1.04826	2.84E-03	protein_coding
ENSG00000164761	TNFRSF11B	-1.04719	2.77E-02	protein_coding
ENSG00000215513	NA	-1.04718	8.77E-04	NA
ENSG00000125319	HROB	-1.04593	6.86E-02	protein_coding
ENSG00000084207	GSTP1	-1.04461	3.80E-05	protein_coding
ENSG00000172661	WASHC2C	-1.04459	1.99E-04	protein_coding
ENSG00000123131	PRDX4	-1.04377	8.32E-03	protein_coding
ENSG00000136237	RAPGEF5	-1.04299	2.03E-02	protein_coding
ENSG00000105011	ASF1B	-1.04279	1.76E-02	protein_coding
ENSG00000106077	ABHD11	-1.04195	1.97E-02	protein_coding
ENSG00000101144	BMP7	-1.04135	9.66E-05	protein_coding
ENSG00000198618	PPIAP22	-1.04131	1.57E-02	processed_pseudogene
ENSG00000133315	MACROD1	-1.03961	1.86E-02	protein_coding
ENSG00000167085	PHB	-1.03942	1.72E-04	protein_coding
ENSG00000104976	SNAPC2	-1.03915	1.28E-02	protein_coding
ENSG00000213178	RPL22P1	-1.03862	8.52E-03	processed_pseudogene
ENSG00000099250	NRP1	-1.03827	1.56E-05	protein_coding
ENSG00000157456	CCNB2	-1.038	7.19E-03	protein_coding
ENSG00000137509	PRCP	-1.03788	5.82E-04	protein_coding
ENSG00000103021	CCDC113	-1.03769	2.95E-02	protein_coding
ENSG00000113971	NPHP3	-1.03748	1.24E-04	protein_coding
ENSG00000148303	RPL7A	-1.03747	9.27E-06	protein_coding
ENSG00000130255	RPL36	-1.03714	1.97E-06	protein_coding
ENSG00000092853	CLSPN	-1.03616	2.41E-04	protein_coding
ENSG00000213390	ARHGAP19	-1.03506	6.91E-04	protein_coding
ENSG00000162627	SNX7	-1.03398	2.53E-03	protein_coding
ENSG00000185386	MAPK11	-1.03346	1.71E-04	protein_coding
ENSG00000142733	MAP3K6	-1.03302	9.12E-03	protein_coding
ENSG00000120693	SMAD9	-1.03294	1.06E-02	protein_coding
ENSG00000183506	PI4KAP2	-1.03135	3.63E-03	transcribed_unitary_pseudogene
ENSG00000167969	ECI1	-1.03117	4.02E-04	protein_coding
ENSG00000006625	GGCT	-1.03105	2.64E-04	protein_coding

ENSG00000089060	SLC8B1	-1.02873	4.46E-02	protein_coding
ENSG00000196331	NA	-1.02832	1.70E-02	NA
ENSG00000138621	PPCDC	-1.02709	4.92E-02	protein_coding
ENSG00000186153	WVOX	-1.02585	2.35E-02	protein_coding
ENSG00000137575	SDCBP	-1.02477	2.41E-03	protein_coding
ENSG00000140743	CDR2	-1.02268	2.76E-03	protein_coding
ENSG00000139190	VAMP1	-1.02224	5.23E-02	protein_coding
ENSG00000116141	MARK1	-1.02169	1.09E-05	protein_coding
ENSG00000229520	LINC00404	-1.02138	9.02E-02	lncRNA
ENSG00000105738	SIPA1L3	-1.01774	9.27E-06	protein_coding
ENSG00000165501	LRR1	-1.01719	9.92E-02	protein_coding
ENSG00000167994	RAB3IL1	-1.01691	6.01E-02	protein_coding
ENSG00000137831	UACA	-1.01651	6.30E-04	protein_coding
ENSG00000103888	CEMP	-1.01614	4.57E-02	protein_coding
ENSG00000054356	PTPRN	-1.0153	1.27E-02	protein_coding
ENSG00000074800	ENO1	-1.01523	3.53E-06	protein_coding
ENSG00000119471	HSDL2	-1.01369	6.09E-04	protein_coding
ENSG00000167508	MVD	-1.01263	9.76E-04	protein_coding
ENSG00000153904	DDAH1	-1.01235	1.12E-05	protein_coding
ENSG00000165704	HPRT1	-1.01231	4.14E-02	protein_coding
ENSG00000229117	RPL41	-1.01141	3.06E-05	protein_coding
ENSG00000178607	ERN1	-1.01103	1.95E-02	protein_coding
ENSG00000088280	ASAP3	-1.01102	2.13E-04	protein_coding
ENSG00000114646	CSPG5	-1.01044	2.14E-03	protein_coding
ENSG00000244398		-1.00966	8.26E-04	processed_pseudogene
ENSG00000187097	ENTPD5	-1.00964	3.74E-03	protein_coding
ENSG00000239922		-1.00928	6.22E-04	lncRNA
ENSG00000254919		-1.00835	2.04E-02	lncRNA
ENSG00000197258	EIF4BP6	-1.00584	9.71E-02	processed_pseudogene
ENSG00000067141	NEO1	-1.00503	4.96E-04	protein_coding
ENSG00000120253	NUP43	-1.00498	8.77E-04	protein_coding
ENSG00000103044	HAS3	-1.00421	8.20E-02	protein_coding
ENSG00000183117	CSMD1	-1.00376	2.59E-04	protein_coding
ENSG00000150457	LATS2	-1.00346	1.73E-02	protein_coding
ENSG00000076770	MBNL3	-1.00298	9.03E-03	protein_coding
ENSG00000119711	ALDH6A1	-1.00199	2.65E-03	protein_coding
ENSG00000181938	GINS3	-1.00167	2.90E-02	protein_coding
ENSG00000071127	WDR1	-1.00153	2.35E-06	protein_coding
ENSG00000014138	POLA2	-1.00134	4.41E-03	protein_coding

Supplementary Table 6: List of upregulated genes (log 2 fold change >1, adjusted p value <0.1) in mature OL compared to pre-OL

Ensembl ID	Symbol	log2 Fold Change	Adj.Pval	Type
ENSG00000135114	OASL	10.40652	7.74E-03	protein_coding
ENSG00000225492	GBP1P1	9.727159	9.88E-02	transcribed_unprocessed_pseudogene
ENSG00000185885	IFITM1	9.474763	8.47E-03	protein_coding
ENSG00000136514	RTP4	9.142409	7.74E-02	protein_coding
ENSG00000169248	CXCL11	8.656589	7.42E-02	protein_coding

ENSG00000229754	CXCR2P1	7.98986	1.80E-02	transcribed_unprocessed_pseudogene
ENSG00000114374	USP9Y	7.906521	4.41E-02	protein_coding
ENSG00000134321	RSAD2	7.743882	3.66E-02	protein_coding
ENSG00000169245	CXCL10	7.743249	7.57E-02	protein_coding
ENSG00000019582	CD74	7.710932	6.25E-02	protein_coding
ENSG00000183486	MX2	7.700949	6.82E-02	protein_coding
ENSG00000125730	C3	7.643838	5.13E-02	protein_coding
ENSG00000162654	GBP4	7.607238	5.36E-02	protein_coding
ENSG00000117228	GBP1	7.558493	6.17E-02	protein_coding
ENSG00000129824	RPS4Y1	7.436909	6.17E-02	protein_coding
ENSG00000111335	OAS2	7.094561	1.79E-02	protein_coding
ENSG00000241859	ANOS2P	7.08513	3.55E-02	transcribed_unprocessed_pseudogene
ENSG00000165949	IFI27	7.058497	7.29E-02	protein_coding
ENSG00000154451	GBP5	6.974187	2.42E-02	protein_coding
ENSG00000168062	BATF2	6.876875	3.31E-02	protein_coding
ENSG00000138755	CXCL9	6.601306	8.96E-03	protein_coding
ENSG00000166592	RRAD	6.548611	3.22E-04	protein_coding
ENSG00000258521		6.499595	5.45E-02	lncRNA
ENSG00000132530	XAF1	6.426723	2.50E-02	protein_coding
ENSG00000105246	EBI3	6.40484	1.79E-02	protein_coding
ENSG00000269720	CCDC194	6.247971	7.74E-03	protein_coding
ENSG00000157601	MX1	6.061992	6.96E-02	protein_coding
ENSG00000225886		5.94173	1.34E-03	lncRNA
ENSG00000119922	IFIT2	5.888915	6.90E-02	protein_coding
ENSG00000161570	NA	5.846142	5.80E-03	NA
ENSG00000010030	ETV7	5.835686	1.40E-04	protein_coding
ENSG00000154620	TMSB4Y	5.68043	8.03E-02	protein_coding
ENSG00000187608	ISG15	5.608347	8.25E-03	protein_coding
ENSG00000150630	VEGFC	5.460533	7.77E-02	protein_coding
ENSG00000123496	IL13RA2	5.419603	4.41E-02	protein_coding
ENSG00000185745	IFIT1	5.41222	3.13E-07	protein_coding
ENSG00000163121	NEURL3	5.401001	1.21E-02	protein_coding
ENSG00000177294	FBXO39	5.390361	1.17E-02	protein_coding
ENSG00000134326	CMPK2	5.36028	9.97E-02	protein_coding
ENSG00000119917	IFIT3	5.054371	7.35E-02	protein_coding
ENSG00000007171	NOS2	5.054176	3.80E-02	protein_coding
ENSG00000110446	SLC15A3	5.009525	1.07E-04	protein_coding
ENSG00000126709	IFI6	4.991554	3.09E-02	protein_coding
ENSG00000174059	CD34	4.938137	2.42E-02	protein_coding
ENSG00000157873	TNFRSF14	4.849602	2.32E-03	protein_coding
ENSG00000166825	ANPEP	4.783915	7.29E-02	protein_coding
ENSG00000204592	HLA-E	4.772589	9.07E-02	protein_coding
ENSG00000124256	ZBP1	4.762999	6.06E-02	protein_coding
ENSG00000141574	SECTM1	4.735763	5.93E-02	protein_coding
ENSG00000188856	RPSAP47	4.734932	2.12E-02	processed_pseudogene
ENSG00000130303	BST2	4.649064	9.07E-02	protein_coding
ENSG00000226025	LGALS17A	4.624931	9.97E-02	transcribed_unprocessed_pseudogene
ENSG00000142089	IFITM3	4.4493	1.07E-04	protein_coding
ENSG00000182179	UBA7	4.397116	8.16E-04	protein_coding
ENSG00000078081	LAMP3	4.382293	5.45E-02	protein_coding
ENSG00000138642	HERC6	4.296903	1.67E-04	protein_coding

ENSG00000107984	DKK1	4.253535	7.07E-02	protein_coding
ENSG00000037280	FLT4	4.238365	1.07E-04	protein_coding
ENSG00000165973	NELL1	4.195484	1.58E-02	protein_coding
ENSG00000100292	HMOX1	4.142563	2.80E-04	protein_coding
ENSG00000133321	PLAAT4	4.127291	1.46E-03	protein_coding
ENSG00000121858	TNFSF10	4.106731	1.22E-02	protein_coding
ENSG00000184979	USP18	4.093667	4.90E-04	protein_coding
ENSG00000068079	IFI35	4.005635	3.79E-04	protein_coding
ENSG00000104951	IL4I1	3.964248	4.16E-02	protein_coding
ENSG00000178685	PARP10	3.938912	3.79E-04	protein_coding
ENSG00000185404	SP140L	3.828793	4.69E-02	protein_coding
ENSG00000128284	APOL3	3.803992	5.91E-02	protein_coding
ENSG00000206532	NA	3.747989	5.15E-02	NA
ENSG00000155629	PIK3AP1	3.724199	6.37E-03	protein_coding
ENSG00000188313	PLSCR1	3.699201	2.07E-03	protein_coding
ENSG00000112343	TRIM38	3.643087	3.56E-02	protein_coding
ENSG00000141497	ZMYND15	3.630505	7.29E-02	protein_coding
ENSG00000204055		3.553043	5.55E-02	lncRNA
ENSG00000180616	SSTR2	3.552076	3.05E-02	protein_coding
ENSG00000125347	IRF1	3.397147	7.32E-03	protein_coding
ENSG00000028137	TNFRSF1B	3.366239	4.82E-02	protein_coding
ENSG00000025708	TYMP	3.336314	2.42E-02	protein_coding
ENSG00000140511	HAPLN3	3.334268	1.46E-03	protein_coding
ENSG00000095587	TLL2	3.334251	7.42E-02	protein_coding
ENSG00000152689	RASGRP3	3.313989	1.33E-02	protein_coding
ENSG00000172183	ISG20	3.299218	3.56E-02	protein_coding
ENSG00000137959	IFI44L	3.259754	1.46E-03	protein_coding
ENSG00000160932	LY6E	3.232741	2.42E-02	protein_coding
ENSG00000164342	TLR3	3.228264	4.26E-02	protein_coding
ENSG00000245571	FAM111A-DT	3.216086	1.78E-02	lncRNA
ENSG00000173193	PARP14	3.137639	3.59E-03	protein_coding
ENSG00000163823	CCR1	3.095279	1.80E-02	protein_coding
ENSG00000140853	NLRC5	3.069322	9.60E-03	protein_coding
ENSG00000132470	ITGB4	3.064009	1.33E-02	protein_coding
ENSG00000130813	SHFL	3.052213	2.81E-03	protein_coding
ENSG00000081479	LRP2	3.013808	1.78E-02	protein_coding
ENSG00000107201	DDX58	2.97794	2.32E-02	protein_coding
ENSG00000131979	GCH1	2.964382	2.32E-02	protein_coding
ENSG00000132109	TRIM21	2.929115	7.74E-03	protein_coding
ENSG00000099860	GADD45B	2.922976	1.64E-04	protein_coding
ENSG00000135899	SP110	2.919778	1.60E-02	protein_coding
ENSG00000162496	DHRS3	2.917732	4.65E-02	protein_coding
ENSG00000152726	NA	2.917507	6.25E-02	NA
ENSG00000154645	CHODL	2.892801	1.07E-04	protein_coding
ENSG00000137628	DDX60	2.873634	9.60E-03	protein_coding
ENSG00000026950	BTN3A1	2.766674	3.79E-02	protein_coding
ENSG00000128342	LIF	2.765066	2.97E-02	protein_coding
ENSG00000142700	DMRTA2	2.745338	3.68E-03	protein_coding
ENSG00000128335	APOL2	2.734205	5.96E-03	protein_coding
ENSG00000234290	NA	2.730917	8.95E-02	NA
ENSG00000137673	MMP7	2.730375	2.59E-02	protein_coding

