

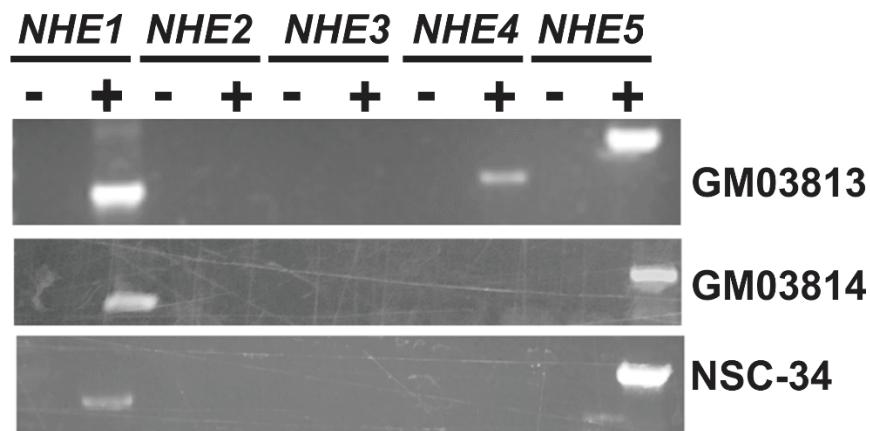
Supplemental File

Effects of inhibitors of SLC9A-type sodium-proton exchangers on *Survival Motor Neuron 2 (SMN2)* mRNA splicing and expression

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Molecular Pharmacology

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Supplemental Figure 1.

Expression of NHE isoform mRNAs in GM03813, GM03814 and NSC-34 cells.

Supplemental Table 1.

List of differentially expressed transcripts.

ID	DMSO Avg (log2)	EIPA Avg (log2)	DMSO Standard Deviation	EIPA Standard Deviation	Fold Change (rel to EIPA)	Fold Change (rel to DMSO)	P-val	FDR P-val	duplicate	Gene Symbol	Description
TC0100013561.hg.1	5.92	8.61	1.1	0.67	-6.44	6.44	0.0003	0.5406		FABP3	fatty acid binding protein 3, muscle and heart
TC0300010185.hg.1	9.34	11.87	1.71	0.57	-5.75	5.75	0.0044	0.6495		OXTR	oxytocin receptor
TC0700006488.hg.1	5.45	7.92	0.63	0.14	-5.56	5.56	0.0003	0.5406		GPER1	G protein-coupled estrogen receptor 1
TC1400009798.hg.1	3.84	5.97	0.77	0.81	-4.39	4.39	0.0015	0.5917	D	NRXN3	neurexin 3
TC0500011347.hg.1	7.58	9.69	0.59	0.27	-4.32	4.32	9.11E-05	0.4854		HAPLN1	hyaluronan and proteoglycan link protein 1
TC1500008525.hg.1	3.76	5.78	0.37	1.16	-4.04	4.04	0.0228	0.7293	D	MEF2A	myocyte enhancer factor 2A
TC0X00010496.hg.1	6.28	8.27	0.21	0.58	-3.97	3.97	0.0002	0.5406		ACSL4	acyl-CoA synthetase long chain family member 4
TC0700013614.hg.1	5.08	7.04	0.59	0.24	-3.88	3.88	0.0033	0.6212		ZNF800	zinc finger protein 800
TC0800008341.hg.1	4.39	6.35	0.55	0.14	-3.87	3.87	8.23E-05	0.4854	D	STK3	serine/threonine kinase 3
TC1600008243.hg.1	3.35	5.21	0.51	0.8	-3.64	3.64	0.0087	0.6681	D	WWP2	WW domain containing E3 ubiquitin protein ligase 2
TC0400007436.hg.1	4.48	6.22	0.24	1.8	-3.34	3.34	0.0196	0.7205		CNGA1	cyclic nucleotide gated channel alpha 1
TCOM0006444.hg.1	17.71	19.41	0.39	0.15	-3.27	3.27	1.92E-05	0.4807	D	ICAM2	intercellular adhesion molecule 2
TCOM0006444.hg.1	17.71	19.41	0.39	0.15	-3.27	3.27	1.92E-05	0.4807	D	PRR29	proline rich 29
TC0400011994.hg.1	6.01	7.71	0.31	0.53	-3.26	3.26	0.0016	0.5917		INPP4B	inositol polyphosphate-4-phosphatase type II B
TC1100008544.hg.1	3.4	5.09	0.28	0.44	-3.22	3.22	0.0083	0.6679		AAMD2	adipogenesis associated Mth938 domain containing
TC1100008544.hg.1	3.4	5.09	0.28	0.44	-3.22	3.22	0.0083	0.6679		INTS4	integrator complex subunit 4
TC1900010687.hg.1	4.33	6.02	0.59	0.19	-3.22	3.22	0.0011	0.5917		ZNF780B	zinc finger protein 780B
TC0600008505.hg.1	4.37	6.03	0.57	0.28	-3.15	3.15	0.004	0.6423		RIMS1	regulating synaptic membrane exocytosis 1
TC1300007781.hg.1	3.72	5.37	0.16	0.6	-3.14	3.14	0.0056	0.6602		RAP2A	RAP2A, member of RAS oncogene family (K-REV)
TC1800007864.hg.1	3.72	5.35	0.28	0.96	-3.1	3.1	0.0319	0.7409		ENOSF1	enolase superfamily member 1
TC1200009772.hg.1	3.55	5.14	0.4	0.61	-3.01	3.01	0.0047	0.6495		C1S	complement C1s
TC1700007240.hg.1	6.09	7.67	0.54	0.54	-2.99	2.99	0.0036	0.6269		SCDP1	stearoyl-CoA desaturase (delta-9-desaturase) pseudogene 1
TC1700007167.hg.1	7.02	8.6	0.56	0.54	-2.98	2.98	0.0027	0.6175	D	EPN2	epsin 2
TC0100017636.hg.1	12.35	13.93	0.25	0.42	-2.98	2.98	0.0017	0.5917		RNA5511	RNA, 55 ribosomal 11
TC0100017637.hg.1	12.35	13.93	0.25	0.42	-2.98	2.98	0.0017	0.5917		RNA5512	RNA, 55 ribosomal 12
TC0100017638.hg.1	12.35	13.93	0.25	0.42	-2.98	2.98	0.0017	0.5917		RNA5513	RNA, 55 ribosomal 13
TC0100017639.hg.1	12.35	13.93	0.25	0.42	-2.98	2.98	0.0017	0.5917		RNA5514	RNA, 55 ribosomal 14
TC0100017640.hg.1	12.35	13.93	0.25	0.42	-2.98	2.98	0.0017	0.5917		RNA5515	RNA, 55 ribosomal 15
TC0100017641.hg.1	12.35	13.93	0.25	0.42	-2.98	2.98	0.0017	0.5917		RNA5516	RNA, 55 ribosomal 16
TC1400010673.hg.1	3.1	4.66	0.24	0.88	-2.96	2.96	0.0129	0.6911		SNORD114-17	small nucleolar RNA, C/D box 114-17
TC1000010702.hg.1	7.25	8.81	0.73	0.22	-2.94	2.94	0.0032	0.6196		IPMK	inositol polyphosphate multikinase
TC0200010585.hg.1	3.26	4.79	0.13	0.8	-2.89	2.89	0.0348	0.7433		CPO	carboxypeptidase O
TC1500008046.hg.1	9.03	10.55	0.46	0.23	-2.88	2.88	0.0228	0.7293	D	CEMIP	cell migration inducing protein, hyaluronan binding
TC1800006488.hg.1	5.66	7.19	0.75	0.25	-2.88	2.88	0.0062	0.6674		SMCHD1	structural maintenance of chromosomes flexible hinge domain containing 1
TC0100008912.hg.1	11.64	13.16	0.72	0.22	-2.86	2.86	0.0084	0.6679		CYR61	cysteine-rich, angiogenic inducer, 61
TC0500011232.hg.1	3.38	4.9	0.56	0.63	-2.85	2.85	0.0017	0.5917		DMGH	dimethylglycine dehydrogenase
TC1500009861.hg.1	10.63	12.13	0.57	0.22	-2.84	2.84	0.0052	0.6581		ITGA11	integrin alpha 11

TC0600010810.hg.1	3.03	4.54	0.43	0.33	-2.84	2.84	0.0011	0.5917		NEDD9	neural precursor cell expressed, developmentally down-regulated 9
TC0400011458.hg.1	3.74	5.23	0.69	0.93	-2.81	2.81	0.028	0.7374		SLC39A8	solute carrier 39 member 8; zinc transporter 8
TC1000008719.hg.1	3.56	5.04	0.65	0.96	-2.8	2.8	0.044	0.7575		GBF1	golgi brefeldin A resistant guanine nucleotide exchange factor 1
TC1700010652.hg.1	8.34	9.81	0.7	0.01	-2.77	2.77	0.0029	0.6175		KRTAP2-2	keratin associated protein 2-2
TC0600006762.hg.1	11.11	12.57	0.32	0.28	-2.76	2.76	0.0026	0.6166		MIR7641-2	microRNA 7641-2
TC1800008743.hg.1	12.76	14.21	0.84	0.32	-2.73	2.73	0.0044	0.6495		CDC68	coiled-coil domain containing 68
TC0300013282.hg.1	9.45	10.9	0.34	0.51	-2.73	2.73	0.0137	0.6926		RNA5SP149	5S ribosomal pseudogene 149
TCOX00008054.hg.1	4.76	6.2	0.48	0.36	-2.71	2.71	0.0008	0.5917		RNF128	ring finger protein 128, E3 ubiquitin protein ligase
TC0200006730.hg.1	4.25	5.68	0.03	0.83	-2.69	2.69	0.0392	0.7497		RN7SL674P	RNA, 7SL, cytoplasmic 674, pseudogene
TC1100011234.hg.1	10.54	11.96	0.86	0.18	-2.68	2.68	0.0128	0.691		LTPB3	latent transforming growth factor beta binding protein 3
TC0100015194.hg.1	10.3	11.72	0.73	0.34	-2.67	2.67	0.0054	0.6602		SORT1	sortilin 1
TC1800006641.hg.1	2.6	4.01	0.3	0.44	-2.66	2.66	0.0003	0.5406		RALBP1	ralA binding protein 1
TC0600007087.hg.1	11.65	13.06	0.41	0.45	-2.65	2.65	0.004	0.6423		CAP2	CAP, adenylate cyclase-associated protein, 2 (yeast)
TC0900010969.hg.1	10.95	12.35	0.49	0.27	-2.65	2.65	0.0465	0.7625		CORO2A	coronin, actin binding protein, 2A
TC1000011057.hg.1	2.81	4.21	0.21	0.69	-2.64	2.64	0.0043	0.6489		ADK	adenosine kinase
TC1200010021.hg.1	10.35	11.76	0.36	0.16	-2.64	2.64	0.0011	0.5917		C12orf60	chromosome 12 open reading frame 60
TC0100007638.hg.1	10.72	12.12	0.29	0.25	-2.64	2.64	0.0001	0.5107		SERINC2	serine incorporator 2
TC1400007348.hg.1	9.48	10.87	0.63	0.07	-2.63	2.63	0.0079	0.6679		PCNX4	pecanex 4
TC0200013206.hg.1	6.28	7.67	0.35	0.32	-2.63	2.63	0.0135	0.6926		RNA5SP99	RNA, 5S ribosomal pseudogene 99
TC0300007309.hg.1	3.94	5.32	0.27	0.5	-2.6	2.6	0.0197	0.7205		SMARCC1	SWI/SNF related, matrix-associated, actin-dependent regulator of chromatin C1
TC0600011595.hg.1	12.45	13.83	0.59	0.46	-2.59	2.59	0.0028	0.6175		C6orf106	chromosome 6 open reading frame 106
TC1700007131.hg.1	3.75	5.12	0.86	0.12	-2.59	2.59	0.0154	0.7029		TBC1D28	TBC1 domain family member 28
TC0200012776.hg.1	5.65	7.02	0.55	0.39	-2.59	2.59	0.0146	0.6965		TMEM17	transmembrane protein 17
TC0600008157.hg.1	2.98	4.34	0.47	0.77	-2.57	2.57	0.0113	0.6846		ENPP5	ectonucleotide pyrophosphatase/phosphodiesterase 5
TC0800011605.hg.1	13.84	15.18	0.54	0.12	-2.53	2.53	0.03	0.7392		SAMD12	sterile alpha motif domain containing 12
TC0900006785.hg.1	2.91	4.24	0.19	0.31	-2.52	2.52	0.0002	0.5406		FOCAD	focalhesin
TC0300009844.hg.1	4.17	5.51	0.32	0.83	-2.52	2.52	0.0393	0.7507		MIR944	microRNA 944
TCUn_GL000216v200006434.hg.1	3.04	4.36	0.47	0.78	-2.5	2.5	0.0142	0.6963		U2	U2 spliceosomal RNA
TC1000012140.hg.1	4.45	5.76	0.63	0.15	-2.47	2.47	0.0482	0.7639		CTBP2	C-terminal binding protein 2
TCOX00008844.hg.1	4.09	5.39	0.75	0.16	-2.47	2.47	0.016	0.7056		IKBKG	inhibitor of nuclear factor kappa B kinase subunit gamma
TC0500011131.hg.1	3.03	4.32	0.71	0.77	-2.46	2.46	0.03	0.7392		ARHGEF28	Rho guanine nucleotide exchange factor 28
TC1500008038.hg.1	13.48	14.78	0.8	0.48	-2.46	2.46	0.0097	0.6713		ARNT2	aryl-hydrocarbon receptor nuclear translocator 2
TC1500008038.hg.1	13.48	14.78	0.8	0.48	-2.46	2.46	0.0097	0.6713		MIR5572	microRNA 5572
TC0500009379.hg.1	3.28	4.57	0.32	0.1	-2.45	2.45	0.0003	0.5406		DOCK2	dedicator of cytokinesis 2
TC2000007453.hg.1	3.03	4.33	0.47	0.22	-2.45	2.45	0.0032	0.6196		HNF4A	hepatocyte nuclear factor 4 alpha
TC2000007453.hg.1	3.03	4.33	0.47	0.22	-2.45	2.45	0.0032	0.6196		MIR3646	microRNA 3646