ENSG00000132274	TRIM22	2.71365	1.48E-02	protein_coding
ENSG00000002549	LAP3	2.713211	1.23E-02	protein_coding
ENSG00000123685	BATF3	2.70708	7.43E-02	protein_coding
ENSG00000137801	THBS1	2.700893	5.34E-05	protein_coding
ENSG00000179583	CIITA	2.69873	9.97E-02	protein_coding
ENSG00000139192	TAPBPL	2.644129	5.36E-02	protein_coding
ENSG00000187323	DCC	2.596751	6.94E-02	protein_coding
ENSG00000196155	PLEKHG4	2.573804	3.15E-02	protein_coding
ENSG00000125148	MT2A	2.533705	4.99E-03	protein_coding
ENSG00000163545	NUAK2	2.523835	2.42E-02	protein_coding
ENSG00000163840	DTX3L	2.506158	3.24E-02	protein_coding
ENSG00000124201	ZNFX1	2.49665	3.10E-02	protein_coding
ENSG00000118946	PCDH17	2.482634	2.82E-02	protein_coding
ENSG00000238961	SNORA47	2.479816	1.62E-02	snoRNA
ENSG00000150394	CDH8	2.476072	9.30E-02	protein_coding
ENSG00000156510	HKDC1	2.470819	3.22E-04	protein_coding
ENSG00000101347	SAMHD1	2.462088	4.33E-02	protein_coding
ENSG00000110057	UNC93B1	2.45568	7.79E-02	protein_coding
ENSG00000115415	STAT1	2.441429	1.26E-02	protein_coding
ENSG00000007516	BAIAP3	2.424434	5.91E-02	protein_coding
ENSG00000172216	CEBPB	2.415576	3.69E-02	protein_coding
ENSG00000100600	LGMN	2.404915	8.22E-02	protein_coding
ENSG00000160712	IL6R	2.349688	5.62E-02	protein_coding
ENSG00000187210	GCNT1	2.311419	3.66E-02	protein_coding
ENSG00000161921	CXCL16	2.304572	2.59E-02	protein_coding
ENSG00000224882	NA	2.28597	7.42E-02	NA
ENSG00000141682	PMAIP1	2.282022	5.55E-02	protein_coding
ENSG00000176046	NUPR1	2.257909	1.11E-04	protein_coding
ENSG00000088836	SLC4A11	2.214058	5.75E-02	protein_coding
ENSG00000141338	ABCA8	2.212559	6.66E-02	protein_coding
ENSG00000163874	ZC3H12A	2.177707	2.17E-02	protein_coding
ENSG00000167772	ANGPTL4	2.171903	2.42E-02	protein_coding
ENSG00000100911	PSME2	2.169185	3.32E-02	protein_coding
ENSG00000138496	PARP9	2.151426	6.84E-02	protein_coding
ENSG00000250337	PURPL	2.125296	8.61E-02	lncRNA
ENSG00000041880	PARP3	2.101881	9.68E-03	protein_coding
ENSG00000173567	ADGRF3	2.088549	7.17E-02	protein_coding
ENSG00000162772	ATF3	2.087337	2.43E-02	protein_coding
ENSG00000107562	CXCL12	2.063823	2.42E-02	protein_coding
ENSG00000148604	RGR	2.063407	4.26E-02	protein_coding
ENSG00000156587	UBE2L6	2.043536	2.39E-02	protein_coding
ENSG00000213689	TREX1	2.019337	1.69E-03	protein_coding
ENSG00000172828	CES3	1.981138	8.25E-03	protein_coding
ENSG00000102034	ELF4	1.961236	8.22E-02	protein_coding
ENSG00000141753	IGFBP4	1.94989	1.02E-02	protein_coding
ENSG00000167996	FTH1	1.920016	1.17E-02	protein_coding
ENSG00000179761	PIPOX	1.905329	1.22E-02	protein_coding
ENSG00000159231	CBR3	1.877614	1.79E-02	protein_coding
ENSG00000121060	TRIM25	1.862392	3.96E-02	protein_coding
ENSG00000169220	RGS14	1.852087	7.46E-02	protein_coding
ENSG00000103966	EHD4	1.825488	6.99E-02	protein_coding

ENSG00000161509	GRIN2C	1.781415	8.95E-02	protein_coding
ENSG00000131386	GALNT15	1.74281	4.44E-02	protein_coding
ENSG00000092010	PSME1	1.729625	9.21E-02	protein_coding
ENSG00000068078	FGFR3	1.722597	3.69E-02	protein_coding
ENSG00000129654	FOXJ1	1.690971	3.39E-02	protein_coding
ENSG00000178150	ZNF114	1.679073	9.16E-02	protein_coding
ENSG00000124942	AHNAK	1.661848	1.27E-03	protein_coding
ENSG00000108515	ENO3	1.653018	6.96E-02	protein_coding
ENSG00000244486	SCARF2	1.61582	4.70E-02	protein_coding
ENSG00000200795	RNU4-1	1.605941	9.62E-02	snRNA
ENSG00000198879	SFMBT2	1.601733	6.17E-03	protein_coding
ENSG00000230202		1.544361	1.60E-02	processed_pseudogene
ENSG00000141664	ZCCHC2	1.543651	7.42E-02	protein_coding
ENSG00000123992	DNPEP	1.539862	7.06E-03	protein_coding
ENSG00000197019	SERTAD1	1.538262	4.41E-02	protein_coding
ENSG00000178381	ZFAND2A	1.522877	6.25E-02	protein_coding
ENSG00000125826	RBCK1	1.520348	7.54E-02	protein_coding
ENSG00000006282	SPATA20	1.497639	2.13E-03	protein_coding
ENSG00000161091	MFSD12	1.490891	7.29E-02	protein_coding
ENSG00000212402	SNORA74B	1.487843	4.34E-02	snoRNA
ENSG00000170382	LRRN2	1.464509	6.62E-02	protein_coding
ENSG00000119139	TJP2	1.463625	7.19E-02	protein_coding
ENSG00000067057	PFKP	1.462058	3.39E-02	protein_coding
ENSG00000161513	FDXR	1.419251	6.96E-02	protein_coding
ENSG00000161011	SQSTM1	1.376847	7.32E-03	protein_coding
ENSG00000175197	DDIT3	1.359267	7.06E-02	protein_coding
ENSG00000177595	PIDD1	1.31528	3.70E-02	protein_coding
ENSG00000113721	PDGFRB	1.273629	3.40E-02	protein_coding
ENSG00000143466	NA	1.224455	8.35E-02	NA
ENSG00000186577	SMIM29	1.181323	6.78E-02	protein_coding
ENSG00000155090	KLF10	1.166774	9.91E-02	protein_coding
ENSG00000130766	SESN2	1.160816	4.87E-02	protein_coding
ENSG00000006118	TMEM132A	1.144354	6.17E-02	protein_coding
ENSG00000147324	MFHAS1	1.120914	7.24E-02	protein_coding

Supplementary Table 7: List of downregulated genes (log 2 fold change <-1, adjusted p value <0.1) in mature OL compared to pre-OL

Ensembl ID	Symbol	log2 Fold Change	Adj.Pval	Type
ENSG00000270192	MRPS35P3	-5.23687	2.42E-02	processed_pseudogene
ENSG00000270615	SGO1P1	-5.13229	4.26E-02	processed_pseudogene
ENSG00000253576		-4.57853	4.16E-02	lncRNA
ENSG00000145242	EPHA5	-3.65303	4.32E-06	protein_coding
ENSG00000147571	CRH	-3.39599	4.54E-02	protein_coding
ENSG00000184779	NA	-3.37171	2.35E-02	NA
ENSG00000257095		-3.31633	7.77E-02	lncRNA

ENSG00000223841		-3.2924	5.33E-02	processed_pseudogene
ENSG00000117602	RCAN3	-3.22505	5.23E-06	protein_coding
ENSG00000112038	OPRM1	-2.99271	3.68E-02	protein_coding
ENSG00000237973	MTCO1P12	-2.97911	2.80E-04	unprocessed_pseudogene
ENSG00000185477	GPRIN3	-2.94563	3.55E-02	protein_coding
ENSG00000254440	PBOV1	-2.94189	7.93E-02	protein_coding
ENSG00000184454	NCMAP	-2.82775	4.55E-02	protein_coding
ENSG00000077942	FBLN1	-2.76547	1.07E-04	protein_coding
ENSG00000144460	NYAP2	-2.76113	6.08E-02	protein_coding
ENSG00000233821	ENOX1-AS1	-2.70709	7.42E-02	lncRNA
ENSG00000079102	RUNX1T1	-2.67581	5.34E-05	protein_coding
ENSG00000157150	TIMP4	-2.62723	1.25E-03	protein_coding
ENSG00000151892	GFRA1	-2.62198	5.99E-02	protein_coding
ENSG00000118473	SGIP1	-2.55189	6.37E-03	protein_coding
ENSG00000153233	PTPRR	-2.5327	1.58E-02	protein_coding
ENSG00000255480		-2.52426	2.42E-02	lncRNA
ENSG00000184305	CCSER1	-2.52273	6.99E-02	protein_coding
ENSG00000162618	ADGRL4	-2.49758	1.74E-03	protein_coding
ENSG00000231764	DLX6-AS1	-2.48679	1.66E-03	lncRNA
ENSG00000074527	NTN4	-2.4608	1.07E-04	protein_coding
ENSG00000136750	GAD2	-2.45853	3.13E-07	protein_coding
ENSG00000273156		-2.45546	7.17E-02	lncRNA
ENSG00000204950	LRRC10B	-2.39538	4.99E-03	protein_coding
ENSG00000009694	TENM1	-2.32952	1.33E-02	protein_coding
ENSG00000172137	CALB2	-2.3201	1.25E-03	protein_coding
ENSG00000006377	DLX6	-2.31809	8.96E-03	protein_coding
ENSG00000105880	DLX5	-2.31077	3.22E-04	protein_coding
ENSG00000269938		-2.29349	1.72E-02	lncRNA
ENSG00000114115	RBP1	-2.27227	1.14E-03	protein_coding
ENSG00000118596	SLC16A7	-2.24113	1.89E-02	protein_coding
ENSG00000082497	SERTAD4	-2.21415	4.27E-04	protein_coding
ENSG00000183960	KCNH8	-2.21091	1.13E-02	protein_coding
ENSG00000271347	NA	-2.18674	1.40E-03	NA
ENSG00000237940	LINC01238	-2.18475	5.45E-02	lncRNA
ENSG00000183196	CHST6	-2.17443	1.51E-04	protein_coding
ENSG00000104435	STMN2	-2.15981	1.07E-04	protein_coding
ENSG00000147488	ST18	-2.15858	3.56E-03	protein_coding
ENSG00000260455	NBAT1	-2.13302	5.62E-02	lncRNA
ENSG00000101958	GLRA2	-2.13081	1.23E-02	protein_coding
ENSG00000144481	TRPM8	-2.11647	2.80E-04	protein_coding
ENSG00000073849	ST6GAL1	-2.07038	1.79E-02	protein_coding
ENSG00000238057	ZEB2-AS1	-2.05548	9.86E-02	lncRNA
ENSG00000101188	NTSR1	-2.03815	7.43E-02	protein_coding
ENSG00000148123	PLPPR1	-2.03403	4.04E-03	protein_coding
ENSG00000154764	WNT7A	-2.02887	2.37E-02	protein_coding
ENSG00000144057	ST6GAL2	-2.01062	6.84E-02	protein_coding
ENSG00000139219	COL2A1	-1.99833	2.77E-02	protein_coding
ENSG00000139354	GAS2L3	-1.98993	1.11E-04	protein_coding
ENSG00000170381	SEMA3E	-1.98736	1.77E-03	protein_coding
ENSG00000157064	NMNAT2	-1.98557	4.88E-02	protein_coding
ENSG00000159167	STC1	-1.94395	1.46E-03	protein_coding

ENSG00000188580	NKAIN2	-1.93903	8.87E-02	protein_coding
ENSG00000152402	GUCY1A2	-1.9341	1.17E-02	protein_coding
ENSG00000113448	PDE4D	-1.93029	8.74E-03	protein_coding
ENSG00000260398		-1.90851	3.43E-03	lncRNA
ENSG00000261496	NA	-1.9071	1.07E-02	NA
ENSG00000078725	BRINP1	-1.89591	3.56E-02	protein_coding
ENSG00000112379	ARFGEF3	-1.89285	5.21E-02	protein_coding
ENSG00000101489	CELF4 ENSG00000101489	-1.87598	4.82E-02	protein_coding
ENSG00000116147	TNR	-1.85951	8.49E-03	protein_coding
ENSG00000135824	RGS8	-1.8454	2.59E-02	protein_coding
ENSG00000185070	FLRT2	-1.84119	3.39E-02	protein_coding
ENSG00000075213	SEMA3A	-1.82112	1.27E-03	protein_coding
ENSG00000127152	BCL11B	-1.80862	1.65E-04	protein_coding
ENSG00000251675		-1.80547	7.22E-02	lncRNA
ENSG00000235655	H3P6	-1.80478	3.28E-03	processed_pseudogene
ENSG00000173530	TNFRSF10D	-1.79686	8.47E-03	protein_coding
ENSG00000122584	NXPH1	-1.7942	4.99E-03	protein_coding
ENSG00000162490	DRAXIN	-1.77922	1.07E-04	protein_coding
ENSG00000077279	DCX	-1.77291	7.16E-04	protein_coding
ENSG00000168386	FILIP1L	-1.76433	5.62E-02	protein_coding
ENSG00000156103	MMP16	-1.76208	3.96E-03	protein_coding
ENSG00000073910	FRY	-1.74826	9.41E-04	protein_coding
ENSG00000170681	CAVIN4	-1.74127	8.52E-03	protein_coding
ENSG00000147041	SYTL5	-1.72207	2.75E-02	protein_coding
ENSG00000175497	DPP10	-1.71163	2.31E-02	protein_coding
ENSG00000141431	ASXL3	-1.69745	2.61E-04	protein_coding
ENSG00000164683	HEY1	-1.69284	8.95E-02	protein_coding
ENSG00000168917	SLC35G2	-1.67342	1.40E-02	protein_coding
ENSG00000163630	SYNPR	-1.66649	6.17E-02	protein_coding
ENSG00000115170	ACVR1	-1.66273	1.25E-03	protein_coding
ENSG00000101349	PAK5	-1.65617	1.17E-02	protein_coding
ENSG00000124406	ATP8A1	-1.64796	9.66E-02	protein_coding
ENSG00000172878	METAP1D	-1.64623	1.66E-03	protein_coding
ENSG00000261451		-1.64344	9.86E-02	lncRNA
ENSG00000100095	SEZ6L	-1.63244	2.57E-02	protein_coding
ENSG00000064225	ST3GAL6	-1.6253	1.49E-02	protein_coding
ENSG00000077080	ACTL6B	-1.6251	4.26E-02	protein_coding
ENSG00000079931	MOXD1	-1.62267	2.23E-02	protein_coding
ENSG00000120658	ENOX1	-1.62038	2.42E-02	protein_coding
ENSG00000164604	GPR85	-1.61843	9.97E-02	protein_coding
ENSG00000101638	ST8SIA5	-1.6112	1.86E-02	protein_coding
ENSG00000113739	STC2 ENSG00000113739	-1.60996	7.14E-03	protein_coding
ENSG00000070961	ATP2B1	-1.60907	4.27E-04	protein_coding
ENSG00000186487	MYT1L	-1.60327	3.40E-02	protein_coding
ENSG00000215397	SCRT2	-1.59686	1.79E-02	protein_coding
ENSG00000139767	SRRM4	-1.59673	1.49E-02	protein_coding
ENSG00000158715	SLC45A3	-1.58716	2.88E-02	protein_coding
ENSG00000152527	PLEKHH2	-1.58608	8.35E-02	protein_coding
ENSG00000154639	CXADR	-1.57456	1.03E-03	protein_coding
ENSG00000257242	LINC01619	-1.57114	7.45E-02	lncRNA
ENSG00000178662	CSRNP3	-1.55221	1.46E-03	protein_coding

ENSG00000138604	GLCE	-1.54576	2.52E-03	protein_coding
ENSG00000117318	ID3	-1.5406	9.30E-02	protein_coding
ENSG00000250305	TRMT9B	-1.52946	3.59E-03	protein_coding
ENSG00000108231	LGI1	-1.52645	9.63E-02	protein_coding
ENSG00000067715	SYT1	-1.52292	2.17E-03	protein_coding
ENSG00000178695	KCTD12	-1.52216	5.57E-03	protein_coding
ENSG00000163449	TMEM169	-1.50428	1.86E-02	protein_coding
ENSG00000260903	XKR7	-1.50372	3.96E-02	protein_coding
ENSG00000174460	ZCCHC12	-1.49916	3.32E-02	protein_coding
ENSG00000164684	ZNF704	-1.49306	1.46E-03	protein_coding
ENSG00000169330	MINAR1	-1.4862	9.07E-02	protein_coding
ENSG00000242265	PEG10	-1.48383	1.53E-02	protein_coding
ENSG00000119866	BCL11A	-1.47063	1.78E-02	protein_coding
ENSG00000120251	GRIA2	-1.46905	1.95E-03	protein_coding
ENSG00000091844	RGS17	-1.46623	4.61E-02	protein_coding
ENSG00000152578	GRIA4	-1.46035	2.42E-02	protein_coding
ENSG00000175175	PPM1E	-1.45726	8.39E-03	protein_coding
ENSG00000178568	ERBB4	-1.45613	5.47E-03	protein_coding
ENSG00000146352	CLVS2	-1.45565	3.56E-02	protein_coding
ENSG00000121210	TMEM131L	-1.45039	3.12E-03	protein_coding
ENSG00000217236	SP9	-1.44569	2.23E-02	protein_coding
ENSG00000188467	SLC24A5 ENSG00000188467	-1.4456	5.75E-02	protein_coding
ENSG00000168824	NSG1	-1.43783	1.89E-02	protein_coding
ENSG00000253230	MIR124-1HG	-1.43739	4.87E-02	lncRNA
ENSG00000120875	DUSP4	-1.42671	8.96E-03	protein_coding
ENSG00000198739	LRRTM3	-1.42415	4.80E-02	protein_coding
ENSG00000169554	ZEB2	-1.42021	6.27E-03	protein_coding
ENSG00000143153	ATP1B1	-1.41652	3.75E-03	protein_coding
ENSG00000171033	PKIA	-1.41536	2.75E-03	protein_coding
ENSG00000198732	SMOC1	-1.4098	5.30E-03	protein_coding
ENSG00000197872	CYRIA	-1.39857	1.99E-02	protein_coding
ENSG00000101746	NOL4	-1.39845	1.00E-02	protein_coding
ENSG00000021645	NRXN3	-1.3981	9.23E-02	protein_coding
ENSG00000174469	CNTNAP2	-1.39093	2.97E-02	protein_coding
ENSG00000117598	PLPPR5	-1.38167	5.91E-02	protein_coding
ENSG00000254377	MIR124-2HG	-1.37172	1.62E-02	lncRNA
ENSG00000137872	SEMA6D	-1.36984	3.55E-02	protein_coding
ENSG00000147459	DOCK5	-1.36063	2.28E-02	protein_coding
ENSG00000118322	ATP10B	-1.35438	8.07E-02	protein_coding
ENSG00000260230	FRRS1L	-1.35432	1.00E-02	protein_coding
ENSG00000079689	SCGN	-1.35271	8.25E-03	protein_coding
ENSG00000163873	GRIK3	-1.34732	9.09E-03	protein_coding
ENSG00000172159	FRMD3 ENSG00000172159	-1.34535	8.03E-02	protein_coding
ENSG00000165566	AMER2	-1.3444	2.42E-02	protein_coding
ENSG00000165966	PDZRN4	-1.34393	1.96E-02	protein_coding
ENSG00000102271	KLHL4	-1.34255	1.17E-02	protein_coding
ENSG00000147862	NFIB	-1.33072	8.39E-03	protein_coding
ENSG00000167081	PBX3	-1.33039	9.34E-02	protein_coding
ENSG00000115355	CCDC88A	-1.32176	6.37E-03	protein_coding
ENSG00000116852	KIF21B	-1.31756	6.17E-02	protein_coding
ENSG00000066032	CTNNA2	-1.31661	8.95E-02	protein_coding

ENSG00000134508	CABLES1	-1.31528	6.94E-02	protein_coding
ENSG00000272505		-1.31509	7.74E-02	lncRNA
ENSG00000135049	AGTPBP1	-1.30244	1.20E-02	protein_coding
ENSG00000155974	GRIP1	-1.30167	4.69E-02	protein_coding
ENSG00000104112	SCG3	-1.29839	1.94E-02	protein_coding
ENSG00000110436	SLC1A2	-1.29823	2.35E-02	protein_coding
ENSG00000133958	UNC79	-1.28625	4.26E-02	protein_coding
ENSG00000187678	SPRY4	-1.27359	1.62E-02	protein_coding
ENSG00000187164	SHTN1	-1.2557	2.32E-02	protein_coding
ENSG00000053438	NNAT	-1.2453	1.23E-02	protein_coding
ENSG00000141622	RNF165	-1.24507	6.55E-02	protein_coding
ENSG00000143434	SEMA6C	-1.22773	5.21E-02	protein_coding
ENSG00000114279	FGF12	-1.21313	9.07E-02	protein_coding
ENSG00000131711	MAP1B	-1.19727	2.42E-02	protein_coding
ENSG00000122778	KIAA1549	-1.19363	2.59E-02	protein_coding
ENSG00000186469	GNG2	-1.19312	2.77E-02	protein_coding
ENSG00000174501	ANKRD36C	-1.19281	5.91E-02	protein_coding
ENSG00000196132	MYT1	-1.18702	6.00E-02	protein_coding
ENSG00000106537	TSPAN13	-1.18511	9.45E-02	protein_coding
ENSG00000187391	MAGI2 ENSG00000187391	-1.18147	3.15E-02	protein_coding
ENSG00000078687	TNRC6C	-1.16798	6.10E-02	protein_coding
ENSG00000069188	SDK2	-1.16746	3.80E-02	protein_coding
ENSG00000148798	INA	-1.16714	2.42E-02	protein_coding
ENSG00000145920	CPLX2	-1.16661	7.42E-02	protein_coding
ENSG00000117632	STMN1	-1.15511	7.54E-02	protein_coding
ENSG00000242808	SOX2-OT	-1.1537	4.81E-02	lncRNA
ENSG00000197959	DNM3	-1.14353	6.06E-02	protein_coding
ENSG00000162636	FAM102B	-1.14279	7.74E-02	protein_coding
ENSG00000165392	WRN	-1.11988	7.35E-02	protein_coding
ENSG00000109265	CRACD	-1.11885	5.31E-02	protein_coding
ENSG00000185565	LSAMP	-1.11667	7.42E-02	protein_coding
ENSG00000104427	ZC2HC1A	-1.10872	5.91E-02	protein_coding
ENSG00000112182	BACH2	-1.10693	9.66E-02	protein_coding
ENSG00000172292	CERS6	-1.10409	7.43E-02	protein_coding
ENSG00000127995	CASD1	-1.09784	9.53E-02	protein_coding
ENSG00000114739	ACVR2B	-1.09707	6.84E-02	protein_coding
ENSG00000176788	BASP1	-1.09041	5.58E-02	protein_coding
ENSG00000049759	NEDD4L	-1.08815	4.82E-02	protein_coding
ENSG00000144355	DLX1	-1.08286	6.94E-02	protein_coding
ENSG00000081189	MEF2C	-1.08165	9.86E-02	protein_coding
ENSG00000077264	PAK3	-1.07425	5.09E-02	protein_coding
ENSG00000246859	STARD4-AS1	-1.07248	7.43E-02	lncRNA
ENSG00000066382	MPPED2	-1.06088	6.66E-02	protein_coding
ENSG00000164796	CSMD3 ENSG00000164796	-1.04659	9.57E-02	protein_coding
ENSG00000077157	PPP1R12B	-1.03743	7.97E-02	protein_coding
ENSG00000150893	FREM2	-1.03613	7.47E-02	protein_coding
ENSG00000185008	ROBO2	-1.02325	5.70E-02	protein_coding
ENSG00000152926	ZNF117	-1.02196	9.53E-02	protein_coding

Supplementary Table 8: List of upregulated genes (log 2 fold change >1, adjusted p value <0.1) in mature OL compared to human fetal neural stem cells (hFNSC)