											GIPC PDZ domain containing family, member 2
TC0100018239.hg.1	7.76	9.04	1.04	0.74	-2.44	2.44	0.019	0.7167		GIPC2	SS ribosomal pseudogene 141
TC0300012508.hg.1	8.07	9.35	0.32	0.35	-2.44	2.44	0.0108	0.6786	RNASSP141	cell cycle progression 1	
TC1500009498.hg.1	3.65	4.93	0.43	0.71	-2.43	2.43	0.0357	0.7437	CCPG1	disco interacting protein 2 homolog C	
TC1000009519.hg.1	8.41	9.69	0.33	0.3	-2.43	2.43	0.0165	0.7092	DIP2C	elongator acetyltransferase complex subunit 4	
TC1100007188.hg.1	3.98	5.26	0.18	0.97	-2.43	2.43	0.0091	0.671	ELP4	fibrillin 2	
TC0500013349.hg.1	8.13	9.41	0.4	0.3	-2.43	2.43	0.0041	0.6437	FBN2	phosphatidylinositol glycan anchor biosynthesis class B	
TC1500009498.hg.1	3.65	4.93	0.43	0.71	-2.43	2.43	0.0357	0.7437	PIGB	RNA, U1 small nuclear 18, pseudogene	
TC0600009320.hg.1	10.33	11.61	0.63	0.7	-2.43	2.43	0.0048	0.6495	RNU1-18P	neuron navigator 2	
TC1100010293.hg.1	4.48	5.75	0.23	0.86	-2.42	2.42	0.0419	0.7534	NAV2		
TC0700010738.hg.1	2.91	4.18	0.23	0.58	-2.42	2.42	0.0262	0.7354	RNU6-1085P	RNA, U6 small nuclear 1085, pseudogene	
TC0300009129.hg.1	3.24	4.51	0.4	0.45	-2.41	2.41	0.0027	0.6175	HLTF	helicase-like transcription factor	
TC1900010117.hg.1	3.45	4.72	0.16	0.62	-2.41	2.41	0.0031	0.6196	ZNF626	zinc finger protein 626	
TC0700009339.hg.1	3.09	4.35	0.33	0.36	-2.4	2.4	0.0004	0.549	LUC7L2	LUC7 like 2, pre-mRNA splicing factor	
TC0100008807.hg.1	10.4	11.67	0.52	0.25	-2.4	2.4	0.0141	0.6963	NEXN	nexilin (F actin binding protein)	
TC0100017626.hg.1	11.72	12.98	0.22	0.26	-2.4	2.4	0.0029	0.6175	RNASS1	RNA, 5S ribosomal 1	
TC0100017635.hg.1	11.72	12.98	0.22	0.26	-2.4	2.4	0.0029	0.6175	RNASS10	RNA, 5S ribosomal 10	
TC0100017642.hg.1	11.72	12.98	0.22	0.26	-2.4	2.4	0.0029	0.6175	RNASS17	RNA, 5S ribosomal 17	
TC0100017627.hg.1	11.72	12.98	0.22	0.26	-2.4	2.4	0.0029	0.6175	RNASS2	RNA, 5S ribosomal 2	
TC0100017628.hg.1	11.72	12.98	0.22	0.26	-2.4	2.4	0.0029	0.6175	RNASS3	RNA, 5S ribosomal 3	
TC0100017629.hg.1	11.72	12.98	0.22	0.26	-2.4	2.4	0.0029	0.6175	RNASS4	RNA, 5S ribosomal 4	
TC0100017630.hg.1	11.72	12.98	0.22	0.26	-2.4	2.4	0.0029	0.6175	RNASS5	RNA, 5S ribosomal 5	
TC0100017631.hg.1	11.72	12.98	0.22	0.26	-2.4	2.4	0.0029	0.6175	RNASS6	RNA, 5S ribosomal 6	
TC0100017632.hg.1	11.72	12.98	0.22	0.26	-2.4	2.4	0.0029	0.6175	RNASS7	RNA, 5S ribosomal 7	
TC0100017633.hg.1	11.72	12.98	0.22	0.26	-2.4	2.4	0.0029	0.6175	RNASS8	RNA, 5S ribosomal 8	
TC0100011197.hg.1	5.97	7.23	0.56	0.38	-2.4	2.4	0.0028	0.6175	SHISA4	shisa family member 4	
TC0X0006746.hg.1	3.04	4.3	0.32	0.36	-2.39	2.39	0.0015	0.5917	BCLAF3	BCLAF1 and TIRAP3 family member 3	
TC2000006477.hg.1	8.46	9.71	0.47	0.18	-2.39	2.39	0.0005	0.5612	PSMF1	proteasome inhibitor subunit 1	
TC0900010918.hg.1	4.66	5.9	0.33	0.17	-2.37	2.37	8.22E-05	0.4854	CDC14B	cell division cycle 14B	
TC0800010264.hg.1	3.95	5.19	0.24	0.73	-2.37	2.37	0.0488	0.7642	KAT6A	lysine acetyltransferase 6A	
TC0200012009.hg.1	5.19	6.43	0.48	0.41	-2.36	2.36	0.0318	0.7409	DTNB	dystrobrevin beta	
TC1000008504.hg.1	10.67	11.91	0.66	0.36	-2.36	2.36	0.0018	0.5917	HELLS	helicase, lymphoid specific	
TC0200016408.hg.1	5.77	7.01	0.28	0.14	-2.36	2.36	0.0002	0.5406	KCNS3	potassium voltage-gated channel, modifier subfamily S, member 3	
TC2200009364.hg.1	4.66	5.9	0.61	0.36	-2.35	2.35	0.009	0.6696	CPT1B	carnitine palmitoyltransferase 1B (muscle)	
TC1700010549.hg.1	3.42	4.65	0.28	0.57	-2.35	2.35	0.0081	0.6679	CWC25	CWC25 spliceosome associated protein homolog	
TC0800011088.hg.1	4.02	5.25	0.6	0.79	-2.35	2.35	0.028	0.7374	RUNX1T1	RUNX1 translocation partner 1	
TC0700012268.hg.1	3.12	4.35	0.04	0.68	-2.34	2.34	0.0197	0.7205	IMMP2L	IMP2 inner mitochondrial membrane peptidase subunit 2	
TC0400007285.hg.1	4.29	5.51	0.35	0.44	-2.34	2.34	0.0126	0.6893	LIAS	lipoic acid synthetase	
TC0200014476.hg.1	3.39	4.62	0.03	0.53	-2.34	2.34	0.0044	0.6495	LRP1B	low density lipoprotein receptor-related protein 1B	
TC0300011409.hg.1	3.37	4.59	0.21	1.04	-2.34	2.34	0.0169	0.7092	MAGI1	membrane-associated guanylate kinase, WW and PDZ domain containing 1	
TC0500007077.hg.1	7.17	8.4	0.7	0.37	-2.34	2.34	0.0081	0.6679	NPR3	natriuretic peptide receptor 3	

TC2100006961.hg.1	6.9	8.13	0.28	0.21	-2.33	2.33	0.0016	0.5917		IFNAR1	interferon (alpha and beta) receptor 1
TC1700010651.hg.1	6.34	7.55	0.06	0.32	-2.33	2.33	0.0006	0.5837	KRTAP2-1	keratin associated protein 2-1	
TC0500006786.hg.1	4.75	5.97	0.43	2.19	-2.33	2.33	0.0423	0.7546		LINC01194	long intergenic non-protein coding RNA 1194
TC0700008569.hg.1	9.63	10.84	0.73	0.64	-2.32	2.32	0.0221	0.7272	ACHE	acetylcholinesterase	
TC1100008382.hg.1	5.37	6.58	0.58	0.18	-2.32	2.32	0.0107	0.6786	ARHGEF17	Rho guanine nucleotide exchange factor 17	
TC0500008233.hg.1	10.01	11.22	0.23	0.2	-2.32	2.32	0.0003	0.5406	C5orf30	chromosome 5 open reading frame 30; unc119 binding	
TC0700008853.hg.1	2.89	4.1	0.22	0.58	-2.32	2.32	0.0361	0.7441	FOXP2	forkhead proteinbox P2	
TC0100006954.hg.1	5.7	6.91	0.46	0.27	-2.32	2.32	0.0042	0.6484	KAZN	kazrin, periplakin interacting protein	
TC0300013106.hg.1	4.83	6.05	0.38	0.32	-2.32	2.32	0.0083	0.6679	RNU1-70P	RNA, U1 small nuclear 70, pseudogene	
TC1200011896.hg.1	3.98	5.19	0.64	0.88	-2.31	2.31	0.0414	0.7524	C12orf76	chromosome 12 open reading frame 76	
TC0500011352.hg.1	11.41	12.62	0.16	0.04	-2.31	2.31	0.0007	0.5837	EDIL3	EGF-like repeats and discoidin I-like domains 3	
TC0800011620.hg.1	9.15	10.36	0.54	0.35	-2.31	2.31	0.0062	0.6674	ENPP2	ectonucleotide pyrophosphatase/phosphodiesterase 2	
TC1700011721.hg.1	7.04	8.24	0.11	0.57	-2.31	2.31	0.0009	0.5917	FDXR	ferredoxin reductase	
TC1400007540.hg.1	7.25	8.45	0.29	0.24	-2.3	2.3	0.0029	0.6175	ACTN1	actinin alpha 1	
TC0X00010849.hg.1	3.37	4.57	0.22	0.61	-2.3	2.3	0.0072	0.6679	GPC4	glypican 4	
TC0600010848.hg.1	2.89	4.09	0.33	0.54	-2.3	2.3	0.0181	0.7124	PHACTR1	phosphatase and actin regulator 1	
TC0500008393.hg.1	2.78	3.97	0.21	0.57	-2.29	2.29	0.0133	0.6916	COMM10	COMM domain containing 10	
TC0500007509.hg.1	4.56	5.76	0.23	0.52	-2.29	2.29	0.0341	0.7424	PDE4D	phosphodiesterase 4D	
TC0100009425.hg.1	3.54	4.74	0.53	0.65	-2.29	2.29	0.0166	0.7092	RAP1A	RAP1A	
TC1100008050.hg.1	6.05	7.23	0.46	0.41	-2.28	2.28	0.0051	0.6578	CST6	cystatin E/M	
TC0700010431.hg.1	2.74	3.93	0.53	0.81	-2.28	2.28	0.0457	0.7605	DNAH11	dynein, axonemal, heavy chain 11	
TC0200008071.hg.1	11.7	12.88	0.06	0.41	-2.28	2.28	0.0056	0.6602	MTHFD2	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 2, methenyltetrahydrofolate cyclohydrolase	
TC0700010102.hg.1	10.32	11.5	0.62	0.2	-2.27	2.27	0.016	0.7056	SDK1	sidekick cell adhesion molecule 1	
TC0400011920.hg.1	12.17	13.35	0.59	0.43	-2.27	2.27	0.0102	0.6715	SLC7A11	solute carrier 7 (anionic amino acid transporter light chain, xc- system), member 11	
TC0400012988.hg.1	3.01	4.2	0.23	0.56	-2.27	2.27	0.0494	0.7657	TMEM192	transmembrane protein 192	
TC0400011303.hg.1	3.55	4.72	0.4	0.55	-2.26	2.26	0.0479	0.7637	FAM13A	family with sequence similarity 13 member A	
TC0500007985.hg.1	3.54	4.71	0.07	0.61	-2.26	2.26	0.0147	0.6965	LOC105379057	LOC105379057	
TC0200009923.hg.1	4.07	5.25	0.13	0.66	-2.26	2.26	0.0192	0.7167	UBR3	ubiquitin protein ligase E3 component n-recognition 3	
TC1100013022.hg.1	9.61	10.78	0.34	0.23	-2.25	2.25	0.0003	0.5406	FADS2	fatty acid desaturase 2	
TC0100011092.hg.1	5.68	6.85	0.94	0.37	-2.25	2.25	0.0332	0.7419	LHX9	LIM homeobox 9	
TC0700010377.hg.1	5.27	6.44	0.55	0.31	-2.25	2.25	0.0037	0.635	SNX13	sorting nexin 13	
TC0100014652.hg.1	4.44	5.61	0.26	0.54	-2.25	2.25	0.0278	0.7374	ZZZ3	zinc finger Z2-type containing 3	
TC1300009924.hg.1	12.92	14.09	0.82	0.29	-2.24	2.24	0.0465	0.7625	GAS6	growth arrest-specific 6	
TC0100006564.hg.1	3.54	4.71	0.43	0.4	-2.24	2.24	0.0053	0.6602	D	transmembrane protein 50A	
TC1600006996.hg.1	5.06	6.22	0.33	0.68	-2.23	2.23	0.0404	0.7511	BFAR	bifunctional apoptosis regulator	
TC0200015456.hg.1	3.32	4.47	0.34	0.57	-2.23	2.23	0.0092	0.671	BMPR2	bone morphogenic protein receptor II	