Ensembl ID	Symbol	log2 Fold Change	Adj.Pval	Type
ENSG00000196126	HLA-DRB1	23.88053	1.95E-04	protein_coding
ENSG00000169248	CXCL11	10.34265	8.90E-02	protein_coding
ENSG00000100342	APOL1	10.09504	3.45E-02	protein_coding
ENSG00000135114	OASL	9.897992	5.94E-03	protein_coding
ENSG00000179869	ABCA13	9.42152	1.11E-05	protein_coding
ENSG00000225492	GBP1P1	9.341115	9.20E-02	transcribed_unprocessed_pseudogene
ENSG00000154451	GBP5	9.16403	3.95E-02	protein_coding
ENSG00000125730	C3	9.02443	6.42E-03	protein_coding
ENSG00000004468	CD38	9.023851	2.39E-02	protein_coding
ENSG00000136514	RTP4	8.760832	7.59E-02	protein_coding
ENSG00000185885	IFITM1	8.66003	1.57E-02	protein_coding
ENSG00000166592	RRAD	8.659067	9.38E-05	protein_coding
ENSG00000170703	TTLL6	8.53222	2.57E-05	protein_coding
ENSG00000162654	GBP4	8.2055	2.24E-02	protein_coding
ENSG00000134321	RSAD2	8.176032	1.63E-02	protein_coding
ENSG00000117228	GBP1	8.154864	2.53E-02	protein_coding
ENSG00000086967	MYBPC2	8.147887	4.58E-03	protein_coding
ENSG00000166825	ANPEP	8.133782	4.67E-03	protein_coding
ENSG00000019582	CD74	8.014025	4.85E-02	protein_coding
ENSG00000169245	CXCL10	7.933723	4.15E-02	protein_coding
ENSG00000183486	MX2	7.800158	5.48E-02	protein_coding
ENSG00000205436	EXOC3L4	7.708175	9.85E-03	protein_coding
ENSG00000229754	CXCR2P1	7.698948	2.14E-02	transcribed_unprocessed_pseudogene
ENSG00000167034	NKX3-1	7.649883	1.09E-02	protein_coding
ENSG00000162645	GBP2	7.555957	5.17E-02	protein_coding
ENSG00000058335	RASGRF1	7.548342	3.60E-03	protein_coding
ENSG00000188064	WNT7B	7.514746	4.85E-03	protein_coding
ENSG00000182050	MGAT4C	7.504854	6.40E-03	protein_coding
ENSG00000148346	LCN2	7.389815	1.79E-02	protein_coding
ENSG00000218410		7.353341	7.12E-03	processed_pseudogene
ENSG00000187800	PEAR1	7.320341	6.85E-03	protein_coding
ENSG00000167210	LOXHD1	7.309051	1.13E-02	protein_coding
ENSG00000169896	ITGAM	7.225845	9.50E-03	protein_coding
ENSG00000254349	MIR2052HG	7.136834	2.25E-02	lncRNA
ENSG00000067066	SP100	7.130634	4.60E-02	protein_coding
ENSG00000233975	LINC02574	7.130259	2.86E-02	lncRNA
ENSG00000179750	APOBEC3B	7.113166	6.42E-02	protein_coding
ENSG00000118523	CCN2	7.095503	1.65E-02	protein_coding
ENSG00000101017	CD40	7.087729	5.34E-02	protein_coding
ENSG00000140254	DUOXA1	7.049265	2.69E-02	protein_coding
ENSG00000235431		7.042303	3.32E-02	lncRNA
ENSG00000266970	SOCS3-DT	7.035216	4.21E-02	lncRNA
ENSG00000162267	ITIH3	6.956266	1.99E-02	protein_coding

ENSG00000196415	PRTN3	6.935839	6.68E-02	protein_coding
ENSG00000185215	TNFAIP2	6.907718	7.72E-02	protein_coding
ENSG00000225101	OR52K3P	6.905413	2.69E-02	transcribed_unprocessed_pseudogene
ENSG00000140968	IRF8	6.905278	3.25E-02	protein_coding
ENSG00000235436	DPY19L2P4	6.8793	2.61E-02	transcribed_unprocessed_pseudogene
ENSG00000248522	SBF1P1	6.848422	4.48E-02	processed_pseudogene
ENSG00000117154	IGSF21	6.833358	3.28E-02	protein_coding
ENSG00000186453	FAM228A	6.805902	3.16E-02	protein_coding
ENSG00000196735	HLA-DQA1	6.805177	5.78E-02	protein_coding
ENSG00000152669	CCNO	6.79392	3.68E-02	protein_coding
ENSG00000100628	ASB2	6.781841	3.12E-02	protein_coding
ENSG00000168453	HR	6.780037	3.54E-02	protein_coding
ENSG00000186235	LINC02610	6.760443	8.38E-02	lncRNA
ENSG00000183036	PCP4	6.7149	2.10E-05	protein_coding
ENSG00000163395	IGFN1	6.694372	4.15E-02	protein_coding
ENSG00000146242	TPBG	6.681811	4.49E-02	protein_coding
ENSG00000150594	ADRA2A	6.677257	3.96E-02	protein_coding
ENSG00000239713	APOBEC3G	6.654141	9.75E-02	protein_coding
ENSG00000042980	ADAM28	6.65126	4.42E-02	protein_coding
ENSG00000266172	NA	6.650471	8.34E-02	NA
ENSG00000185198	PRSS57	6.642529	6.95E-02	protein_coding
ENSG00000261200		6.592496	4.72E-02	lncRNA
ENSG00000140279	DUOX2	6.57419	5.04E-02	protein_coding
ENSG00000166750	SLFN5	6.569353	7.31E-02	protein_coding
ENSG00000104888	SLC17A7	6.545826	5.24E-02	protein_coding
ENSG00000183929	DUSP5P1	6.545826	5.24E-02	processed_pseudogene
ENSG00000215853	RPTN	6.545826	5.24E-02	protein_coding
ENSG00000070886	EPHA8	6.536407	5.33E-02	protein_coding
ENSG00000163746	PLSCR2	6.531285	8.78E-02	protein_coding
ENSG00000185404	SP140L	6.526606	1.37E-04	protein_coding
ENSG00000130649	CYP2E1	6.391681	3.12E-02	protein_coding
ENSG00000124256	ZBP1	6.354738	3.41E-02	protein_coding
ENSG00000155052	CNTNAP5	6.350888	4.14E-03	protein_coding
ENSG00000165949	IFI27	6.289652	9.52E-02	protein_coding
ENSG00000169507	SLC38A11	6.270355	5.63E-02	protein_coding
ENSG00000163131	CTSS	6.267652	6.08E-02	protein_coding
ENSG00000168539	CHRM1	6.242503	1.89E-02	protein_coding
ENSG00000008517	IL32	6.191216	5.34E-02	protein_coding
ENSG00000163453	IGFBP7	6.163271	2.06E-07	protein_coding
ENSG00000128285	MCHR1	6.063943	7.48E-04	protein_coding
ENSG00000132470	ITGB4	6.061928	1.64E-06	protein_coding
ENSG00000095752	IL11	5.980845	1.73E-03	protein_coding
ENSG00000243811	APOBEC3D	5.961291	6.03E-02	protein_coding
ENSG00000129667	RHBDF2	5.940416	6.98E-03	protein_coding
ENSG00000236963	LINC01141	5.913849	8.95E-03	lncRNA
ENSG00000256982		5.904483	5.00E-02	lncRNA
ENSG00000106034	CPED1	5.81856	2.01E-02	protein_coding
ENSG00000171903	CYP4F11	5.818104	1.98E-03	protein_coding
ENSG00000005381	MPO	5.816882	1.49E-02	protein_coding
ENSG00000167244	IGF2	5.813378	4.14E-03	protein_coding
ENSG00000146674	IGFBP3	5.643924	1.27E-03	protein_coding

ENSG00000152910	CNTNAP4	5.641324	3.74E-05	protein_coding
ENSG00000134326	CMPK2	5.635059	5.33E-02	protein_coding
ENSG00000173110	HSPA6	5.629949	1.37E-04	protein_coding
ENSG00000134668	SPOCD1	5.629107	9.87E-02	protein_coding
ENSG00000128284	APOL3	5.568745	7.40E-03	protein_coding
ENSG00000114204	SERPINI2	5.531676	2.24E-02	protein_coding
ENSG00000198010	DLGAP2	5.528177	8.87E-02	protein_coding
ENSG00000142185	TRPM2	5.518949	7.82E-02	protein_coding
ENSG00000111335	OAS2	5.500381	8.78E-02	protein_coding
ENSG00000133107	TRPC4	5.49371	3.51E-02	protein_coding
ENSG00000159403	C1R	5.373861	5.17E-02	protein_coding
ENSG00000166741	NNMT	5.318851	6.79E-03	protein_coding
ENSG00000175267	VWA3A	5.278645	1.81E-02	protein_coding
ENSG00000146039	SLC17A4	5.206919	1.97E-02	protein_coding
ENSG00000000971	CFH	5.202668	5.14E-02	protein_coding
ENSG00000198959	TGM2	5.196145	7.39E-02	protein_coding
ENSG00000164692	COL1A2	5.159033	9.67E-07	protein_coding
ENSG00000132530	XAF1	5.1353	8.94E-02	protein_coding
ENSG00000108771	DHX58	5.134935	7.47E-02	protein_coding
ENSG00000180269	GPR139	5.104591	3.57E-02	protein_coding
ENSG00000165973	NELL1	5.082473	1.59E-03	protein_coding
ENSG00000128510	CPA4	5.073805	6.43E-02	protein_coding
ENSG00000101438	SLC32A1	5.04761	5.12E-07	protein_coding
ENSG00000148677	ANKRD1	5.016942	7.13E-02	protein_coding
ENSG00000138646	HERC5	4.993607	8.49E-02	protein_coding
ENSG00000169933	FRMPD4	4.933521	6.24E-02	protein_coding
ENSG00000102290	PCDH11X	4.930149	9.81E-02	protein_coding
ENSG00000137198	GMPR	4.911498	6.78E-03	protein_coding
ENSG00000028137	TNFRSF1B	4.905312	1.58E-02	protein_coding
ENSG00000168404	MLKL	4.799172	5.34E-02	protein_coding
ENSG00000157873	TNFRSF14	4.785498	2.90E-03	protein_coding
ENSG00000000938	FGR	4.78487	8.96E-02	protein_coding
ENSG00000095739	BAMBI	4.762904	5.93E-02	protein_coding
ENSG00000106018	VIPR2	4.731177	6.20E-02	protein_coding
ENSG00000178965	ERICH3	4.727986	7.72E-04	protein_coding
ENSG00000108821	COL1A1	4.726273	6.79E-02	protein_coding
ENSG00000153029	MR1	4.685863	2.65E-02	protein_coding
ENSG00000186487	MYT1L	4.64271	8.87E-06	protein_coding
ENSG00000007171	NOS2	4.63787	6.14E-02	protein_coding
ENSG00000081479	LRP2	4.599283	8.61E-04	protein_coding
ENSG00000214381	LINC00488	4.599007	1.95E-04	lncRNA
ENSG00000163827	LRRC2	4.575605	9.40E-02	protein_coding
ENSG00000198797	BRINP2	4.564313	3.15E-04	protein_coding
ENSG00000119917	IFIT3	4.557696	6.37E-02	protein_coding
ENSG00000110446	SLC15A3	4.55686	1.83E-04	protein_coding
ENSG00000185614	INKA1	4.544103	9.97E-02	protein_coding
ENSG00000115380	EFEMP1	4.502243	5.73E-02	protein_coding
ENSG00000166473	PKD1L2	4.500449	4.41E-03	polymorphic_pseudogene
ENSG00000215182	MUC5AC	4.499354	6.19E-02	protein_coding
ENSG00000005884	ITGA3	4.479113	6.03E-02	protein_coding
ENSG00000168062	BATF2	4.475257	4.94E-04	protein_coding

ENSG00000010030	ETV7	4.444871	3.49E-03	protein_coding
ENSG00000018236	CNTN1	4.385115	9.48E-02	protein_coding
ENSG00000188897		4.366372	6.67E-03	protein_coding
ENSG00000167011	NAT16	4.343211	1.02E-02	protein_coding
ENSG00000198822	GRM3	4.324617	5.76E-02	protein_coding
ENSG00000128394	APOBEC3F	4.319225	4.26E-02	protein_coding
ENSG00000113739	STC2	4.313155	2.34E-08	protein_coding
ENSG00000162542	TMCO4	4.306868	4.21E-02	protein_coding
ENSG00000153902	LGI4	4.274551	4.26E-04	protein_coding
ENSG00000145536	ADAMTS16	4.26165	3.13E-02	protein_coding
ENSG00000165379	LRFN5	4.255905	3.32E-02	protein_coding
ENSG00000120949	TNFRSF8	4.211456	6.24E-02	protein_coding
ENSG00000139178	C1RL	4.19237	5.14E-04	protein_coding
ENSG00000105976	MET	4.180018	2.82E-02	protein_coding
ENSG00000131095	GFAP	4.176434	5.07E-06	protein_coding
ENSG00000089169	RPH3A	4.172552	2.80E-02	protein_coding
ENSG00000251194		4.170642	8.04E-02	lncRNA
ENSG00000123342	MMP19	4.170286	7.01E-03	protein_coding
ENSG00000163735	CXCL5	4.117834	6.14E-02	protein_coding
ENSG00000165923	AGBL2	4.085968	9.12E-02	protein_coding
ENSG00000128917	DLL4	4.084075	2.73E-02	protein_coding
ENSG00000235568	NFAM1	4.063699	1.48E-02	protein_coding
ENSG00000152689	RASGRP3	4.039629	1.99E-03	protein_coding
ENSG00000118160	SLC8A2	4.035227	5.07E-06	protein_coding
ENSG00000154734	ADAMTS1	4.035101	5.69E-04	protein_coding
ENSG00000125148	MT2A	4.023578	2.56E-09	protein_coding
ENSG00000214212	C19orf38	3.963214	4.76E-02	protein_coding
ENSG00000184492	FOXD4L1	3.961763	4.60E-02	protein_coding
ENSG00000182326	C1S	3.957877	9.87E-02	protein_coding
ENSG00000153820	SPHKAP	3.957007	1.27E-03	protein_coding
ENSG00000108551	RASD1	3.947395	3.06E-04	protein_coding
ENSG00000163568	AIM2	3.94733	1.63E-02	protein_coding
ENSG00000185133	INPP5J	3.945507	1.36E-02	protein_coding
ENSG00000163814	CDCP1	3.936901	9.22E-02	protein_coding
ENSG00000110675	ELMOD1	3.936836	6.24E-02	protein_coding
ENSG00000138316	ADAMTS14	3.906331	4.05E-02	protein_coding
ENSG00000185070	FLRT2	3.898552	3.41E-02	protein_coding
ENSG00000187608	ISG15	3.894797	9.98E-02	protein_coding
ENSG00000160712	IL6R	3.890551	2.92E-04	protein_coding
ENSG00000175556	LONRF3	3.887498	2.85E-05	protein_coding
ENSG00000272669		3.870595	2.21E-02	lncRNA
ENSG00000064687	ABCA7	3.847163	1.74E-05	protein_coding
ENSG00000180921	FAM83H	3.843979	8.50E-02	protein_coding
ENSG00000139211	AMIGO2	3.835702	3.43E-03	protein_coding
ENSG00000131389	SLC6A6	3.823272	1.04E-05	protein_coding
ENSG00000136842	TMOD1	3.820394	1.04E-04	protein_coding
ENSG00000124493	GRM4	3.81925	5.80E-02	protein_coding
ENSG00000196371	FUT4	3.810005	6.43E-02	protein_coding
ENSG00000130940	CASZ1	3.798349	1.79E-02	protein_coding
ENSG00000132359	RAP1GAP2	3.778223	8.81E-03	protein_coding
ENSG00000085552	IGSF9	3.776868	3.34E-03	protein_coding

ENSG00000202354	RNY3	3.774533	8.78E-03	misc_RNA
ENSG00000173918	C1QTNF1	3.770489	7.43E-12	protein_coding
ENSG00000151136	BTBD11	3.765921	4.48E-02	protein_coding
ENSG00000156219	ART3	3.764269	7.90E-02	protein_coding
ENSG00000178685	PARP10	3.752467	5.28E-04	protein_coding
ENSG00000145824	CXCL14	3.746427	3.77E-02	protein_coding
ENSG00000183840	GPR39	3.744947	5.24E-02	protein_coding
ENSG00000162496	DHRS3	3.738001	1.03E-02	protein_coding
ENSG00000198626	RYR2	3.734262	8.49E-02	protein_coding
ENSG00000155629	PIK3AP1	3.723074	6.21E-03	protein_coding
ENSG00000078725	BRINP1	3.713644	1.92E-03	protein_coding
ENSG00000169306	IL1RAPL1	3.701139	6.40E-03	protein_coding
ENSG00000066032	CTNNA2	3.693068	1.00E-06	protein_coding
ENSG00000140332	TLE3	3.691291	2.08E-08	protein_coding
ENSG00000178623	GPR35	3.680303	2.80E-02	protein_coding
ENSG00000104689	TNFRSF10A	3.676873	2.35E-02	protein_coding
ENSG00000188522	FAM83G	3.672796	2.63E-02	protein_coding
ENSG00000144339	TMEFF2	3.670238	3.15E-02	protein_coding
ENSG00000167642	SPINT2	3.664005	1.44E-02	protein_coding
ENSG00000089847	ANKRD24	3.641336	2.61E-03	protein_coding
ENSG00000154764	WNT7A	3.622216	1.00E-01	protein_coding
ENSG00000169715	MT1E	3.61338	4.14E-04	protein_coding
ENSG00000165186	PTCHD1	3.590543	5.81E-09	protein_coding
ENSG00000110723	EXPH5	3.575324	2.80E-02	protein_coding
ENSG00000201831	SNORD115-1	3.554269	6.53E-02	snoRNA
ENSG00000087495	PHACTR3	3.549702	3.30E-02	protein_coding
ENSG00000229474	PATL2	3.548006	3.34E-02	protein_coding
ENSG00000079385	CEACAM1	3.525988	4.21E-02	protein_coding
ENSG00000185915	KLHL34	3.522584	5.89E-02	protein_coding
ENSG00000226080	RPL6P4	3.510605	5.34E-02	processed_pseudogene
ENSG00000095587	TLL2	3.509871	2.87E-02	protein_coding
ENSG00000128342	LIF	3.500095	1.68E-03	protein_coding
ENSG00000155324	GRAMD2B	3.471961	2.18E-02	protein_coding
ENSG00000130707	ASS1	3.458057	5.98E-04	protein_coding
ENSG00000160867	FGFR4	3.456943	1.79E-02	protein_coding
ENSG00000256612	CYP2B7P	3.44311	6.24E-02	transcribed_unprocessed_pseudogene
ENSG00000257335	MGAM	3.436741	1.91E-03	protein_coding
ENSG00000072163	LIMS2	3.432735	7.20E-02	protein_coding
ENSG00000142606	MMEL1	3.427994	6.20E-02	protein_coding
ENSG00000184305	CCSER1	3.416063	3.61E-02	protein_coding
ENSG00000108846	ABCC3	3.391375	3.61E-02	protein_coding
ENSG00000170419	VSTM2A	3.390182	1.13E-02	protein_coding
ENSG00000140368	PSTPIP1	3.381039	8.53E-02	protein_coding
ENSG00000185745	IFIT1	3.380408	3.58E-03	protein_coding
ENSG00000159450	TCHH	3.376986	7.39E-02	protein_coding
ENSG00000066735	KIF26A	3.376425	5.65E-08	protein_coding
ENSG00000177103	DSCAML1	3.370984	7.71E-07	protein_coding
ENSG00000100625	SIX4	3.367759	1.13E-02	protein_coding
ENSG00000124440	HIF3A	3.366349	3.57E-02	protein_coding
ENSG00000165929	TC2N	3.366232	6.97E-02	protein_coding
ENSG00000174844	DNAH12	3.364348	2.25E-02	protein_coding

ENSG00000138642	HERC6	3.329032	4.69E-03	protein_coding
ENSG00000143842	SOX13	3.312717	5.33E-02	protein_coding
ENSG00000137571	SLCO5A1	3.310831	1.74E-02	protein_coding
ENSG00000102359	SRPX2	3.298819	6.97E-02	protein_coding
ENSG00000198910	L1CAM	3.297946	2.21E-02	protein_coding
ENSG00000163071	SPATA18	3.291069	2.18E-02	protein_coding
ENSG00000129990	SYT5	3.286298	1.91E-02	protein_coding
ENSG00000179583	CIITA	3.285539	1.97E-02	protein_coding
ENSG00000135525	MAP7	3.280724	2.39E-03	protein_coding
ENSG00000130643	CALY	3.273687	6.08E-02	protein_coding
ENSG00000238961	SNORA47	3.270987	2.01E-04	snoRNA
ENSG00000142089	IFITM3	3.268571	6.09E-03	protein_coding
ENSG00000182179	UBA7	3.267243	1.49E-02	protein_coding
ENSG00000012779	ALOX5	3.264737	5.34E-02	protein_coding
ENSG00000125347	IRF1	3.252311	7.54E-03	protein_coding
ENSG00000172183	ISG20	3.243956	3.41E-02	protein_coding
ENSG00000197442	MAP3K5	3.242759	9.22E-05	protein_coding
ENSG00000185274	GALNT17	3.241757	6.21E-03	protein_coding
ENSG00000256637	LINC01965	3.241704	9.98E-02	lncRNA
ENSG00000068079	IFI35	3.238128	4.85E-03	protein_coding
ENSG00000166863	TAC3	3.225776	7.43E-02	protein_coding
ENSG00000100302	RASD2	3.214354	2.25E-02	protein_coding
ENSG00000105278	ZFR2	3.212521	1.32E-03	protein_coding
ENSG00000196218	RYR1	3.206018	5.53E-06	protein_coding
ENSG00000105825	TFPI2	3.201296	7.62E-02	protein_coding
ENSG00000116132	PRRX1	3.18531	1.43E-02	protein_coding
ENSG00000134207	SYT6	3.18088	5.37E-02	protein_coding
ENSG00000092295	TGM1	3.176047	4.78E-03	protein_coding
ENSG00000111913	RIPOR2	3.169331	3.73E-06	protein_coding
ENSG00000117266	CDK18	3.148359	7.38E-04	protein_coding
ENSG00000178031	ADAMTSL1	3.143094	4.69E-03	protein_coding
ENSG00000056558	TRAF1	3.141323	3.34E-02	protein_coding
ENSG00000162711	NLRP3	3.135198	9.30E-02	protein_coding
ENSG00000178803	ADORA2A-AS1	3.129223	6.78E-02	lncRNA
ENSG00000124602	UNC5CL	3.113701	7.50E-02	protein_coding
ENSG00000128203	ASPHD2	3.108241	7.18E-03	protein_coding
ENSG00000121858	TNFSF10	3.103884	7.50E-02	protein_coding
ENSG00000198417	MT1F	3.099481	2.39E-02	protein_coding
ENSG00000127152	BCL11B	3.099304	2.80E-06	protein_coding
ENSG00000168016	TRANK1	3.099038	2.96E-02	protein_coding
ENSG00000174469	CNTNAP2	3.084456	3.30E-07	protein_coding
ENSG00000206199	ANKUB1	3.062976	7.61E-03	protein_coding
ENSG00000145113	MUC4	3.059331	2.31E-02	protein_coding
ENSG00000116661	FBXO2	3.045366	5.24E-02	protein_coding
ENSG00000137801	THBS1	3.040694	2.87E-05	protein_coding
ENSG00000137474	MYO7A	3.034616	3.39E-02	protein_coding
ENSG00000129654	FOXJ1	3.034186	1.41E-05	protein_coding
ENSG00000157087	ATP2B2	3.017922	1.37E-04	protein_coding
ENSG00000188313	PLSCR1	3.011576	1.41E-02	protein_coding
ENSG00000202538	RNU4-2	3.010793	1.64E-05	snRNA
ENSG00000100292	HMOX1	3.001791	1.27E-02	protein_coding

ENSG00000181284	TMEM102	2.990308	7.46E-02	protein_coding
ENSG00000197905	TEAD4	2.989246	4.39E-02	protein_coding
ENSG00000181143	MUC16	2.986104	8.58E-03	protein_coding
ENSG00000168918	INPP5D	2.983123	2.14E-02	protein_coding
ENSG00000145242	EPHA5	2.976078	5.93E-02	protein_coding
ENSG00000173535	TNFRSF10C	2.974656	1.05E-02	protein_coding
ENSG00000062038	CDH3	2.974007	7.85E-02	protein_coding
ENSG00000152377	SPOCK1	2.970583	2.01E-02	protein_coding
ENSG00000107099	DOCK8	2.948825	9.11E-02	protein_coding
ENSG00000006377	DLX6	2.943717	1.27E-02	protein_coding
ENSG00000188039	NWD1	2.938673	9.03E-03	protein_coding
ENSG00000099957	P2RX6	2.925812	9.51E-03	protein_coding
ENSG00000147889	CDKN2A	2.914446	6.97E-03	protein_coding
ENSG00000162706	CADM3	2.912028	7.72E-04	protein_coding
ENSG00000123685	BATF3	2.90195	4.21E-02	protein_coding
ENSG00000138670	RASGEF1B	2.898333	9.72E-02	protein_coding
ENSG00000138759	FRAS1	2.897253	8.82E-02	protein_coding
ENSG00000140961	OSGIN1	2.895724	1.76E-02	protein_coding
ENSG00000160190	SLC37A1	2.894102	4.43E-02	protein_coding
ENSG00000106236	NPTX2	2.892368	9.52E-02	protein_coding
ENSG00000147883	CDKN2B	2.887245	4.32E-02	protein_coding
ENSG00000167483	NIBAN3	2.867829	1.09E-02	protein_coding
ENSG00000198133	TMEM229B	2.866763	3.89E-04	protein_coding
ENSG00000183914	DNAH2	2.865087	1.34E-02	protein_coding
ENSG00000167306	MYO5B	2.860679	6.32E-02	protein_coding
ENSG000000064201	TSPAN32	2.859725	1.87E-02	protein_coding
ENSG00000206579	XKR4	2.856078	4.62E-03	protein_coding
ENSG00000090920	NA	2.848114	3.41E-02	NA
ENSG00000176840	MIR7-3HG	2.848064	2.18E-02	lncRNA
ENSG00000122585	NPY	2.839809	1.29E-02	protein_coding
ENSG00000245571	FAM111A-DT	2.835297	7.62E-02	lncRNA
ENSG00000172936	MYD88	2.834123	4.01E-02	protein_coding
ENSG00000110455	ACCS	2.821532	4.11E-02	protein_coding
ENSG00000099860	GADD45B	2.820407	1.98E-04	protein_coding
ENSG00000023892	DEF6	2.816983	5.89E-02	protein_coding
ENSG00000167588	GPD1	2.811818	2.91E-03	protein_coding
ENSG00000155897	ADCY8	2.804052	2.68E-03	protein_coding
ENSG00000137877	SPTBN5	2.803083	8.98E-02	protein_coding
ENSG00000214872	SMTNL1	2.795986	9.61E-02	protein_coding
ENSG00000131979	GCH1	2.793611	3.12E-02	protein_coding
ENSG00000151067	CACNA1C	2.773813	2.37E-02	protein_coding
ENSG00000116254	CHD5	2.768633	5.65E-02	protein_coding
ENSG00000201098	RNY1	2.755856	6.08E-02	misc_RNA
ENSG00000170381	SEMA3E	2.751163	1.92E-03	protein_coding
ENSG00000074416	MGLL	2.747229	1.20E-09	protein_coding
ENSG00000148204	CRB2	2.746025	1.92E-03	protein_coding
ENSG00000131771	PPP1R1B	2.738689	2.01E-02	protein_coding
ENSG00000176170	SPHK1	2.735171	1.43E-02	protein_coding
ENSG00000012171	SEMA3B	2.724475	9.38E-03	protein_coding
ENSG00000075426	FOSL2	2.717256	2.18E-02	protein_coding
ENSG00000179603	GRM8	2.716407	7.62E-02	protein_coding