TC0200008468.hg.1	6.68	7.84	0.4	0.4	-2.23	2.23	0.001	0.5917		FAHD2A	fumarylacetoacetate hydrolase domain containing 2A	
TC0500007984.hg.1	2.67	3.82	0.12	0.19	-2.23	2.23	0.0002	0.5406	LOC105379057	LOC105379057		
TC0200011356.hg.1	7.83	8.98	0.35	0.3	-2.22	2.22	0.0004	0.5406	GPC1	glypican 1		
TC1200010005.hg.1	3.68	4.82	0.69	0.11	-2.21	2.21	0.0399	0.751	ATF7IP	activating transcription factor 7 interacting protein		
TC0800007150.hg.1	8.94	10.08	0.46	0.55	-2.21	2.21	0.0015	0.5917	KIF13B	kinesin family member 13B		
TC0300013886.hg.1	11.77	12.92	0.2	0.47	-2.21	2.21	0.0064	0.6674	ZIC1	Zic family member 1		
TC1000010008.hg.1	4.18	5.32	0.74	0.66	-2.2	2.2	0.0051	0.6574	DNAJC1	DnaJ heat shock protein family (Hsp40) member C1		
TC0600006869.hg.1	10.72	11.86	0.21	0.11	-2.2	2.2	0.001	0.5917	DSP	desmoplakin		
TC1000011998.hg.1	3.22	4.35	0.25	0.51	-2.2	2.2	0.0036	0.6269	GRK5	G protein-coupled receptor kinase 5		
TC0200010657.hg.1	3.31	4.45	0.47	0.55	-2.2	2.2	0.0136	0.6926	LANCL1	LanC-like 1		
TC0800007998.hg.1	2.66	3.79	0.25	0.51	-2.19	2.19	0.0011	0.5917	HIGD1AP6	HIG1 hypoxia inducible domain family member 1A pseudogene 6		
TC0300013941.hg.1	3.04	4.17	0.17	0.58	-2.19	2.19	0.0164	0.7092	MKRN2OS	MKRN2 opposite strand		
TC0200007774.hg.1	3.14	4.27	0.28	0.38	-2.19	2.19	0.02	0.7205	WDPCP	WD repeat containing planar cell polarity effector		
TC1500010203.hg.1	3.32	4.44	0.45	0.75	-2.18	2.18	0.0459	0.7609	D	CEMIP	cell migration inducing protein, hyaluronan binding	
TC0600010160.hg.1	10.61	11.73	0.15	0.37	-2.18	2.18	0.0024	0.6041	RNA5SP226	H5S ribosomal pseudogene 226		
TC0100015654.hg.1	11.9	13.02	0.47	0.42	-2.18	2.18	0.0025	0.6123	RNVU1-1	RNA, variant U1 small nuclear 1		
TC0100016794.hg.1	6.39	7.51	1.02	0.6	-2.17	2.17	0.0143	0.6965	B3GALT2	UDP-Gal:betaGlcNAc beta 1,3-galactosyltransferase 2		
TC0600007959.hg.1	6.19	7.31	0.59	0.51	-2.17	2.17	0.0051	0.6578	DAAM2	dishevelled associated activator of morphogenesis 2		
TC0100017634.hg.1	11.38	12.5	0.44	0.2	-2.17	2.17	0.0006	0.5837	RNA5S9	RNA, SS ribosomal 9		
TC0100018238.hg.1	12.9	14.01	0.61	0.28	-2.16	2.16	0.0093	0.6713	DNAJB4	DnaJ (Hsp40) homolog, subfamily B, member 4		
TC1000012126.hg.1	3.95	5.06	0.4	0.18	-2.16	2.16	0.02	0.7205	LHPP	phospholysine phosphohistidine inorganic pyrophosphate phosphatase		
TC1200010932.hg.1	5.23	6.35	0.54	0.36	-2.16	2.16	0.006	0.6674	PTGES3	prostaglandin E synthase 3		
TC0800011927.hg.1	10.21	11.32	0.44	0.49	-2.16	2.16	0.006	0.6674	RNU1-35P	RNA, U1 small nuclear 35, pseudogene		
TC0100016431.hg.1	7.04	8.15	0.78	0.41	-2.16	2.16	0.027	0.7372	TNFSF4	tumor necrosis factor (ligand) superfamily, member 4		
TC0900008576.hg.1	6.19	7.29	0.42	0.44	-2.15	2.15	0.0165	0.7092	ASTN2	astrotactin 2		
TC0400010337.hg.1	3.33	4.43	0.5	0.31	-2.15	2.15	0.0032	0.6196	LINC02472	long intergenic non-protein coding RNA 2472		
TC1100010015.hg.1	5.43	6.53	0.37	0.03	-2.15	2.15	0.0043	0.6495	NLRP10	NLR family pyrin domain containing 10		
TC0700008745.hg.1	3.71	4.81	0.29	0.31	-2.15	2.15	0.0103	0.6725	PRKAR2B	protein kinase, cAMP-dependent, regulatory, type II, beta		
TC0300008381.hg.1	7.67	8.78	0.77	0.01	-2.15	2.15	0.0402	0.751	QTRTD1	queuine tRNA-ribosyltransferase domain containing 1		
TC0600011144.hg.1	3.36	4.46	0.41	0.33	-2.14	2.14	0.0172	0.7113	HIST1H4H	histone cluster 1 H4 family member h		
TC1000010192.hg.1	3.77	4.87	0.47	1.3	-2.14	2.14	0.017	0.7096	JCAD	junctional cadherin 5 associated		
TC0300012323.hg.1	11.05	12.15	0.44	0.06	-2.14	2.14	0.0114	0.6847	MGLL	monoglyceride lipase		
TC1600009258.hg.1	5.99	7.08	0.16	0.4	-2.13	2.13	0.0184	0.7145	ALG1	chitobiosyldiphospholichol beta-mannosyltransferase		

TC0600013361.hg.1	4.54	5.63	0.14	0.71	-2.13	2.13	0.0232	0.7299		CITED	CBP/p300 interacting transactivator with Glu/Asp rich carboxy-terminal domain 1
TC0900006820.hg.1	5.91	7	0.5	0.17	-2.13	2.13	0.0014	0.5917		LINC01239	long intergenic non-protein coding RNA 1239
TC1400010214.hg.1	9.75	10.85	0.35	0.14	-2.13	2.13	0.0007	0.5837	D	MEG8	long intergenic non-protein coding RNA (Bsr)
TC1400009697.hg.1	5.18	6.27	0.4	0.26	-2.13	2.13	0.0079	0.6679		MIR4709	microRNA 4709
TC1400009697.hg.1	5.18	6.27	0.4	0.26	-2.13	2.13	0.0079	0.6679		NPC2	NPC intracellular cholesterol transporter 2
TC1900010817.hg.1	6.2	7.29	0.51	0.31	-2.13	2.13	0.0079	0.6679		PSG8	pregnancy specific beta-1-glycoprotein 8
TC0400007901.hg.1	9.43	10.52	0.52	0.15	-2.13	2.13	0.0019	0.5917		SHROOM3	shroom family member 3
TC0300013509.hg.1	2.89	3.98	0.32	0.53	-2.13	2.13	0.0048	0.6495		TP63	tumor protein p63
TC0800011956.hg.1	3.35	4.43	0.41	0.66	-2.12	2.12	0.0248	0.7317		COL22A1	collagen type XXII alpha 1 chain
TC1700011407.hg.1	3.27	4.36	0.32	0.21	-2.12	2.12	0.0002	0.5406		CYB561	cytochrome b561
TC1400007620.hg.1	2.97	4.06	0.21	0.77	-2.12	2.12	0.0133	0.6916		DCAF4	DDB1 and CUL4 associated factor 4
TC1100012777.hg.1	15.02	16.1	0.45	0.21	-2.12	2.12	0.0027	0.6175		ETS1	ETS proto-oncogene 1, transcription factor
TC1000011024.hg.1	3.33	4.42	0.38	0.69	-2.12	2.12	0.0467	0.7634		MSS51	MSS51 mitochondrial translational activator
TC0300014054.hg.1	6.79	7.88	0.21	0.49	-2.12	2.12	0.0113	0.6846		PIK3CB	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit beta
TC1100009397.hg.1	4.35	5.44	0.37	0.49	-2.12	2.12	0.0076	0.6679		SPA17	sperm autoantigenic protein 17
TC1300009022.hg.1	2.84	3.92	0.08	0.44	-2.12	2.12	0.0056	0.6602		SUGT1	SGT1 homolog, MIS12 kinetochore complex assembly cochaperone
TC1200010182.hg.1	3.68	4.76	0.3	0.43	-2.11	2.11	0.005	0.6564		BHLHE41	basic helix-loop-helix family, member e41
TC1000012216.hg.1	5.11	6.19	0.28	0.31	-2.11	2.11	0.0002	0.5406		DOCK1	dedicator of cytokinesis 1
TC1000012216.hg.1	5.11	6.19	0.28	0.31	-2.11	2.11	0.0002	0.5406		FAM196A	family with sequence similarity 196 member A
TC0600006656.hg.1	4.69	5.77	0.15	0.45	-2.11	2.11	0.0072	0.6679		RIPK1	receptor interacting serine/threonine kinase 1
TC100014621.hg.1	2.71	3.79	0.07	0.56	-2.11	2.11	0.0094	0.6713		SLC44A5	solute carrier 44 member A5
TC1300008615.hg.1	4.65	5.73	0.6	0.44	-2.11	2.11	0.0208	0.7206		SPART	spartin
TC1600008992.hg.1	4.31	5.38	0.13	0.5	-2.1	2.1	0.0122	0.6876		LMF1	lipase maturation factor 1
TC0100011096.hg.1	13.78	14.85	0.27	0.16	-2.1	2.1	0.008	0.6679		NEK7	NIMA-related kinase 7
TC0100013908.hg.1	9.66	10.73	0.13	0.31	-2.1	2.1	0.0133	0.6916		SLC2A1	solute carrier 2 member 1 (facilitated glucose transporter)
TC0600007864.hg.1	6.52	7.59	0.25	0.58	-2.1	2.1	0.0172	0.7113		TBC1D22B	TBC1 domain family, member 22B
TC1100011052.hg.1	7.08	8.15	0.2	0.4	-2.09	2.09	0.0266	0.7354		FADS3	fatty acid desaturase 3
TC0X00010036.hg.1	4.25	5.31	1.1	0.03	-2.09	2.09	0.0484	0.7639		HDAC8	histone deacetylase 8
TC2000006790.hg.1	4.99	6.05	0.33	0.53	-2.09	2.09	0.0352	0.7433		RNU1-131P	RNA, U1 small nuclear 131, pseudogene
TC1500010018.hg.1	9.43	10.5	0.52	0.12	-2.09	2.09	0.0067	0.6679		SEMA7A	semaphorin 7A
TC1100010172.hg.1	6.01	7.08	0.3	0.54	-2.09	2.09	0.0323	0.7414		SPON1	spondin 1
TC0700008539.hg.1	5.79	6.86	0.46	0.11	-2.09	2.09	0.0045	0.6495		STAG3L5P-PVRIG2P-PILRB	STAG3L5P-PVRIG2P-PILRB readthrough
TC1100007641.hg.1	5.77	6.83	0.42	0.23	-2.08	2.08	0.009	0.6696		OR5M4P	olfactory receptor, family 5, subfamily M, member 4 pseudogene
TC2000006689.hg.1	3.97	5.03	0.42	0.27	-2.08	2.08	0.0138	0.6941		SNAP25	synaptosome associated protein 25
TC1500009071.hg.1	3.2	4.26	0.28	0.41	-2.08	2.08	0.0063	0.6674		THBS1	thrombospondin 1