ENSG00000095713	CRTAC1	2.714713	3.90E-02	protein_coding
ENSG00000006432	MAP3K9	2.71129	7.86E-06	protein_coding
ENSG00000214279	SCART1	2.700525	8.72E-02	protein_coding
ENSG00000135740	SLC9A5	2.695461	2.97E-02	protein_coding
ENSG00000162836	ACP6	2.689451	5.32E-02	protein_coding
ENSG00000089820	ARHGAP4	2.687138	3.28E-03	protein_coding
ENSG00000159871	LYPD5	2.676159	2.18E-02	protein_coding
ENSG00000161681	SHANK1	2.675998	7.16E-02	protein_coding
ENSG00000107147	KCNT1	2.675487	8.50E-02	protein_coding
ENSG00000188779	SKOR1	2.672621	5.93E-02	protein_coding
ENSG00000174776	WDR49	2.665256	4.24E-02	protein_coding
ENSG00000205220	PSMB10	2.662887	5.34E-02	protein_coding
ENSG00000137673	MMP7	2.662133	3.16E-02	protein_coding
ENSG00000197536	IRF1-AS1	2.65312	5.53E-02	lncRNA
ENSG00000117676	RPS6KA1	2.64862	3.41E-02	protein_coding
ENSG00000104435	STMN2	2.643172	7.33E-04	protein_coding
ENSG00000065717	TLE2	2.638213	4.62E-03	protein_coding
ENSG00000165478	HEPACAM	2.635695	3.62E-09	protein_coding
ENSG00000225091	SNORA71A	2.628063	9.03E-03	snoRNA
ENSG00000119138	KLF9	2.620563	3.21E-06	protein_coding
ENSG00000244509	APOBEC3C	2.612942	8.78E-02	protein_coding
ENSG00000188158	NHS	2.60505	2.24E-02	protein_coding
ENSG00000186765	FSCN2	2.598628	9.88E-02	protein_coding
ENSG00000106366	SERPINE1	2.596583	3.62E-02	protein_coding
ENSG00000145147	SLIT2	2.587097	5.93E-02	protein_coding
ENSG00000176956	LY6H	2.584607	5.08E-03	protein_coding
ENSG00000231764	DLX6-AS1	2.581243	4.32E-02	lncRNA
ENSG00000203685	STUM	2.57997	1.27E-03	protein_coding
ENSG00000198216	CACNA1E	2.569378	8.58E-02	protein_coding
ENSG00000105499	PLA2G4C	2.56739	2.07E-03	protein_coding
ENSG00000128335	APOL2	2.564753	1.09E-02	protein_coding
ENSG00000042832	TG	2.561449	6.52E-02	protein_coding
ENSG00000144476	ACKR3	2.560983	9.98E-02	protein_coding
ENSG00000228672	PROB1	2.552378	4.15E-02	protein_coding
ENSG00000215039	CD27-AS1	2.540182	4.61E-02	lncRNA
ENSG00000227184	NA	2.53976	3.57E-02	NA
ENSG00000170091	NSG2	2.539223	2.10E-04	protein_coding
ENSG00000198624	CCDC69	2.534701	5.54E-02	protein_coding
ENSG00000184905	TCEAL2	2.531625	8.78E-03	protein_coding
ENSG00000181291	TMEM132E	2.530629	6.22E-02	protein_coding
ENSG00000200795	RNU4-1	2.511065	1.95E-04	snRNA
ENSG00000102554	KLF5	2.511007	5.35E-02	protein_coding
ENSG00000095370	SH2D3C	2.500007	7.54E-02	protein_coding
ENSG00000108924	HLF	2.498167	9.86E-02	protein_coding
ENSG00000130653	PNPLA7	2.480644	3.57E-02	protein_coding
ENSG00000063180	CA11	2.475625	3.75E-04	protein_coding
ENSG00000173193	PARP14	2.473614	3.11E-02	protein_coding
ENSG00000104081	BMF	2.472499	2.60E-02	protein_coding
ENSG00000043143	JADE2	2.466424	8.76E-03	protein_coding
ENSG00000124201	ZNFX1	2.459563	2.52E-02	protein_coding
ENSG00000105880	DLX5	2.458369	3.40E-03	protein_coding

ENSG00000107731	UNC5B	2.449402	2.83E-03	protein_coding
ENSG00000253230	MIR124-1HG	2.448682	2.18E-02	lncRNA
ENSG00000153266	FEZF2	2.436122	7.99E-03	protein_coding
ENSG00000158560	DYNC1I1	2.431919	6.24E-02	protein_coding
ENSG00000145365	TIFA	2.427059	8.34E-02	protein_coding
ENSG00000118473	SGIP1	2.422705	8.04E-02	protein_coding
ENSG00000104450	SPAG1	2.418223	4.57E-02	protein_coding
ENSG00000184408	KCND2	2.403238	5.45E-02	protein_coding
ENSG00000100031	GGT1	2.39545	9.05E-03	protein_coding
ENSG00000189190	ZNF600	2.393299	6.24E-02	protein_coding
ENSG00000177106	EPS8L2	2.388169	4.60E-02	protein_coding
ENSG00000130813	SHFL	2.367127	3.33E-02	protein_coding
ENSG00000157064	NMNAT2	2.335871	6.23E-02	protein_coding
ENSG00000079689	SCGN	2.331201	1.68E-03	protein_coding
ENSG00000136869	TLR4	2.32819	4.73E-02	protein_coding
ENSG00000141505	ASGR1	2.32663	5.00E-02	protein_coding
ENSG00000143786	CNIH3	2.322765	6.97E-03	protein_coding
ENSG00000185275	CD24P4	2.322063	9.50E-03	processed_pseudogene
ENSG00000125869	LAMP5	2.315029	4.53E-03	protein_coding
ENSG00000189410	SH2D5	2.309648	4.77E-02	protein_coding
ENSG00000135248	FAM71F1	2.299009	9.86E-02	protein_coding
ENSG00000161328	LRRC56	2.292696	6.32E-02	protein_coding
ENSG00000156804	FBXO32	2.281331	6.14E-02	protein_coding
ENSG00000158445	KCNB1	2.279718	7.63E-04	protein_coding
ENSG00000163686	ABHD6	2.279493	1.88E-04	protein_coding
ENSG00000163630	SYNPR	2.268973	1.44E-02	protein_coding
ENSG00000142549	IGLON5	2.268524	6.24E-04	protein_coding
ENSG00000091622	PITPNM3	2.265943	5.74E-03	protein_coding
ENSG00000101489	CELF4	2.258746	3.16E-02	protein_coding
ENSG00000270141	TERC	2.245519	8.78E-03	lncRNA
ENSG00000167680	SEMA6B	2.242422	1.43E-02	protein_coding
ENSG00000107742	SPOCK2	2.225545	1.85E-04	protein_coding
ENSG00000135899	SP110	2.221602	9.11E-02	protein_coding
ENSG00000104856	RELB	2.215749	9.45E-02	protein_coding
ENSG00000178718	RPP25	2.198028	3.16E-02	protein_coding
ENSG00000117983	MUC5B	2.170198	7.83E-02	protein_coding
ENSG00000080854	IGSF9B	2.16743	6.97E-02	protein_coding
ENSG00000132274	TRIM22	2.167323	5.73E-02	protein_coding
ENSG00000149633	KIAA1755	2.158526	9.98E-02	protein_coding
ENSG00000246203		2.141159	8.72E-02	unprocessed_pseudogene
ENSG00000148053	NTRK2	2.135	9.22E-05	protein_coding
ENSG00000136383	ALPK3	2.123067	1.58E-02	protein_coding
ENSG00000146094	DOK3	2.116903	5.61E-02	protein_coding
ENSG00000159409	CELF3	2.104232	1.10E-02	protein_coding
ENSG00000154358	OBSCN	2.092035	6.03E-04	protein_coding
ENSG00000217236	SP9	2.07387	7.46E-03	protein_coding
ENSG00000180758	GPR157	2.069947	8.66E-02	protein_coding
ENSG00000107338	SHB	2.068571	2.77E-02	protein_coding
ENSG00000173567	ADGRF3	2.06663	6.32E-02	protein_coding
ENSG00000171303	KCNK3	2.06396	8.68E-02	protein_coding
ENSG00000132109	TRIM21	2.05752	8.49E-02	protein_coding

ENSG00000176978	DPP7	2.044883	7.54E-03	protein_coding
ENSG00000064932	SBNO2	2.043553	3.33E-02	protein_coding
ENSG00000180638	SLC47A2	2.029985	4.31E-02	protein_coding
ENSG00000175906	ARL4D	2.029968	9.85E-03	protein_coding
ENSG00000104369	JPH1	2.029853	6.32E-02	protein_coding
ENSG00000156510	HKDC1	2.026246	5.02E-03	protein_coding
ENSG00000136750	GAD2	2.025654	1.72E-02	protein_coding
ENSG00000168824	NSG1	2.005484	4.21E-02	protein_coding
ENSG00000137959	IFI44L	1.999349	9.60E-02	protein_coding
ENSG00000252835	SCARNA21	1.998058	4.26E-04	scaRNA
ENSG00000188549	CCDC9B	1.99228	4.65E-04	protein_coding
ENSG00000163873	GRIK3	1.982978	4.76E-04	protein_coding
ENSG00000112139	MDGA1	1.982308	6.97E-03	protein_coding
ENSG00000130038	CRACR2A	1.97317	9.86E-02	protein_coding
ENSG00000173530	TNFRSF10D	1.962979	5.34E-02	protein_coding
ENSG00000165238	WNK2	1.950546	8.27E-03	protein_coding
ENSG00000173805	HAP1	1.9438	2.69E-04	protein_coding
ENSG00000182218	HHIPL1	1.940126	6.20E-02	protein_coding
ENSG00000137857	DUOX1	1.934422	3.13E-03	protein_coding
ENSG00000139438	FAM222A	1.932906	7.64E-03	protein_coding
ENSG00000197191	CYSRT1	1.928301	4.18E-02	protein_coding
ENSG00000232561	NA	1.917401	7.89E-04	NA
ENSG00000167996	FTH1	1.906308	3.87E-03	protein_coding
ENSG00000114270	COL7A1	1.89997	5.37E-02	protein_coding
ENSG00000079337	RAPGEF3	1.870989	2.86E-02	protein_coding
ENSG00000131242	RAB11FIP4	1.8702	9.04E-03	protein_coding
ENSG00000149571	KIRREL3	1.867466	1.48E-02	protein_coding
ENSG00000156587	UBE2L6	1.866277	4.11E-02	protein_coding
ENSG00000107562	CXCL12	1.864872	4.99E-03	protein_coding
ENSG00000159167	STC1	1.863622	1.39E-02	protein_coding
ENSG00000149527	PLCH2	1.86348	7.90E-02	protein_coding
ENSG00000214530	STARD10	1.858389	1.01E-02	protein_coding
ENSG00000169660	HEXD	1.846229	6.18E-02	protein_coding
ENSG00000167772	ANGPTL4	1.829797	8.35E-02	protein_coding
ENSG00000163644	PPM1K	1.822819	4.54E-02	protein_coding
ENSG00000165716	DIPK1B	1.821952	2.14E-02	protein_coding
ENSG00000124313	IQSEC2	1.815672	4.46E-02	protein_coding
ENSG00000182902	SLC25A18	1.808229	1.91E-03	protein_coding
ENSG00000114019	AMOTL2	1.778017	5.43E-03	protein_coding
ENSG00000156395	SORCS3	1.770942	2.25E-02	protein_coding
ENSG00000171223	JUNB	1.769288	7.84E-02	protein_coding
ENSG00000166689	PLEKHA7	1.763168	1.05E-02	protein_coding
ENSG00000103056	SMPD3	1.756074	9.38E-02	protein_coding
ENSG00000166111	SVOP	1.746413	9.52E-02	protein_coding
ENSG00000203326	ZNF525	1.746292	6.24E-02	protein_coding
ENSG00000196517	SLC6A9	1.737767	9.58E-03	protein_coding
ENSG00000244617	ASPRV1	1.737138	9.98E-02	protein_coding
ENSG00000110076	NRXN2	1.731987	7.11E-03	protein_coding
ENSG00000266019	MIR3609	1.730422	1.79E-02	miRNA
ENSG00000161082	CELF5	1.72219	3.04E-02	protein_coding
ENSG00000042286	AIFM2	1.716078	8.60E-03	protein_coding