TC1900009363.hg.1	5.66	6.71	0.36	0.31	-2.07	2.07	0.0038	0.6395		DPP9	dipeptidyl peptidase 9
TC0800009527.hg.1	4.62	5.67	0.48	1.02	-2.07	2.07	0.0356	0.7437		ERI1	exoribonuclease 1
TC1500006775.hg.1	2.59	3.64	0.2	0.66	-2.07	2.07	0.037	0.7449		GOLGA8O	golgin A8 family member O
TC0500008539.hg.1	10.87	11.92	0.53	0.43	-2.07	2.07	0.0109	0.6793		GRAMD3	GRAM domain containing 3
										myosin, heavy polypeptide 10, non-muscle	
TC1700006821.hg.1	5.23	6.28	0.08	0.16	-2.07	2.07	0.0004	0.5406		MYH10	
TC1200008641.hg.1	6.9	7.95	0.54	0.32	-2.07	2.07	0.0133	0.6916		NUP37	nucleoporin 37
TC0800009226.hg.1	2.8	3.84	0.28	0.75	-2.07	2.07	0.0095	0.6713		PLEC	plectin
										amyloid beta (A4) precursor protein-binding, family B, member 2	
TC0400010519.hg.1	9.89	10.94	0.43	0.13	-2.06	2.06	0.0048	0.6495		APBB2	
TC0300006483.hg.1	9.02	10.06	0.26	0.38	-2.06	2.06	0.0003	0.5406		BHLHE40	basic helix-loop-helix family, member e40
TC1100012083.hg.1	3.35	4.39	0.17	0.49	-2.06	2.06	0.016	0.7056		CNTN5	contactin 5
										ELKS/RAB6-i-interacting CASE family member 2	
TC0300007551.hg.1	3.1	4.14	0.27	0.79	-2.06	2.06	0.0229	0.7298		ERC2	
TC0200011052.hg.1	4.08	5.12	0.5	0.52	-2.06	2.06	0.0237	0.7299		PSMD1	proteasome 26S subunit, non-ATPase 1
TC0400010427.hg.1	4.36	5.4	0.35	0.53	-2.06	2.06	0.0029	0.6175		TBC1D1	TBC1 domain family, member 1
TC0300013350.hg.1	3.63	4.67	0.34	0.44	-2.06	2.06	0.0248	0.7317		YEATS2	YEATS domain containing 2
										CCR4-NOT transcription complex subunit 1	
TC0200013663.hg.1	3.27	4.31	0.65	0.67	-2.05	2.05	0.0293	0.7382		CNOT1	
TC0900011401.hg.1	3.29	4.32	0.15	0.51	-2.05	2.05	0.0017	0.5917	D	GSN	gelsolin
TC1500009703.hg.1	11.12	12.16	0.46	0.27	-2.05	2.05	0.002	0.594		LAETB	lactamase beta
TC1200009072.hg.1	7.86	8.9	0.88	0.25	-2.05	2.05	0.0372	0.7449		TAOK3	TAO kinase 3
										glucosaminyl (N-acetyl) transferase 2, I-branched enzyme	
TC0600006922.hg.1	3.69	4.72	0.46	0.58	-2.04	2.04	0.023	0.7299		GCNT2	
TC1700010648.hg.1	6.42	7.45	0.15	0.48	-2.04	2.04	0.0125	0.6893		KTRAP1-5	keratin associated protein 1-5
TC0300012570.hg.1	3.99	5.02	0.35	0.44	-2.04	2.04	0.0395	0.7509		MRAS	muscle Ras
TC1200012579.hg.1	5.17	6.2	0.52	0.16	-2.04	2.04	0.0044	0.6495		NTF3	neurotrophin 3
TC2200007151.hg.1	2.99	4.02	0.57	0.41	-2.04	2.04	0.01	0.6713		SYN3	synapsin III
TC2200007151.hg.1	2.99	4.02	0.57	0.41	-2.04	2.04	0.01	0.6713		TIMP3	TIMP metallopeptidase inhibitor 3
										ATP binding cassette subfamily A member 6	
TC1700011578.hg.1	4.02	5.04	0.21	0.29	-2.03	2.03	8.21E-05	0.4854		ABCA6	chromosome 9 open reading frame 116 (PIERC1)
TC0900011938.hg.1	3.48	4.5	0.38	0.32	-2.03	2.03	0.0079	0.6679		C9orf116	
TC0600008721.hg.1	3.58	4.6	0.22	0.56	-2.03	2.03	0.0074	0.6679		CGA	glycoprotein hormones, alpha polypeptide (CG; LH; FSH; TSH)
										hepatocellular carcinoma up-regulated EZH2-associated long non-coding RNA	
TC0500013107.hg.1	6.63	7.65	0.21	0.34	-2.03	2.03	0.0175	0.7113		HEIH	
TC1500007102.hg.1	5.12	6.14	0.15	0.47	-2.03	2.03	0.0012	0.5917		RNU1-119P	RNA, U1 small nuclear 119, pseudogene
TC0700008262.hg.1	3.8	4.82	0.67	0.43	-2.03	2.03	0.0456	0.7602		SLC25A40	solute carrier family 25 member 40 (mitochondrial carrier protein)
TC0200012128.hg.1	3.76	4.78	0.15	0.84	-2.03	2.03	0.0132	0.6916		SPDYA	speedy/RINGO cell cycle regulator family member A
TC0300011260.hg.1	2.7	3.72	0.14	0.49	-2.02	2.02	0.0236	0.7299		ARHGEF3	Rho guanine nucleotide exchange factor 3 (GEF3)
TC0700010329.hg.1	3.3	4.31	0.12	0.28	-2.02	2.02	0.0449	0.7586		GTF3AP5	general transcription factor IIIA pseudogene 5
TC1200008027.hg.1	3.68	4.69	0.35	0.43	-2.02	2.02	0.0135	0.6926		LEMD3	LEM domain containing 3
TC0400009221.hg.1	15.46	16.47	0.65	0.23	-2.02	2.02	0.0076	0.6679		MSMO1	methylsterol monooxygenase 1

TC0700010441.hg.1	2.86	3.88	0.47	0.45	-2.02	2.02	0.0343	0.7424		RAPGEF5	Rap guanine nucleotide exchange factor 5
TC1800008358.hg.1	3.59	4.6	0.38	0.81	-2.01	2.01	0.0098	0.6713		CDH2	cadherin 2, type 1, N-cadherin (neuronal)
TC0400009001.hg.1	3.6	4.61	0.31	0.72	-2.01	2.01	0.0166	0.7092		FAM160A1	family with sequence similarity 160, member A1
TC0200006674.hg.1	8.02	9.03	0.17	0.61	-2.01	2.01	0.042	0.7539		KLF11	Kruppel-like factor 11
TC0300006520.hg.1	5.55	6.55	0.56	0.24	-2.01	2.01	0.0465	0.7625		LINC00312	long intergenic non-protein coding RNA 312
TC0500011453.hg.1	4.91	5.91	0.34	0.35	-2.01	2.01	0.0059	0.6674		LOC105379082	LOC105379082
TC1100008196.hg.1	6.19	7.19	0.6	0.26	-2.01	2.01	0.0169	0.7092		PPP6R3	protein phosphatase 6 regulatory subunit 3
TC0400010282.hg.1	7.47	8.48	0.07	0.13	-2.01	2.01	0.0019	0.594		SEL1L3	sel-1 suppressor of lin-12-like 3 (C. elegans)
TC0300009052.hg.1	2.56	3.56	0.35	0.15	-2.01	2.01	0.0093	0.6713		SLC9A9	solute carrier family 9 member A9 (NHE9)
TC0700010989.hg.1	3.05	4.06	0.3	0.35	-2.01	2.01	0.0182	0.7124		TNS3	tensin 3
TC1200007023.hg.1	3.5	4.5	0.14	0.5	-2	2	0.0186	0.7163		AEBP2	AE binding protein 2
TC0100014276.hg.1	11.83	12.83	0.65	0.09	-2	2	0.028	0.7374		DHCR24	24-dehydrocholesterol reductase
TC0500012283.hg.1	2.44	3.44	0.09	0.5	-2	2	0.0233	0.7299		HDAC3	histone deacetylase 3
TC0300012437.hg.1	3.6	4.6	0.36	0.29	-2	2	0.0144	0.6965		RNU6-726P	RNA, U6 small nuclear 726, pseudogene
TC0100011321.hg.1	4.73	3.73	0.99	0.23	2	-2	0.0371	0.7449		CNTN2	contactin 2
											microtubule associated monooxygenase, calponin and LIM domain containing 2
TC1100010131.hg.1	5.16	4.15	0.54	0.34	2	-2	0.0059	0.6653		MICAL2	ribosome binding protein 1
TC2000008499.hg.1	4.46	3.46	0.42	0.22	2	-2	0.0143	0.6965		RYR2	ryanodine receptor 2
TC0100017872.hg.1	5	4	0.41	0.4	2	-2	0.0232	0.7299		SEMA6D	semaphorin 6D
TC1500009319.hg.1	7.93	6.93	0.84	0.44	2	-2	0.0085	0.6681		SKI	SKI proto-oncogene
TC0100006567.hg.1	6.5	5.5	0.12	0.48	2	-2	0.004	0.6435		WBP4	WW domain binding protein 4
TC1300006966.hg.1	4.87	3.87	0.29	0.27	2	-2	0.0245	0.7317		AQP11	aquaporin 11
TC1100008532.hg.1	4.43	3.42	0.21	0.56	2.01	-2.01	0.0236	0.7299		ATXN10	ataxin 10
TC2200007627.hg.1	4.56	3.56	0.37	0.43	2.01	-2.01	0.0143	0.6965		GHR	growth hormone receptor
TC0500007264.hg.1	4.15	3.14	0.58	0.44	2.01	-2.01	0.016	0.7056		ITSN2	intersectin 2
TC0200011981.hg.1	3.55	2.54	0.21	0.19	2.01	-2.01	0.001	0.5917		LSP1P5	LSP1 pseudogene 5
TC0100015523.hg.1	7.75	6.74	0.23	0.36	2.01	-2.01	0.0009	0.5917		LURAP1L	leucine rich adaptor protein 1-like
TC0900006655.hg.1	4.38	3.37	0.14	0.41	2.01	-2.01	0.004	0.6435		MAML2	mastermind like transcriptional coactivator 2
TC1100012041.hg.1	6.01	5.01	0.72	0.13	2.01	-2.01	0.0057	0.6602		METTL7B	methyltransferase like 7B
TC1200007804.hg.1	4.03	3.03	0.18	0.42	2.01	-2.01	0.0256	0.7354		MYCBP2	MYC binding protein 2, E3 ubiquitin protein ligase
TC1300009296.hg.1	4.48	3.47	0.09	0.54	2.01	-2.01	0.0307	0.7392	D	PLEKHM2	pleckstrin homology and RUN domain containing M2
TC0100006995.hg.1	4.31	3.3	0.59	0.1	2.01	-2.01	0.0111	0.6811		RNU6-787P	RNA, U6 small nuclear 787, pseudogene
TC0300011422.hg.1	7.77	6.77	0.19	0.51	2.01	-2.01	0.0203	0.7205		SCIN	scinderin
TC0700006735.hg.1	13.61	12.6	0.5	0.17	2.01	-2.01	0.0076	0.6679		SLC22A18	solute carrier family 22, member 18
TC0800011550.hg.1	4.82	3.82	0.47	0.44	2.01	-2.01	0.0019	0.5917	D	TRPS1	transcriptional repressor GATA binding 1
TC0100011211.hg.1	4.29	3.27	0.31	0.47	2.02	-2.02	0.0118	0.6853		GRPR37L1	G protein-coupled receptor 37 like 1
TC0600007988.hg.1	5.61	4.6	0.76	0.46	2.02	-2.02	0.0085	0.6681		NFYA	nuclear transcription factor Y
TC0900009771.hg.1	5.41	4.39	0.29	0.41	2.02	-2.02	0.0322	0.7411		PLAA	phospholipase A2 activating protein

TC0700007560.hg.1	3.97	2.96	0.42	0.33	2.02	-2.02	0.0124	0.6887		RNU1-14P	RNA, U1 small nuclear 14, pseudogene
TC0800012298.hg.1	7.96	6.94	0.23	0.45	2.02	-2.02	0.0232	0.7299	SMIM19	small integral membrane protein 19	
TC1300009012.hg.1	4.7	3.68	0.29	0.33	2.02	-2.02	0.009	0.6696		THSD1	thrombosponding type 1 domain containing 1
TC1100010472.hg.1	4.19	3.17	0.23	0.34	2.03	-2.03	0.0018	0.5917	CDC73	coiled-coil domain containing 73	
TC0100008457.hg.1	3.67	2.65	0.66	0.48	2.03	-2.03	0.0479	0.7637	DAB1	reelin adaptor protein	
TC0800007061.hg.1	4.62	3.6	0.45	0.34	2.03	-2.03	0.046	0.7609	DOCK5	dedicator of cytokinesis 5	
TC0600008281.hg.1	10.81	9.78	0.26	0.63	2.03	-2.03	0.0058	0.6629	ELOV5	ELOVL family member 5	
TC0600007519.hg.1	4.2	3.17	0.52	0.28	2.03	-2.03	0.0036	0.6276	HCG17	HLA complex group 17 (ncRNA)	
TC0700006813.hg.1	4.54	3.52	0.28	0.1	2.03	-2.03	0.0135	0.6926	HDAC9	histone deacetylase 9	
TC0300010904.hg.1	6.13	5.11	0.32	0.67	2.03	-2.03	0.0386	0.7486	KIAA1143	KIAA1143	
TC0100007413.hg.1	4.33	3.31	0.3	0.08	2.03	-2.03	0.0096	0.6713	MAN1C1	mannosidase alpha 1C	
TC0600009326.hg.1	4.91	3.89	0.33	0.48	2.03	-2.03	0.0084	0.6679	SERINC1	serine incorporator 1	
TC0200012623.hg.1	3.96	2.93	0.18	0.23	2.03	-2.03	0.0014	0.5917	SPTBN1	spectrin beta, non-erythrocytic 1	
TC1200012719.hg.1	4.9	3.88	0.42	0.84	2.03	-2.03	0.0431	0.7562	WDR66	WD repeat domain 66	
TC0200007063.hg.1	6.8	5.77	0.55	0.44	2.04	-2.04	0.0129	0.6911	EIF2B4	eukaryotic translation initiation factor 2B subunit delta	
TC0X0007418.hg.1	4.23	3.21	0.29	0.12	2.04	-2.04	0.0006	0.5837	FAAH2	fatty acid amide hydrolase 2	
TC0100017457.hg.1	8.38	7.35	0.16	0.28	2.04	-2.04	0.0008	0.5917	GTF2IP20	general transcription factor ii pseudogene 20	
TC0200011281.hg.1	4.78	3.75	0.15	0.16	2.04	-2.04	0.0004	0.549	PER2	period circadian clock 2	
TC0700007952.hg.1	8.24	7.22	0.19	0.37	2.04	-2.04	0.0058	0.6629	POM121	POM121 transmembrane nucleoporin	
TC2200007056.hg.1	4.55	3.52	0.28	0.69	2.04	-2.04	0.0189	0.7167	RNU6-564P	RNA, U6 small nuclear 564, pseudogene	
TC0500008809.hg.1	6.19	5.16	0.27	0.33	2.04	-2.04	0.0225	0.7287	RNU6-572P	RNA, U6 small nuclear 572, pseudogene	
TC2200007056.hg.1	4.55	3.52	0.28	0.69	2.04	-2.04	0.0189	0.7167	SEC14L2	SEC14 like lipid binding 2	
TC1000011727.hg.1	10.36	9.33	0.37	0.38	2.04	-2.04	0.0064	0.6674	SH3PXD2A	SH3 and PX domains 2A	
TC0X00011259.hg.1	4.91	3.88	0.47	0.12	2.04	-2.04	0.02	0.7205	STS	steroid sulfatase (microsomal)	
TC0300007015.hg.1	4.71	3.67	0.63	0.33	2.05	-2.05	0.0237	0.7299	ARPP21	cAMP regulated phosphoprotein 21	
TC0100011149.hg.1	5.86	4.82	0.19	0.22	2.05	-2.05	0.0011	0.5917	CAMSAP2	calmodulin regulated spectrin associated protein family member 2	
TC0800011112.hg.1	6.83	5.8	0.38	0.24	2.05	-2.05	0.0364	0.7449	FAM92A	family with sequence similarity 92 member A	
TC0400009803.hg.1	5.44	4.41	0.54	0.37	2.05	-2.05	0.0227	0.7287	HTT	huntingtin	
TC1400009126.hg.1	5.52	4.49	0.34	0.32	2.05	-2.05	0.0355	0.7437	L2HGDH	L-2-hydroxyglutarate dehydrogenase	
TC1100009112.hg.1	4.56	3.53	0.17	0.58	2.05	-2.05	0.0114	0.6848	NNMT	nicotinamide N-methyltransferase	
TC0400006642.hg.1	5.08	4.04	0.26	0.15	2.05	-2.05	4.76E-05	0.4807	STX18	syntaxin 18	
TC0300008404.hg.1	4.26	3.22	0.86	0.18	2.05	-2.05	0.0448	0.7586	ZBTB20	zinc finger and BTB domain containing 20	
TC0500011438.hg.1	4.74	3.7	0.29	0.26	2.06	-2.06	0.0011	0.5917	ADGRV1	adhesion G protein-coupled receptor V1	
TC0600013419.hg.1	6.63	5.59	0.32	0.13	2.06	-2.06	0.0011	0.5917	AIG1	androgen induced 1	
TC0500007726.hg.1	8.97	7.93	0.26	0.54	2.06	-2.06	0.0226	0.7287	BDP1	B double prime 1, subunit of RNA polymerase 3B	
TC0900006753.hg.1	6.22	5.17	0.52	0.64	2.06	-2.06	0.0463	0.7616	HAUS6	HAUS augmin like complex subunit 6	
TC0600009999.hg.1	4.68	3.63	0.43	0.66	2.06	-2.06	0.0292	0.7382	HSPE1P26	heat shock protein family E (Hsp10) member 1 pseudogene 26	
TC0500009395.hg.1	4.17	3.13	0.65	0.4	2.06	-2.06	0.0178	0.7119	LCP2	lymphocyte cytosolic protein 2	
TC0500012541.hg.1	8.41	7.36	0.45	0.19	2.06	-2.06	0.0053	0.6602	MFAP3	microfibril associated protein 3	
TC0600011666.hg.1	6.94	5.9	0.24	0.13	2.06	-2.06	0.0012	0.5917	RNU1-88P	RNA, U1 small nuclear 88, pseudogene	

TC0100013199.hg.1	5.07	4.03	0.7	0.37	2.06	-2.06	0.0289	0.7374		RPS15AP6	ribosomal protein S15a pseudogene 6
TC1700008571.hg.1	5.28	4.24	0.27	0.09	2.06	-2.06	0.0018	0.5917		STRADA	STE20-related kinase adaptor alpha
TC0200012990.hg.1	6.69	5.65	0.35	0.53	2.06	-2.06	0.0131	0.6916		TIA1	TIA1 cytotoxin granule associated RNA binding protein 1
TC1600009119.hg.1	4.04	3	0.48	0.27	2.07	-2.07	0.0377	0.7456		AMDHD2	amidohydrolase domain containing 2
TC0100008921.hg.1	5.82	4.77	0.2	0.06	2.07	-2.07	0.0217	0.7257		CLCA2	chloride channel accessory 2
TC1100011514.hg.1	5.22	4.17	0.48	0.35	2.07	-2.07	0.0034	0.6229		DHCR7	7-dehydrocholesterol reductase
TC0100014154.hg.1	4.68	3.63	0.27	0.2	2.07	-2.07	0.0013	0.5917		FAF1	Fas-associated factor 1
TC0100012421.hg.1	10.88	9.83	0.14	0.5	2.07	-2.07	0.0025	0.6123		FAM41C	family with sequence similarity 41, member C
TC1200008302.hg.1	5.79	4.74	0.84	0.59	2.07	-2.07	0.0454	0.7595		LIN7A	lin-7 homolog A, crumbs cell polarity complex component
TC0300009826.hg.1	4.31	3.26	0.73	0.4	2.07	-2.07	0.034	0.7423		LPP	LIM domain containing preferred translocation partner in lipoma
TC0100009702.hg.1	6.91	5.87	0.25	0.32	2.07	-2.07	0.003	0.6196	D	NBPF10	neuroblastoma breakpoint family member 10
TC1600009706.hg.1	5.5	4.45	0.55	0.26	2.07	-2.07	0.0056	0.6602	D	NPIP5	nuclear pore complex interacting protein family member B5
TC0900011331.hg.1	5.69	4.64	0.19	0.47	2.07	-2.07	0.0102	0.6715	D	PAPPA	pregnancy-associated plasma protein A, pappalysin 1
TC0100014316.hg.1	7.46	6.41	0.54	0.6	2.07	-2.07	0.038	0.7466	D	PPAP2B	phosphatidic acid phosphatase 2B
TC1600009347.hg.1	7.17	6.13	0.8	0.25	2.07	-2.07	0.0164	0.7092		RNA55P403	RNA, 5S ribosomal pseudogene 403
TC0600012620.hg.1	10.15	9.1	0.59	0.26	2.07	-2.07	0.0418	0.7532		RNU4-70P	RNA, U4 small nuclear 70, pseudogene
TCUnmapped0000505.hg.1	6.31	5.26	0.2	0.27	2.07	-2.07	0.0016	0.5917		SERTAD4-AS1	SERTAD4 antisense RNA 1
TC0500009560.hg.1	4.89	3.84	0.64	0.56	2.07	-2.07	0.0155	0.7034		SFXN1	sideroflexin 1
TC0700012463.hg.1	6.44	5.39	1.06	0.49	2.07	-2.07	0.0129	0.6911		WASL	Wiskott-Aldrich syndrome like
TC0300007975.hg.1	4.04	2.99	0.56	0.34	2.08	-2.08	0.0203	0.7205		CADM2	cell adhesion molecule 2 (SynCAM2)
TC170001008.hg.1	4.52	3.46	0.61	0.37	2.08	-2.08	0.0228	0.7293	D	EPN2	epsin 2
TC0600007272.hg.1	7.11	6.05	0.44	0.56	2.08	-2.08	0.0216	0.7242		HIST1H2AC	histone cluster 1 H2A family member c
TC0100009143.hg.1	6.1	5.05	0.06	0.13	2.08	-2.08	0.02	0.7205	D	PTBP2	polyglutamine tract binding protein 2
TC1800007617.hg.1	6.4	5.34	0.9	0.41	2.08	-2.08	0.0062	0.6674		RTTN	rotatin
TC2000007107.hg.1	5.92	4.87	0.7	0.79	2.08	-2.08	0.0331	0.7419		TM9SF4	transmembrane 9 superfamily member 4
TC2200007198.hg.1	5.84	4.78	0.52	0.47	2.08	-2.08	0.0081	0.6679		TOM1	target of myb1 membrane trafficking protein
TC0700008901.hg.1	4.11	3.05	0.53	0.34	2.09	-2.09	0.026	0.7354		ANKRD7	ankyrin repeat domain 7
TC1600011221.hg.1	4.08	3.02	0.42	0.12	2.09	-2.09	0.0045	0.6495		MVD	mevalonate (diphospho) decarboxylase
TC1700008130.hg.1	5.14	4.08	0.51	0.32	2.09	-2.09	0.008	0.6679	D	NPEPPS	aminopeptidase puromycin sensitive
TC1700008131.hg.1	4.86	3.79	0.23	0.51	2.09	-2.09	0.0136	0.6926	D	NPEPPS	aminopeptidase puromycin sensitive
TC0200013669.hg.1	12.85	11.79	0.72	0.36	2.09	-2.09	0.0433	0.7567	D	RFX8	RFX family member 8, lacking RFX DNA binding domain
TC1500007386.hg.1	8.27	7.2	0.16	0.29	2.09	-2.09	0.001	0.5917	D	RNF111	ring finger protein 111
TC1500007386.hg.1	8.27	7.2	0.16	0.29	2.09	-2.09	0.001	0.5917	D	SLTM	SAFB-like, transcription modulator
TC0700010250.hg.1	3.93	2.87	0.67	0.28	2.09	-2.09	0.0343	0.7424		UMAD1	UBAP-MVB12-associated (UMA) domain containing 1
TC1100011809.hg.1	5.46	4.39	0.1	0.57	2.1	-2.1	0.0191	0.7167		ANKRD42	ankyrin repeat domain 42
TC1400009999.hg.1	6.64	5.57	0.5	0.59	2.1	-2.1	0.004	0.6437		CPSF2	cleavage and polyadenylation specific factor 2
TC0200016641.hg.1	5.19	4.12	0.31	0.08	2.1	-2.1	0.0023	0.6008		DNMT3A	DNA methyltransferase 3alpha
TC0100018570.hg.1	8.83	7.75	0.27	0.11	2.1	-2.1	0.0005	0.5735		HNRNPU	heteronuclear ribonucleoprotein U