ENSG00000180340	FZD2	1.710531	8.29E-02	protein_coding
ENSG00000164574	GALNT10	1.710462	5.34E-02	protein_coding
ENSG00000173258	ZNF483	1.709974	1.97E-02	protein_coding
ENSG00000197769	MAP1LC3C	1.709642	8.72E-02	protein_coding
ENSG00000173442	EHBP1L1	1.704059	9.90E-02	protein_coding
ENSG00000113578	FGF1	1.692105	7.70E-04	protein_coding
ENSG00000212402	SNORA74B	1.688411	2.24E-02	snoRNA
ENSG00000162975	KCNF1	1.679791	8.85E-02	protein_coding
ENSG00000155254	MARVELD1	1.679382	4.32E-02	protein_coding
ENSG00000041880	PARP3	1.672466	5.06E-02	protein_coding
ENSG00000114805	PLCH1	1.667727	2.60E-02	protein_coding
ENSG00000184371	CSF1	1.665249	9.22E-02	protein_coding
ENSG00000169871	TRIM56	1.641267	3.57E-02	protein_coding
ENSG00000101638	ST8SIA5	1.631929	7.81E-02	protein_coding
ENSG00000119866	BCL11A	1.617326	2.25E-02	protein_coding
ENSG00000183087	GAS6	1.616921	2.18E-02	protein_coding
ENSG00000160570	DEDD2	1.609306	8.31E-03	protein_coding
ENSG00000158716	DUSP23	1.604858	9.81E-02	protein_coding
ENSG00000114626	ABTB1	1.592711	9.22E-02	protein_coding
ENSG00000162545	CAMK2N1	1.58689	3.25E-03	protein_coding
ENSG00000149243	KLHL35	1.584691	5.70E-02	protein_coding
ENSG00000010818	HIVEP2	1.579078	1.64E-03	protein_coding
ENSG00000181722	ZBTB20	1.568744	6.14E-02	protein_coding
ENSG00000116852	KIF21B	1.556797	7.46E-02	protein_coding
ENSG00000204947	ZNF425	1.55433	4.60E-02	protein_coding
ENSG00000166073	GPR176	1.5516	3.92E-02	protein_coding
ENSG00000187479	C11orf96	1.535749	3.69E-02	protein_coding
ENSG00000105656	ELL	1.524373	5.34E-02	protein_coding
ENSG00000200087	SNORA73B	1.514435	9.45E-04	snoRNA
ENSG00000106078	COBL	1.505099	8.43E-02	protein_coding
ENSG00000006062	MAP3K14	1.502879	3.41E-02	protein_coding
ENSG00000166925	TSC22D4	1.497131	4.32E-02	protein_coding
ENSG00000105516	DBP	1.487958	8.97E-02	protein_coding
ENSG00000137142	IGFBPL1	1.487349	9.50E-03	protein_coding
ENSG00000260285		1.480846	9.60E-02	lncRNA
ENSG00000049089	COL9A2	1.471429	6.24E-02	protein_coding
ENSG00000130518	IQCN	1.471149	4.05E-02	protein_coding
ENSG00000198948	MFAP3L	1.469731	2.25E-02	protein_coding
ENSG00000169169	CPT1C	1.466856	5.24E-02	protein_coding
ENSG00000106484	MEST	1.452598	3.49E-02	protein_coding
ENSG00000130222	GADD45G	1.435504	6.24E-02	protein_coding
ENSG00000167700	MFSD3	1.42995	6.42E-02	protein_coding
ENSG00000007174	DNAH9	1.418912	4.49E-02	protein_coding
ENSG00000152092	ASTN1	1.417813	9.49E-02	protein_coding
ENSG00000186834	HEXIM1	1.415603	3.04E-02	protein_coding
ENSG00000117600	PLPPR4	1.415466	5.97E-02	protein_coding
ENSG00000138111	MFSD13A	1.403694	5.32E-02	protein_coding
ENSG00000023909	GCLM	1.393485	9.11E-02	protein_coding
ENSG00000142178	SIK1	1.37885	5.24E-02	protein_coding
ENSG00000198732	SMOC1	1.370453	3.27E-02	protein_coding
ENSG00000167100	SAMD14	1.364321	4.49E-02	protein_coding

ENSG00000245060	LINC00847	1.361519	5.34E-02	lncRNA
ENSG00000137642	SORL1	1.347735	4.36E-02	protein_coding
ENSG00000186577	SMIM29	1.334727	3.15E-02	protein_coding
ENSG00000171823	FBXL14	1.334088	4.16E-02	protein_coding
ENSG00000260336	NA	1.333244	7.16E-02	NA
ENSG00000164796	CSMD3	1.332646	1.82E-02	protein_coding
ENSG00000186174	BCL9L	1.324793	5.92E-02	protein_coding
ENSG00000266037	NA	1.322714	3.18E-03	NA
ENSG00000115461	IGFBP5	1.309543	9.11E-02	protein_coding
ENSG00000259001		1.304361	1.45E-02	lncRNA
ENSG00000270066		1.304118	8.54E-02	lncRNA
ENSG00000063176	SPHK2	1.301034	3.14E-02	protein_coding
ENSG00000120129	DUSP1	1.290375	6.63E-02	protein_coding
ENSG00000175274	TP53I11	1.288468	5.33E-02	protein_coding
ENSG00000242125	SNHG3	1.285567	1.05E-02	lncRNA
ENSG00000201998	SNORA23	1.271016	6.32E-02	snoRNA
ENSG00000141639	MAPK4	1.270989	5.49E-02	protein_coding
ENSG00000165886	UBTD1	1.25531	6.32E-02	protein_coding
ENSG00000066923	STAG3	1.230092	5.54E-02	protein_coding
ENSG00000116990	MYCL	1.222959	7.83E-02	protein_coding
ENSG00000144191	CNGA3	1.222586	5.40E-02	protein_coding
ENSG00000163399	ATP1A1	1.208017	2.37E-02	protein_coding
ENSG00000148798	INA	1.206648	7.45E-02	protein_coding
ENSG00000003249	DBNDD1	1.20524	9.98E-02	protein_coding
ENSG00000153976	HS3ST3A1	1.199113	9.79E-02	protein_coding
ENSG00000006282	SPATA20	1.196083	3.08E-02	protein_coding
ENSG00000161714	PLCD3	1.185513	9.20E-02	protein_coding
ENSG00000160685	ZBTB7B	1.177065	9.50E-02	protein_coding
ENSG00000102109	PCSK1N	1.172044	4.77E-02	protein_coding
ENSG00000115844	DLX2	1.166338	8.95E-02	protein_coding
ENSG00000049769	PPP1R3F	1.163043	7.30E-02	protein_coding
ENSG00000173581	CCDC106	1.158545	5.32E-02	protein_coding
ENSG00000105248	YJU2	1.122693	9.81E-02	protein_coding
ENSG00000134574	DDB2	1.122618	8.40E-02	protein_coding
ENSG00000265735	RN7SL5P	1.115914	3.28E-02	misc_RNA
ENSG00000121440	PDZRN3	1.112789	3.57E-02	protein_coding
ENSG00000116809	ZBTB17	1.110797	5.97E-02	protein_coding
ENSG00000161011	SQSTM1	1.105712	2.69E-02	protein_coding
ENSG00000105767	CADM4	1.105028	3.73E-02	protein_coding
ENSG00000144355	DLX1	1.097757	5.48E-02	protein_coding
ENSG00000006118	TMEM132A	1.069281	5.87E-02	protein_coding
ENSG00000174307	PHLDA3	1.039914	6.49E-02	protein_coding
ENSG00000212232	SNORD17	1.03264	7.76E-02	snoRNA
ENSG00000005486	RHBDD2	1.02043	9.90E-02	protein_coding
ENSG00000053438	NNAT	1.009997	7.57E-02	protein_coding
ENSG00000115266	APC2	1.000382	6.08E-02	protein_coding

Supplementary Table 9: List of of downregulated genes (log 2 fold change <-1, adjusted p value <0.1) in mature OL compared to human fetal neural stem cells (hFNSC)

Ensembl ID	Symbol	log2 Fold Change	Adj.Pval	Type
ENSG00000250687	NAIPP1	-7.18537	6.03E-02	transcribed_unprocessed_pseudogene
ENSG00000238717	NA	-6.91729	1.89E-02	NA
ENSG00000235531	MSC-AS1	-6.58094	5.34E-02	lncRNA
ENSG00000257803	PIGAP1	-5.31929	1.05E-02	processed_pseudogene
ENSG00000163520	FBLN2	-4.19507	5.08E-19	protein_coding
ENSG00000140451	PIF1	-3.7141	3.63E-06	protein_coding
ENSG00000086205	FOLH1	-3.59709	2.34E-04	protein_coding
ENSG00000108932	SLC16A6	-3.52232	3.53E-07	protein_coding
ENSG00000152931	PART1	-3.1859	7.84E-02	lncRNA
ENSG00000178878	APOLD1	-3.16896	2.32E-09	protein_coding
ENSG00000159307	SCUBE1	-3.08864	3.26E-03	protein_coding
ENSG00000241956		-3.06306	5.17E-03	lncRNA
ENSG00000237797	MACORIS	-2.99716	6.97E-02	lncRNA
ENSG00000115163	CENPA	-2.94768	5.17E-02	protein_coding
ENSG00000260385		-2.86715	4.91E-02	lncRNA
ENSG00000064300	NGFR	-2.75363	6.91E-02	protein_coding
ENSG00000112984	KIF20A	-2.71657	4.16E-02	protein_coding
ENSG00000226869	LHFPL3-AS1	-2.65407	8.93E-03	lncRNA
ENSG00000187416	LHFPL3	-2.62301	6.59E-04	protein_coding
ENSG00000136960	ENPP2	-2.61664	5.33E-03	protein_coding
ENSG00000228253	MT-ATP8	-2.59803	7.64E-03	protein_coding
ENSG00000234921		-2.54727	8.49E-02	lncRNA
ENSG00000197712	FAM114A1	-2.53596	8.91E-05	protein_coding
ENSG00000050767	COL23A1	-2.52201	3.21E-06	protein_coding
ENSG00000135744	AGT	-2.50515	4.08E-03	protein_coding
ENSG00000153012	LGI2	-2.49378	1.92E-03	protein_coding
ENSG00000248318		-2.48726	8.15E-02	lncRNA
ENSG00000145386	CCNA2	-2.44075	6.14E-02	protein_coding
ENSG00000268894	PLCE1-AS1	-2.43373	5.50E-02	lncRNA
ENSG00000202023	SNORD81	-2.43346	4.46E-02	snoRNA
ENSG00000172062	SMN1	-2.43275	1.42E-03	protein_coding
ENSG00000101447	FAM83D	-2.39253	1.80E-02	protein_coding
ENSG00000260412		-2.37769	8.50E-02	lncRNA
ENSG00000163053	SLC16A14	-2.37513	5.65E-09	protein_coding
ENSG00000139364	TMEM132B	-2.36938	2.65E-02	protein_coding
ENSG00000174145	NWD2	-2.34421	1.27E-03	protein_coding
ENSG00000224121	ATG12P2	-2.3435	9.61E-02	processed_pseudogene
ENSG00000153179	RASSF3	-2.33127	4.92E-02	protein_coding
ENSG00000215018	COL28A1	-2.25268	1.31E-03	protein_coding
ENSG00000152642	GPD1L	-2.2401	5.25E-04	protein_coding
ENSG00000198342	ZNF442	-2.23861	1.37E-04	protein_coding
ENSG00000249255	PGAM1P9	-2.23249	9.00E-02	processed_pseudogene
ENSG00000226403		-2.22234	8.26E-02	lncRNA
ENSG00000165731	RET	-2.22177	3.32E-03	protein_coding

ENSG00000258424		-2.21862	6.17E-02	lncRNA
ENSG00000175832	ETV4	-2.17527	2.80E-06	protein_coding
ENSG00000105281	SLC1A5	-2.17112	1.61E-05	protein_coding
ENSG00000254705		-2.15886	5.61E-02	lncRNA
ENSG00000164611	PTTG1	-2.15353	6.24E-04	protein_coding
ENSG00000135547	HEY2	-2.11898	4.46E-02	protein_coding
ENSG00000137831	UACA	-2.09641	1.31E-03	protein_coding
ENSG00000070159	PTPN3	-2.06109	1.26E-02	protein_coding
ENSG00000152413	HOMER1	-2.02545	5.73E-06	protein_coding
ENSG00000231114		-2.01624	7.63E-04	lncRNA
ENSG00000198374	NA	-2.01112	5.78E-02	NA
ENSG00000164104	HMGB2	-2.00318	5.53E-02	protein_coding
ENSG00000136010	ALDH1L2	-1.99646	5.96E-04	protein_coding
ENSG00000257499	NA	-1.96932	5.26E-02	NA
ENSG00000251370	SEMA5A-AS1	-1.95115	4.71E-02	lncRNA
ENSG00000187678	SPRY4	-1.94132	5.07E-06	protein_coding
ENSG00000117289	NA	-1.92605	2.63E-02	NA
ENSG00000130529	TRPM4	-1.90836	1.18E-02	protein_coding
ENSG00000196374	NA	-1.89169	7.72E-02	NA
ENSG00000143153	ATP1B1	-1.88792	7.49E-06	protein_coding
ENSG00000151572	ANO4	-1.8769	4.78E-03	protein_coding
ENSG00000254672		-1.86096	4.94E-02	processed_pseudogene
ENSG00000137033	IL33	-1.84184	5.91E-03	protein_coding
ENSG00000182168	UNC5C	-1.83754	1.01E-02	protein_coding
ENSG00000184349	EFNA5	-1.80486	1.57E-02	protein_coding
ENSG00000166851	PLK1	-1.80346	4.21E-02	protein_coding
ENSG00000107105	ELAVL2	-1.79325	2.61E-03	protein_coding
ENSG00000011201	ANOS1	-1.78944	9.86E-02	protein_coding
ENSG00000166450	PRTG	-1.78039	5.34E-02	protein_coding
ENSG00000139915	MDGA2	-1.77211	8.86E-03	protein_coding
ENSG00000117598	PLPPR5	-1.77197	3.49E-03	protein_coding
ENSG00000078549	ADCYAP1R1	-1.76932	2.80E-02	protein_coding
ENSG00000150893	FREM2	-1.7487	9.22E-05	protein_coding
ENSG00000116985	BMP8B	-1.74151	6.59E-02	protein_coding
ENSG00000137872	SEMA6D	-1.7367	1.06E-04	protein_coding
ENSG00000120802	TMPO	-1.73168	8.07E-02	protein_coding
ENSG00000091428	RAPGEF4	-1.72738	5.87E-02	protein_coding
ENSG00000230498	ENSG00000230498	-1.72693	5.97E-02	lncRNA
ENSG00000135272	MDFIC	-1.72607	5.73E-02	protein_coding
ENSG00000100526	CDKN3	-1.72452	9.96E-02	protein_coding
ENSG00000168874	ATOH8	-1.72286	6.22E-04	protein_coding
ENSG00000140749	IGSF6	-1.72252	8.50E-02	protein_coding
ENSG00000064225	ST3GAL6	-1.72017	1.58E-02	protein_coding
ENSG00000245694	CRNDE	-1.70369	5.85E-02	lncRNA
ENSG00000239922		-1.69694	1.64E-03	lncRNA
ENSG00000115758	ODC1	-1.67732	4.14E-03	protein_coding
ENSG00000152953	STK32B	-1.67522	9.97E-02	protein_coding
ENSG00000107796	ACTA2	-1.67436	3.40E-02	protein_coding
ENSG00000136237	RAPGEF5	-1.67299	1.74E-02	protein_coding
ENSG00000114315	HES1	-1.67231	4.15E-02	protein_coding
ENSG00000095015	MAP3K1	-1.66974	1.01E-03	protein_coding