TC0600009857.hg.1	3.71	2.64	0.5	0.42	2.1	-2.1	0.0219	0.7272	D	MTHFD1L	methylenetetrahydrofolate dehydrogenase 1-like
TC1000008643.hg.1	5.49	4.42	0.23	0.26	2.1	-2.1	0.0015	0.5917		SCD	stearyl-CoA desaturase (delta-9-desaturase)
TC0900007520.hg.1	6.59	5.52	0.94	0.45	2.1	-2.1	0.0158	0.7053		SMC5	structural maintenance of chromosomes 5
TC0600009755.hg.1	7.4	6.33	0.53	0.53	2.1	-2.1	0.0147	0.6965		STXBP5	syntaxis binding protein 5; tomosyn
TC1300008559.hg.1	5.22	4.15	0.38	0.77	2.11	-2.11	0.045	0.7586		N4BP2L2	NEDD binding protein 2 like 2
TC0900008668.hg.1	7.31	6.23	0.36	0.01	2.11	-2.11	0.0044	0.6495		OR1H1P	olfactory receptor, family 1, subfamily H, member 1 pseudogene
TC0700012913.hg.1	7.7	6.62	0.68	0.55	2.11	-2.11	0.0152	0.7	D	OR2A1-AS1	OR2A1 antisense RNA 1
TC0300011557.hg.1	4.96	3.88	0.21	0.08	2.11	-2.11	0.0003	0.5406		PDZRN3	PDZ domain containing ring finger 3
TC1600007200.hg.1	6.67	5.59	0.32	0.36	2.11	-2.11	0.0035	0.6269		SMG1P1	SMG1 pseudogene 1
TC0600010564.hg.1	4.77	3.69	0.08	0.26	2.12	-2.12	0.0003	0.5406		BPHL	biphenyl hydrolase like
TC0100014954.hg.1	6.09	5.01	0.48	0.52	2.12	-2.12	0.0267	0.7354		CCDC18-AS1	CCDC18 antisense RNA 1
TC0400012744.hg.1	6.76	5.68	1.02	0.44	2.12	-2.12	0.015	0.6978		FRG1-DT	FRG1 divergent transcript
TC1400008934.hg.1	4.73	3.65	0.15	0.59	2.12	-2.12	0.0296	0.7392		KIAA0391	KIAA0391
TC1300009547.hg.1	4.16	3.07	0.61	0.74	2.12	-2.12	0.0353	0.7433		MBNL2	muscleblind like splicing factor 2
TC1600007181.hg.1	8.17	7.08	0.05	0.42	2.12	-2.12	0.0069	0.6679		NPIP84	nuclear pore complex interacting protein family member 84
TC0900006557.hg.1	4.08	3	0.23	0.43	2.12	-2.12	0.0073	0.6679		PLGRKT	plasminogen receptor with a C-terminal lysine
TC1100010478.hg.1	12.19	11.11	0.11	0.41	2.12	-2.12	0.0086	0.6681		QSER1	glutamine and serine rich 1
TC0200008653.hg.1	6.48	5.4	0.63	0.49	2.12	-2.12	0.0178	0.7119	D	RFX8	RFX family member 8, lacking RFX DNA binding domain
TC0200011383.hg.1	7	5.92	0.57	0.15	2.12	-2.12	0.0078	0.6679		SNED1	sushi, nidogen and EGF-like domain 1
TC0200010145.hg.1	6.56	5.47	0.08	0.45	2.13	-2.13	0.0064	0.6674		CWC22	CWC spliceosome associated protein homolog
TC0400011117.hg.1	5.69	4.6	0.86	0.16	2.13	-2.13	0.0217	0.7257		FRAS1	Frasier extracellular matrix complex subunit 1
TC0700012622.hg.1	3.74	2.64	0.29	0.43	2.13	-2.13	0.0048	0.6495		LINC00513	long intergenic non-protein coding RNA S13
TC0100009755.hg.1	5.93	4.84	0.22	0.29	2.13	-2.13	0.0024	0.6041	D	NBPF10	neuroblastoma breakpoint family member 10
TC0100013858.hg.1	4.7	3.61	0.45	0.13	2.13	-2.13	0.0148	0.6965		SCMH1	sex comb on midleg homolog 1
TC1200011882.hg.1	6.04	4.96	0.35	0.51	2.13	-2.13	0.013	0.6916		TRPV4	transient receptor potential cation channel, subfamily C, member 4
TC0300010166.hg.1	4.7	3.61	0.51	0.34	2.14	-2.14	0.0353	0.7433		GRM7	metabotropic glutamate receptor 7
TC0900011402.hg.1	5.35	4.26	0.37	0.33	2.14	-2.14	0.0021	0.594	D	GSN	gelsolin
TC1500010526.hg.1	7.29	6.19	0.27	0.36	2.14	-2.14	0.0014	0.5917		MCTP2	multiple C2 and transmembrane domain containing 2
TC0100010412.hg.1	4.52	3.43	0.33	0.16	2.14	-2.14	0.0008	0.5917		RNUSF-6P	RNA, U6 small nuclear 6, pseudogene
TC0600011533.hg.1	4.86	3.77	0.62	0.47	2.14	-2.14	0.0248	0.7317		VPS52	VPS52, GARP complex subunit
TC1000008756.hg.1	3.9	2.8	0.95	0.34	2.15	-2.15	0.0369	0.7449		BORCS7-ASMT	BORCS7-ASMT readthrough
TC0100012444.hg.1	8.1	7	0.14	0.52	2.15	-2.15	0.0239	0.7299		C1orf159	chromosome 1 open reading frame 159
TC1000012165.hg.1	4.35	3.24	0.31	0.22	2.15	-2.15	0.0101	0.6715		DHX32	DEAH-box helicase 32
TC1000011989.hg.1	4.06	2.96	0.37	0.36	2.15	-2.15	0.0018	0.5917		EIF3A	eukaryotic translation inhibition factor 3 subunit A
TC0100010865.hg.1	4.5	3.4	0.25	0.55	2.15	-2.15	0.0018	0.5917		LAMC1	laminin gamma-1 (LAMB2)
TC0X00007399.hg.1	12.17	11.07	0.26	0.51	2.15	-2.15	0.0271	0.7372		NBDY	negative regulator of P-body association (NoBody)

TC0100010432.hg.1	5.11	4	1.04	0.74	2.15	-2.15	0.0321	0.7409	D	PBX1	pre-B cell leukemia homeobox 1
TC1600009762.hg.1	4.38	3.27	0.53	0.15	2.15	-2.15	0.0031	0.6196		RBBP6	RB binding protein 6, ubiquitin ligase
TC0100017359.hg.1	6.37	5.26	0.4	0.71	2.15	-2.15	0.0211	0.7215		SLC30A10	solute carrier 30 member A10 (Zn2+/Mn2+-transporter)
TC0400008130.hg.1	4.11	3.01	0.52	0.35	2.15	-2.15	0.0411	0.7524		SNCA	synuclein alpha
TC1300009224.hg.1	5.89	4.78	0.18	0.5	2.15	-2.15	0.0302	0.7392		SNORD37	Small nucleolar RNA SNORD37
TC1200012081.hg.1	6.65	5.54	0.42	0.43	2.15	-2.15	0.0239	0.7299		TESC-AS1	TESC antisense RNA 1
TC0700010761.hg.1	5.93	4.82	0.46	0.55	2.16	-2.16	0.0066	0.6679		ELMO1	engulfment and cell motility 1
TC0300012240.hg.1	4.91	3.79	0.43	1.02	2.16	-2.16	0.0396	0.7509		HEG1	heart development protein with EGF-like domain 1
TC0800007146.hg.1	10.33	9.22	0.28	0.2	2.16	-2.16	0.0004	0.5476		HMBOX1-IT1	HMBOX1 intronic transcript 1 (non-protein coding)
TC1900008614.hg.1	6.97	5.86	0.44	0.29	2.16	-2.16	0.0093	0.6713		KLK9	kallikrein related peptidase 9
TC1400007775.hg.1	4.86	3.74	0.34	0.16	2.16	-2.16	0.0016	0.5917	D	NRXN3	neurexin 3
TC0400011472.hg.1	6.21	5.1	0.34	0.5	2.16	-2.16	0.0246	0.7317		UBE2D3	ubiquitin conjugating enzyme E2D3
TC0700011322.hg.1	4.59	3.47	0.6	0.54	2.17	-2.17	0.0185	0.7154		CCT6P3	chaperonin containing TCP1 subunit 6 pseudogene 3
TC1200011162.hg.1	4.46	3.34	0.78	0.61	2.17	-2.17	0.0332	0.7419		LINC02408	long intergenic non-protein coding RNA 2408
TC1600007163.hg.1	4.56	3.44	0.75	0.43	2.17	-2.17	0.0321	0.7411		NPIP83	nuclear pore complex interacting protein family member B3
TC0900008441.hg.1	4.23	3.11	0.39	0.19	2.17	-2.17	0.0032	0.6196		UGCG	UDP-glucose ceramide glucosyltransferase
TC1600007114.hg.1	4.56	3.44	0.75	0.43	2.17	-2.17	0.0321	0.7411		VPS35L	VPS35 endosomal protein sorting factor like
TC0500007914.hg.1	3.94	2.82	0.46	0.18	2.17	-2.17	0.0089	0.6696		ZFYVE16	zinc finger FYVE-type containing 16
TC1400009300.hg.1	4.7	3.57	0.67	0.28	2.18	-2.18	0.003	0.6175		CCDC198	coiled-coil domain containing 198
TC0700011551.hg.1	4.49	3.37	0.65	0.37	2.18	-2.18	0.0261	0.7354		POM121C	POM121 transmembrane nucleoporin C
TC0200014741.hg.1	4.75	3.63	0.82	0.51	2.18	-2.18	0.0183	0.7133		RBMS1	RNA binding motif, single-stranded interacting protein 1
TC1700012282.hg.1	5.91	4.79	0.42	0.28	2.18	-2.18	0.0145	0.6965		SPATA20	spermatogenesis associated 20
TC1500008523.hg.1	5.76	4.63	0.06	0.47	2.19	-2.19	0.0086	0.6681	D	MEF2A	myocyte enhancer factor 2A
TC1200006997.hg.1	4.74	3.61	0.63	0.44	2.19	-2.19	0.029	0.7375		PIK3C2G	phosphatidylinositol-4-phosphate 3-kinase catalytic subunit type 2 gamma
TC0500012144.hg.1	5.27	4.14	0.26	0.68	2.19	-2.19	0.0413	0.7524		SIL1	SIL1 nucleotide exchange factor
TC0700010541.hg.1	6.07	4.94	0.36	0.41	2.19	-2.19	0.0045	0.6495		SNX10	sorting nexin 10
TC0200012966.hg.1	6.28	5.15	0.29	0.46	2.2	-2.2	0.0285	0.7374		AAK1	AP2-associated kinase 1
TC1400010594.hg.1	9.17	8.03	0.58	0.45	2.2	-2.2	0.0059	0.6653		FAM177A1	family with sequence similarity 177 member A1
TC1400008262.hg.1	6.35	5.21	0.51	0.26	2.2	-2.2	0.017	0.7096	D	MEG8	long intergenic non-protein coding RNA (Bsr)
TC0200009697.hg.1	5.3	4.16	0.62	0.4	2.2	-2.2	0.0129	0.6911		RPRM	reproto, TP53 dependent G2 arrest mediator homolog
TC1400008369.hg.1	5.57	4.44	0.55	0.22	2.2	-2.2	0.007	0.6679		TRAF3	TNF receptor associated factor 3
TC2000008958.hg.1	3.96	2.82	1.26	0.33	2.2	-2.2	0.0392	0.7497		TRPC4AP	transient receptor potential cation channel, subfamily C, member 4 associated protein
TC0700011467.hg.1	4.59	3.46	0.41	0.18	2.2	-2.2	0.0039	0.6395		TYW1B	tRNA-γW synthesizing protein 1 homolog B
TC1900007244.hg.1	5.93	4.79	0.51	0.97	2.21	-2.21	0.0192	0.7167		CYP4F2	cytochrome P450 family 4 subfamily F member 2