ENSG00000123983	ACSL3	-1.66754	5.98E-05	protein_coding
ENSG00000059804	SLC2A3	-1.6665	2.62E-03	protein_coding
ENSG00000203814	H2BC18	-1.66377	4.73E-02	protein_coding
ENSG00000125247	TMTC4	-1.64279	3.61E-02	protein_coding
ENSG00000197647	ZNF433	-1.63644	1.36E-02	protein_coding
ENSG00000101542	CDH20	-1.61219	6.20E-02	protein_coding
ENSG00000074410	CA12	-1.61146	2.64E-03	protein_coding
ENSG00000065150	IPO5	-1.60768	4.21E-02	protein_coding
ENSG00000170775	GPR37	-1.60763	7.82E-02	protein_coding
ENSG00000148180	GSN	-1.59618	1.07E-03	protein_coding
ENSG00000172380	GNG12	-1.59075	6.78E-03	protein_coding
ENSG00000118971	CCND2	-1.58686	7.83E-02	protein_coding
ENSG00000153707	PTPRD	-1.5856	7.46E-03	protein_coding
ENSG00000117069	ST6GALNAC5	-1.58356	1.12E-02	protein_coding
ENSG00000176771	NCKAP5	-1.56677	3.96E-02	protein_coding
ENSG00000156103	MMP16	-1.55458	1.68E-02	protein_coding
ENSG00000152578	GRIA4	-1.55455	1.03E-02	protein_coding
ENSG00000198830	HMGN2	-1.54884	7.83E-02	protein_coding
ENSG00000134121	CHL1	-1.54355	1.13E-02	protein_coding
ENSG00000100095	SEZ6L	-1.54337	2.35E-02	protein_coding
ENSG00000225177		-1.53947	5.61E-02	lncRNA
ENSG00000115290	GRB14	-1.53874	5.65E-02	protein_coding
ENSG00000093217	XYLB	-1.53319	4.17E-02	protein_coding
ENSG00000114861	FOXP1	-1.52817	3.34E-02	protein_coding
ENSG00000242539		-1.52691	1.85E-02	lncRNA
ENSG00000186297	GABRA5	-1.52518	1.01E-02	protein_coding
ENSG00000102271	KLHL4	-1.5165	8.67E-03	protein_coding
ENSG00000070756	PABPC1	-1.51043	1.08E-02	protein_coding
ENSG00000100219	XBP1	-1.5058	4.42E-03	protein_coding
ENSG00000145934	TENM2	-1.49725	4.00E-02	protein_coding
ENSG00000092421	SEMA6A	-1.48878	2.10E-02	protein_coding
ENSG00000269728	NA	-1.4878	1.27E-02	NA
ENSG00000116745	RPE65	-1.47494	1.45E-02	protein_coding
ENSG00000128595	CALU	-1.46392	7.48E-02	protein_coding
ENSG00000213366	GSTM2	-1.45351	7.39E-02	protein_coding
ENSG00000146592	CREB5	-1.45145	3.41E-02	protein_coding
ENSG00000130158	DOCK6	-1.43112	3.16E-02	protein_coding
ENSG00000155760	FZD7	-1.42757	2.12E-02	protein_coding
ENSG00000187123	LYPD6	-1.40265	8.94E-02	protein_coding
ENSG00000242299		-1.3945	1.97E-02	processed_pseudogene
ENSG00000091127	PUS7	-1.38913	5.61E-02	protein_coding
ENSG00000198668	CALM1	-1.38419	9.49E-02	protein_coding
ENSG00000248445	SEMA6A-AS1	-1.38395	5.34E-02	lncRNA
ENSG00000213240	NA	-1.38339	5.48E-02	NA
ENSG00000106105	GARS1	-1.37537	6.26E-03	protein_coding
ENSG00000260822	NA	-1.36826	4.21E-02	NA
ENSG00000204764	RANBP17	-1.36389	2.87E-02	protein_coding
ENSG00000129353	SLC44A2	-1.35429	5.53E-02	protein_coding
ENSG00000070961	ATP2B1	-1.35222	7.27E-03	protein_coding
ENSG00000170540	ARL6IP1	-1.34617	5.97E-02	protein_coding
ENSG00000136603	SKIL	-1.33377	7.42E-02	protein_coding

ENSG00000155850	SLC26A2	-1.32976	5.00E-02	protein_coding
ENSG00000104408	EIF3E	-1.31819	3.57E-02	protein_coding
ENSG00000146376	ARHGAP18	-1.31789	4.32E-02	protein_coding
ENSG00000112245	PTP4A1	-1.31767	8.76E-03	protein_coding
ENSG00000101911	PRPS2	-1.31228	6.55E-02	protein_coding
ENSG00000104660	LEPROTL1	-1.31175	1.88E-02	protein_coding
ENSG00000134049	IER3IP1	-1.31064	4.69E-02	protein_coding
ENSG00000182132	KCNIP1	-1.30423	5.37E-02	protein_coding
ENSG00000040731	CDH10	-1.30381	4.95E-02	protein_coding
ENSG00000186205	MTARC1	-1.30013	7.50E-02	protein_coding
ENSG00000139354	GAS2L3	-1.28722	4.01E-02	protein_coding
ENSG00000006625	GGCT	-1.28331	3.73E-02	protein_coding
ENSG00000166068	SPRED1	-1.28252	1.01E-02	protein_coding
ENSG00000146352	CLVS2	-1.28216	9.40E-02	protein_coding
ENSG00000164305	CASP3	-1.28014	1.58E-02	protein_coding
ENSG00000106571	GLI3	-1.27966	1.39E-02	protein_coding
ENSG00000233476	EEF1A1P6	-1.27929	6.20E-02	processed_pseudogene
ENSG00000253729	PRKDC	-1.27845	9.81E-02	protein_coding
ENSG00000125772	GPCPD1	-1.2745	7.77E-02	protein_coding
ENSG00000169504	CLIC4	-1.2636	4.46E-02	protein_coding
ENSG00000168615	ADAM9	-1.26232	7.80E-03	protein_coding
ENSG00000162490	DRAXIN	-1.25355	3.57E-02	protein_coding
ENSG00000172795	DCP2	-1.251	5.58E-02	protein_coding
ENSG00000124942	AHNAK	-1.24798	3.14E-02	protein_coding
ENSG00000070669	ASNS	-1.24783	5.92E-02	protein_coding
ENSG00000139318	DUSP6	-1.24164	5.34E-02	protein_coding
ENSG00000130741	EIF2S3	-1.23819	4.21E-02	protein_coding
ENSG00000156504	PABIR2	-1.23451	5.34E-02	protein_coding
ENSG00000172469	MANEA	-1.2321	4.46E-02	protein_coding
ENSG00000115935	WIPF1	-1.22652	2.87E-02	protein_coding
ENSG00000105928	GSDME	-1.22626	5.17E-02	protein_coding
ENSG00000167703	SLC43A2	-1.22031	2.37E-02	protein_coding
ENSG00000141540	TTYH2	-1.21633	9.97E-02	protein_coding
ENSG00000139910	NOVA1	-1.21551	1.49E-02	protein_coding
ENSG00000166130	IKBIP	-1.21185	5.26E-02	protein_coding
ENSG00000141337	ARSG	-1.21007	8.18E-02	protein_coding
ENSG00000187239	FNBP1	-1.20827	2.34E-02	protein_coding
ENSG00000235363	SNRPGP10	-1.20722	3.57E-02	processed_pseudogene
ENSG00000164253	WDR41	-1.20305	6.15E-02	protein_coding
ENSG00000075618	FSCN1	-1.19878	5.17E-02	protein_coding
ENSG00000166483	WEE1	-1.19813	4.31E-02	protein_coding
ENSG00000104131	EIF3J	-1.19127	8.35E-02	protein_coding
ENSG00000006607	FARP2	-1.18657	6.20E-02	protein_coding
ENSG00000132842	AP3B1	-1.18625	3.12E-02	protein_coding
ENSG00000198408	OGA	-1.18606	1.90E-02	protein_coding
ENSG00000138709	LARP1B	-1.18303	5.40E-02	protein_coding
ENSG00000090621	PABPC4	-1.17814	3.97E-02	protein_coding
ENSG00000136997	MYC	-1.17221	4.61E-02	protein_coding
ENSG00000125520	SLC2A4RG	-1.16961	5.34E-02	protein_coding
ENSG00000260539	NA	-1.16548	9.66E-02	NA
ENSG00000165566	AMER2	-1.15868	7.83E-02	protein_coding

ENSG00000010278	CD9	-1.15797	9.10E-02	protein_coding
ENSG000000155893	PXYLP1	-1.15513	6.30E-02	protein_coding
ENSG000000116141	MARK1	-1.15512	3.41E-02	protein_coding
ENSG000000106692	FKTN	-1.15503	9.98E-02	protein_coding
ENSG000000116962	NID1	-1.1461	5.23E-02	protein_coding
ENSG000000120868	APAF1	-1.13824	6.97E-02	protein_coding
ENSG000000223547	ZNF844	-1.1379	5.40E-02	protein_coding
ENSG000000139514	SLC7A1	-1.1372	7.83E-02	protein_coding
ENSG000000197111	PCBP2	-1.13278	5.63E-02	protein_coding
ENSG000000136379	ABHD17C	-1.12843	6.18E-02	protein_coding
ENSG000000071575	TRIB2	-1.12799	7.50E-02	protein_coding
ENSG000000141556	TBCD	-1.12408	6.32E-02	protein_coding
ENSG000000175198	PCCA	-1.12273	5.17E-02	protein_coding
ENSG000000113163	CERT1	-1.11879	3.33E-02	protein_coding
ENSG000000102606	ARHGEF7	-1.11467	3.16E-02	protein_coding
ENSG000000168175	MAPK1IP1L	-1.10368	3.97E-02	protein_coding
ENSG000000133703	KRAS	-1.1025	5.34E-02	protein_coding
ENSG000000060749	QSER1	-1.10143	4.42E-02	protein_coding
ENSG000000179104	TMTC2	-1.09849	9.26E-02	protein_coding
ENSG000000114450	GNB4	-1.09751	6.97E-02	protein_coding
ENSG000000260230	FRRS1L	-1.09367	5.97E-02	protein_coding
ENSG000000145685	LHFPL2	-1.08939	5.34E-02	protein_coding
ENSG000000135862	LAMC1	-1.08877	9.52E-02	protein_coding
ENSG000000106829	TLE4	-1.08237	4.83E-02	protein_coding
ENSG000000146802	TMEM168	-1.08154	9.88E-02	protein_coding
ENSG000000164056	SPRY1	-1.08105	9.02E-02	protein_coding
ENSG000000113971	NPHP3	-1.07859	7.45E-02	protein_coding
ENSG000000156052	GNAQ	-1.07805	7.82E-02	protein_coding
ENSG000000149782	PLCB3	-1.07759	7.07E-02	protein_coding
ENSG000000143924	EML4	-1.0754	5.24E-02	protein_coding
ENSG000000109911	ELP4	-1.06686	9.75E-02	protein_coding
ENSG000000187091	PLCD1	-1.06658	8.00E-02	protein_coding
ENSG000000162704	ARPC5	-1.06278	8.78E-02	protein_coding
ENSG000000131711	MAP1B	-1.04991	4.21E-02	protein_coding
ENSG000000167460	TPM4	-1.04922	9.22E-02	protein_coding
ENSG000000156140	ADAMTS3	-1.03299	6.67E-02	protein_coding
ENSG000000115993	TRAK2	-1.01652	9.04E-02	protein_coding
ENSG000000135677	GNS	-1.01633	8.50E-02	protein_coding