TC1100013032.hg.1	5.97	4.83	0.85	0.33	2.21	-2.21	0.0054	0.6602		DNAJC4	Dnaj (Hsp40) homolog, subfamily C, member 4
TC0500009101.hg.1	6.08	4.94	0.1	0.72	2.21	-2.21	0.0313	0.7392		SMIM3	small integral membrane protein 3
TC0900010975.hg.1	15.59	14.43	0.1	0.43	2.22	-2.22	0.0019	0.5917		GABBR2	gamma-aminobutyric acid (GABA) B receptor, 2
TC0X00010427.hg.1	4.43	3.28	0.5	0.27	2.22	-2.22	0.003	0.6194		MORF4L2	mortality factor 4 like 2
TC0600011864.hg.1	5.98	4.83	0.04	0.33	2.22	-2.22	0.0002	0.5406		PTK7	protein tyrosine kinase 7
TC1800008130.hg.1	3.98	2.83	0.16	0.49	2.22	-2.22	0.0028	0.6175		PTPN2	protein tyrosine phosphatase, non-receptor type 2
TC1400010390.hg.1	4.89	3.73	0.2	0.14	2.23	-2.23	0.0004	0.5406		AHNAK2	AHNAK nucleoprotein 2
TC1200006490.hg.1	4.17	3.01	0.54	0.23	2.23	-2.23	0.0299	0.7392		CACNA1C	calcium voltage-gated channel subunit alpha 1 C (CaV1.2)
TC0300011900.hg.1	4.16	3	0.37	0.15	2.23	-2.23	0.0001	0.5236		CBLB	Cbl proto-oncogene B
TC1600008624.hg.1	8.68	7.52	0.39	0.59	2.23	-2.23	0.0244	0.7317		CDH13	cadherin 13
TC1200010968.hg.1	4.24	3.09	0.5	0.28	2.23	-2.23	0.0361	0.7448		DDIT3	DNA-damage-inducible transcript 3
TC0100010417.hg.1	7.97	6.82	0.61	0.39	2.23	-2.23	0.0284	0.7374	D	PBX1	pre-B cell leukemia homeobox 1
TC0500011993.hg.1	4.5	3.34	0.63	0.63	2.23	-2.23	0.0253	0.7354		RAPGEF6	Rap guanine nucleotide exchange factor 6
TC0200014599.hg.1	11.6	10.44	0.49	0.37	2.23	-2.23	0.0237	0.7299		RND3	Rho family GTPase 3; RhoE
TC0800011611.hg.1	15.81	14.65	0.08	0.38	2.23	-2.23	0.0016	0.5917		TNFRSF11B	tumor necrosis factor receptor superfamily, member 11b
											heterogeneous nuclear ribonucleoprotein A1 pseudogene 57
TC0200012348.hg.1	5.58	4.42	0.26	0.62	2.24	-2.24	0.0006	0.5837		ITGA8	integrin alpha 8
TC1000009893.hg.1	4.39	3.23	0.5	0.34	2.24	-2.24	0.004	0.6423		LDLR	low density lipoprotein receptor
TC1900007012.hg.1	5.03	3.87	0.45	0.33	2.24	-2.24	0.0055	0.6602		LMBR1	limb development membrane protein 1
TC0700013221.hg.1	6.09	4.92	0.57	0.72	2.24	-2.24	0.0442	0.7576		MAP3K20	mitogen activated protein kinase kinase 20
TC0200009990.hg.1	4.11	2.95	0.72	0.19	2.24	-2.24	0.0351	0.7433		MIR6886	microRNA 6886
TC1900007012.hg.1	5.03	3.87	0.45	0.33	2.24	-2.24	0.0055	0.6602		TMEM50A	transmembrane protein 50A
TC0100007399.hg.1	6.29	5.13	0.62	0.84	2.24	-2.24	0.0161	0.7073	D	UBAP2L	ubiquitin associated protein 2 like (NICE 4)
TC0100010067.hg.1	9.06	7.89	0.45	0.48	2.24	-2.24	0.0303	0.7392		DNML2	Dmx like 2
TC1500009432.hg.1	4.78	3.61	0.35	0.07	2.25	-2.25	0.0039	0.641		DNAH11	dynein, axonemal, heavy chain 11
TC0700010429.hg.1	4.22	3.05	0.4	0.14	2.25	-2.25	0.0025	0.6123	D	MIR1269a	microRNA 1269a
TC0400007700.hg.1	4.81	3.64	0.44	0.21	2.25	-2.25	0.0123	0.6878		RNABP2-like and GRIP domain containing 8	
TC0200013903.hg.1	9.43	8.26	0.46	0.08	2.25	-2.25	0.0009	0.5917	D	TBC1D22A	TBC1 domain family member 22A
TC2200007678.hg.1	4.63	3.46	0.57	0.45	2.25	-2.25	0.0273	0.7372		TCF12	transcription factor 12
TC1500009535.hg.1	4.74	3.57	1.12	0.33	2.25	-2.25	0.0326	0.7414		TNC	tenascin C
TC0900008530.hg.1	12.35	11.18	0.39	0.28	2.25	-2.25	0.0013	0.5917	D	CCDC114A	coiled coil domain containing 114A
TC1700009906.hg.1	4.5	3.32	0.69	0.17	2.26	-2.26	0.0333	0.7419		PPP1R21	protein phosphatase 1 regulatory subunit 21 (KLRAQ1)
TC0200012539.hg.1	9.32	8.14	0.58	0.16	2.26	-2.26	0.0096	0.6713		TRPS1	transcriptional repressor GATA binding 1
TC0800011544.hg.1	8.97	7.79	0.72	0.54	2.26	-2.26	0.0159	0.7056	D	CASKIN1	CASK interacting protein 1
TC1600006596.hg.1	4.87	3.69	0.73	0.05	2.27	-2.27	0.0302	0.7392		DLC1	DLC1 Rho GTPase activating protein
TC0800006812.hg.1	4.52	3.34	0.53	0.28	2.27	-2.27	0.0205	0.7205		PAPPA	pregnancy-associated plasma protein A, pappalyisin 1
TC0900008563.hg.1	5.83	4.65	0.54	0.16	2.27	-2.27	0.0018	0.5917	D	RNU6-308P	RNA, U6 small nuclear 308, pseudogene
TC0500008119.hg.1	5.08	3.9	0.59	0.2	2.27	-2.27	0.0036	0.6269			

TC0300009603.hg.1	5.25	4.06	0.32	0.19	2.28	-2.28	0.001	0.5917		MFN1	mitofusin 1
TC0100009839.hg.1	5.42	4.23	0.07	0.5	2.28	-2.28	0.0015	0.5917	D	NBPF10	neuroblastoma breakpoint family member 10
TC0500007644.hg.1	5.61	4.43	0.67	0.74	2.28	-2.28	0.0086	0.6681		PIK3R1	phosphoinositol 3-kinase, regulatory subunit 1
TC2000006674.hg.1	5.04	3.86	0.93	0.19	2.28	-2.28	0.0078	0.6679		PLCB4	phospholipase C, beta 4
TC0300012659.hg.1	4.87	3.68	0.32	0.7	2.28	-2.28	0.0361	0.7441		TFDP2	transcription factor Dp-2
TC1800008828.hg.1	6.44	5.24	0.85	0.45	2.29	-2.29	0.0261	0.7354	D	CCBE1	collagen and calcium binding EGF domains 1
TC1500008048.hg.1	4.94	3.74	0.37	0.33	2.29	-2.29	0.0017	0.5917	D	CEMIP	cell migration inducing protein, hyaluronan binding
TC0600006737.hg.1	4.16	2.96	0.64	0.16	2.29	-2.29	0.0194	0.7195		ECL2	enoyl-CoA delta isomerase 2
TC0100007667.hg.1	5.22	4.02	0.51	0.3	2.29	-2.29	0.0157	0.7053		KPNA6	karyopherin (importin) subunit alpha 6
TC1400008556.hg.1	7.25	6.05	0.09	0.35	2.29	-2.29	0.0005	0.5735		LINC01297	long intergenic non-protein coding RNA 1297
TC0100007762.hg.1	4.44	3.25	0.35	0.67	2.29	-2.29	0.018	0.7124		SFPQ	splicing factor proline and glutamine rich
TC0700008055.hg.1	4.3	3.11	0.23	0.37	2.29	-2.29	0.0468	0.7634		STAG3L1	stromal antigen 3-like 1 (pseudogene)
TC1500009210.hg.1	5.26	4.07	0.31	0.56	2.29	-2.29	0.0158	0.7056		TMEM62	transmembrane protein 62
TC0500008121.hg.1	8.09	6.89	0.49	0.55	2.3	-2.3	0.0031	0.6196		ARSK	arylsulfatase family, member K
TC0600008666.hg.1	4.3	3.1	0.37	0.61	2.3	-2.3	0.0142	0.6965		ME1	malic enzyme 1, NADP(+)-dependent, cytosolic
TC2100007387.hg.1	5.66	4.46	0.62	0.16	2.3	-2.3	0.0098	0.6713		PTTG1IP	pituitary tumor-transforming 1 interacting protein
TC0300012289.hg.1	5.38	4.17	0.14	0.54	2.3	-2.3	0.0033	0.6212		TXNRD3	thioredoxin reductase 3
TC1700008114.hg.1	5.31	4.1	0.58	0.62	2.31	-2.31	0.0299	0.7392		LRC37A17P	leucin rich repeat containing 37 member A17, pseudogene
TC1400010261.hg.1	5.16	3.95	0.21	0.59	2.31	-2.31	0.0375	0.7454		MOK	MOK protein kinase
TC1400008629.hg.1	6.35	5.15	0.21	0.34	2.31	-2.31	9.36E-05	0.4854		SUPT16H	SPT16 homolog, facilitates chromatin remodeling subunit
TC1700007512.hg.1	5.04	3.83	0.17	0.32	2.32	-2.32	0.0005	0.5674		C17orf75	chromosome 17 open reading fram 75
TC1600008344.hg.1	4.58	3.37	0.8	0.25	2.32	-2.32	0.0131	0.6916		LINC01572	long intergenic non-protein coding RNA 1572
TC0500008850.hg.1	4.43	3.21	0.53	0.33	2.33	-2.33	0.01	0.6713		CYSTM1	cysteine-rich transmembrane module containing 1
TC1800008659.hg.1	7.24	6.03	0.77	0.09	2.33	-2.33	0.0356	0.7437		DYM	dymeclina
TC1400008277.hg.1	7.63	6.4	0.41	0.23	2.33	-2.33	0.0011	0.5917		MIR495	microRNA 495
TC0500012345.hg.1	7.43	6.21	0.42	1.03	2.33	-2.33	0.0469	0.7635		NR3C1	nuclear receptor subfamily 3C1; glucocorticoid receptor alpha
TC2100006865.hg.1	6.38	5.15	0.41	0.51	2.34	-2.34	0.0024	0.6041		BACH1	BTB domain and CNC homolog 1
TC2100006865.hg.1	6.38	5.15	0.41	0.51	2.34	-2.34	0.0024	0.6041		GRIK1	ionotropic glutamate receptor, kainate subtype 1
TC0600009567.hg.1	4.54	3.31	0.46	0.67	2.34	-2.34	0.0436	0.7571		PEX7	peroxisomal biogenesis factor 7
TC1200007965.hg.1	6.46	5.23	0.24	0.36	2.34	-2.34	0.0019	0.5917		PPM1H	protein phosphatase, Mg ²⁺ /Mn ²⁺ -dependent 1H
TC0400011536.hg.1	4.57	3.34	0.61	0.22	2.35	-2.35	0.0097	0.6713		DKK2	dickkopf WNT signaling pathway inhibitor 2
TC0300010671.hg.1	5.01	3.78	0.37	0.66	2.35	-2.35	0.0238	0.7299		FBXL2	F-box and leucine-rich repeat protein 2
TC1700010677.hg.1	3.96	2.73	0.27	0.54	2.35	-2.35	0.0019	0.594		KRT19	keratin 19, type I

TC0600010132.hg.1	7.6	6.37	0.69	0.19	2.35	-2.35	0.0121	0.6866	D	QKI	quaking homology KH domain RNA binding
TC1000009629.hg.1	5.9	4.66	0.39	0.12	2.36	-2.36	0.0002	0.5406		LINC00702	long intergenic non-protein coding RNA 702
TC0900008548.hg.1	8	6.77	0.42	0.45	2.36	-2.36	0.0253	0.7354	D	PAPPA	pregnancy-associated plasma protein A, pappalysin 1
TC1900010341.hg.1	4.8	3.56	0.67	0.26	2.36	-2.36	0.0108	0.6786		RNA5SP471	5S ribosomal pseudogene 471
TC0300009993.hg.1	6.72	5.48	0.78	0.3	2.36	-2.36	0.0059	0.6653		SDHAP1	succinate dehydrogenase complex flavoprotein subunit A pseudogene 1
TC0100009844.hg.1	7.59	6.34	0.37	0.28	2.37	-2.37	0.0005	0.575	D	NBPF10	neuroblastoma breakpoint family member 10
TC0200008857.hg.1	4.72	3.48	0.84	0.35	2.37	-2.37	0.0119	0.6853		RGPD6	RNABP2-like and GRIP domain containing 6
TC0200008920.hg.1	4.72	3.48	0.84	0.35	2.37	-2.37	0.0119	0.6853	D	RGPD8	RNABP2-like and GRIP domain containing 8
TC1300009892.hg.1	4.68	3.43	0.45	0.21	2.38	-2.38	0.0083	0.6679		F10	coagulation factor X
TC1400008284.hg.1	6.92	5.67	0.29	0.63	2.38	-2.38	0.005	0.6538		MIR300	microRNA 300
TC02000105091.hg.1	4.69	3.43	0.3	0.36	2.38	-2.38	0.0048	0.6495		SESTD1	SEC14 and spectrin domain 1
TC1900008695.hg.1	6.55	5.29	0.38	0.42	2.38	-2.38	0.0064	0.6674		ZNF610	zinc finger protein 610
TC0900010769.hg.1	4.82	3.57	0.11	0.44	2.39	-2.39	0.0027	0.6175		NFIL3	nuclear factor, interleukin 3 regulated
TC0700007134.hg.1	5.88	4.62	0.57	0.38	2.39	-2.39	0.0009	0.5917		NT5C3A	5'-nucleotidase, cytosolic IIIA
TC1700007774.hg.1	5.55	4.29	0.52	0.38	2.39	-2.39	0.0133	0.6916		PSMD3	proteasome 26S subunit, non-ATPase 3
TC0500010556.hg.1	4.09	2.83	0.52	0.52	2.4	-2.4	0.0352	0.7433		C9	complement C9
TC0200012526.hg.1	5.4	4.13	0.4	0.47	2.4	-2.4	0.0296	0.7392		FBXO11	F-box protein 11
TC1200010611.hg.1	4.75	3.48	0.44	0.41	2.41	-2.41	0.0048	0.6495		KMT2D	lysine methyltransferase 2D
TC1400008309.hg.1	4.66	3.39	0.46	0.27	2.41	-2.41	0.0015	0.5917		MIR656	microRNA 656
TC0800009528.hg.1	4.84	3.57	0.42	0.29	2.41	-2.41	9.87E-05	0.4854		RNU7-55P	RNA, U7 small nuclear 55 pseudogene
TC1000007525.hg.1	4.75	3.48	0.61	0.09	2.42	-2.42	0.0138	0.6945		BMS1P1	BM51, ribosome biogenesis factor pseudogene 1
TC0600006688.hg.1	4.65	3.37	0.68	0.19	2.42	-2.42	0.0022	0.594		SLC22A23	solute carrier 22 member 23
TC0300011833.hg.1	3.79	2.51	0.51	0.35	2.43	-2.43	0.014	0.6958		CMSS1	cms1 ribosomal small subunit homolog
TC1500007316.hg.1	4.46	3.18	0.56	0.21	2.43	-2.43	0.0065	0.6679		RFX7	regulatory factor X7
TC0100013499.hg.1	6.91	5.63	0.17	0.76	2.43	-2.43	0.0331	0.7419		SRSF4	serine and arginine rich splicing factor 4 (SRP75)
TC0900008971.hg.1	6.66	5.37	0.8	0.55	2.44	-2.44	0.0046	0.6495		ABL1	ABL proto-oncogene 1, non-receptor tyrosine kinase
TC0200007761.hg.1	7.41	6.12	0.58	0.45	2.44	-2.44	0.0488	0.7642		EHBP1	EH domain binding protein 1; NACSIN
TC1700012404.hg.1	5.88	4.6	0.68	0.33	2.44	-2.44	0.0204	0.7205		KTRAP1-1	keratin associated protein 1-1
TC1900008125.hg.1	4.38	3.08	0.29	0.24	2.45	-2.45	0.0009	0.5917		CYP2A6	cytochrome P450 family 2 subfamily A member 6
TC1400008273.hg.1	6.4	5.11	0.35	0.35	2.45	-2.45	0.0051	0.6574		MIR329-2	microRNA 329-2
TC1800007344.hg.1	6.51	5.22	0.27	0.51	2.45	-2.45	0.0172	0.7113		MIR4528	microRNA 4528
TC0200007942.hg.1	4.01	2.72	0.57	0.28	2.45	-2.45	0.0016	0.5917		PCBP1-AS1	PCBP1 antisense RNA 1
TC0500011289.hg.1	4.86	3.57	0.85	0.15	2.45	-2.45	0.0431	0.7562		RASGRF2	RAS protein-specific guanine nucleotide-releasing factor 2
TC1000011495.hg.1	5.06	3.76	0.2	0.62	2.45	-2.45	0.0078	0.6679		SORBS1	sorbin and SH3 domain containing 1
TC0700012186.hg.1	5.45	4.16	0.51	0.39	2.46	-2.46	0.0053	0.6593		CCDC71L	coiled-coil domain containing 71 like
TC1700008441.hg.1	6.28	4.98	0.42	0.34	2.47	-2.47	0.0115	0.6849		PPM1E	protein phosphatase, Mg ²⁺ /Mn ²⁺ -dependent 1E

TC0100014498.hg.1	4.28	2.96	0.45	0.3	2.49	-2.49	0.0054	0.6602		SGIP1	SH3 domain GRB2 like endophilin interacting protein 1
TC1000009819.hg.1	11.24	9.91	0.36	0.35	2.5	-2.5	0.0005	0.5735		CAMK1D	calcium/calmodulin-dependent protein kinase ID
TC0600008339.hg.1	5.04	3.72	0.7	0.57	2.5	-2.5	0.0242	0.7313	DST	dystonin	
TC1700008453.hg.1	4.39	3.07	0.57	0.23	2.5	-2.5	0.0016	0.5917	GDPD1	glycerophosphodiester phosphodiesterase domain containing 1	
TC0100006744.hg.1	4.08	2.76	0.59	0.33	2.5	-2.5	0.0028	0.6175	RERE	arginine-glutamate dipeptide repeats	
TC0400007581.hg.1	6.94	5.61	0.71	0.35	2.52	-2.52	0.0154	0.7022	CEP135	centrosomal protein 135	
TC1200008538.hg.1	4.16	2.83	0.27	0.28	2.52	-2.52	0.0007	0.5837	ELK3	ELK, ETS transcription factor	
TC1000007005.hg.1	5.9	4.57	0.45	0.57	2.52	-2.52	0.0014	0.5917	RNU6-413P	RNA, U6 small nuclear 413, pseudogene	
TC1700011452.hg.1	4.15	2.82	0.65	0.49	2.52	-2.52	0.0126	0.6893	SMURF2	SMAD specific E3 ubiquitin protein ligase 2	
TC0800009820.hg.1	5.58	4.24	0.14	0.71	2.52	-2.52	0.0012	0.5917	XPO7	exportin 7	
TC1100008849.hg.1	6.82	5.48	0.3	0.62	2.53	-2.53	0.0306	0.7392	CEP57	centrosomal protein 57	
TC0100014317.hg.1	6.98	5.64	0.86	0.3	2.53	-2.53	0.0244	0.7317	PAPAP2B	phosphatidic acid phosphatase 2B	
TC1000007104.hg.1	4.63	3.29	0.68	0.17	2.53	-2.53	0.006	0.6674	RAB1B	RAB1B, member RAS oncogene family	
TC1100010535.hg.1	5.95	4.61	0.39	0.5	2.54	-2.54	0.0023	0.6012	PAMR1	with muscle regeneration 1	
TC1400010653.hg.1	11.27	9.92	0.32	0.45	2.56	-2.56	0.0013	0.5917	D	MEG8	
TC0800011264.hg.1	4.87	3.51	0.25	0.76	2.56	-2.56	0.0184	0.7147	PABPC1	poly(A) binding protein cytoplasmic 1	
TCOX00010094.hg.1	7.56	6.2	0.3	0.76	2.56	-2.56	0.0073	0.6679	SLC16A2	solute carrier family 16 member 2 (MCT8)	
TC0900008561.hg.1	6.72	5.36	0.16	0.57	2.57	-2.57	0.0005	0.5735	D	pappalysin 1	
TC0600010131.hg.1	4.28	2.92	1.06	0.18	2.57	-2.57	0.0118	0.6853	D	quaking homology KH domain RNA binding	
TC0800007226.hg.1	4.41	3.05	0.74	0.24	2.57	-2.57	0.0112	0.6837	RNA5SP263	5S ribosomal pseudogene 263	
TC0600010894.hg.1	4.01	2.64	0.57	0.46	2.58	-2.58	0.0147	0.6965	ATXN1	ataxin 1	
TC0300006881.hg.1	4.39	3.02	0.39	0.65	2.59	-2.59	0.011	0.6799	SLC4A7	solute carrier 4 member A7; sodium bicarbonate transporter (NBC3)	
TC0500009065.hg.1	5.6	4.21	0.6	0.26	2.61	-2.61	0.0148	0.6967	CSNK1A1	casein kinase 1 alpha 1	
TC1900011512.hg.1	5.42	4.04	0.46	0.45	2.61	-2.61	0.0204	0.7205	ZSCAN5A	zinc finger and SCAN domain containing 5A	
TC2000009461.hg.1	5.73	4.34	0.8	0.41	2.62	-2.62	0.045	0.7586	ATP9A	ATPase, class II, type 9A	
TC0700012263.hg.1	6.5	5.12	0.66	0.35	2.62	-2.62	0.0027	0.6175	LRRN3	leucine-rich repeat neuronal 3	
TC0900007116.hg.1	12.82	11.42	0.58	0.31	2.63	-2.63	0.0036	0.6269	CCIN	calicin	
TC0900007603.hg.1	4.41	3.01	0.84	0.27	2.64	-2.64	0.0344	0.7424	CARNMT1	carnocine N-methyltransferase 1	
TC1100007112.hg.1	6.03	4.63	0.18	0.51	2.65	-2.65	0.0216	0.7245	BBOX1	gamma-butyrobetaine hydroxylase 1	
TC1700007618.hg.1	7.6	6.19	0.24	0.51	2.65	-2.65	0.0075	0.6679	CLL3	C-C motif chemokine ligand 3	
TCOM00006445.hg.1	5.32	3.91	0.47	0.41	2.65	-2.65	0.0111	0.6807	D	ICAM2	
TCOM00006445.hg.1	5.32	3.91	0.47	0.41	2.65	-2.65	0.0111	0.6807	PRR29	intercellular adhesion molecule 2	
TC1300009376.hg.1	4.84	3.43	0.52	0.44	2.65	-2.65	0.0101	0.6715	SLTRK1	proline rich 29	
TC0800008151.hg.1	5.48	4.07	0.43	0.5	2.66	-2.66	0.0016	0.5917	RMDN1	SLIT and NTRK like family member 1	
TC0400008463.hg.1	5.27	3.85	0.5	0.89	2.67	-2.67	0.0087	0.6681	PRDM5	regulator of microtubule dynamics 1	
TC1200011245.hg.1	5.2	3.79	0.67	0.14	2.67	-2.67	0.0085	0.6679	PTPRB	PR/SET domain 5	
TC1400010647.hg.1	13.46	12.04	0.76	0.48	2.69	-2.69	0.0096	0.6713	BDKRB2	protein tyrosine phosphatase, receptor type, B	
TC1000011923.hg.1	6.88	5.46	0.4	0.51	2.69	-2.69	0.0011	0.5917	GFRA1	bradykinin receptor B2	
										GDNF family receptor alpha 1	

TC1600010779.hg.1	4.7	3.27	0.43	0.26	2.69	-2.69	0.0033	0.6196		HYDIN	HYDIN, axonemal central pair apparatus protein
TC1700010942.hg.1	4.79	3.35	0.68	0.68	2.7	-2.7	0.0172	0.7113	EFCAB13	EF-hand calcium binding domain 13	
TC0400010627.hg.1	5.2	3.76	0.4	0.29	2.7	-2.7	3.06E-05	0.4807	FRYL	FRY like transcription coactivator	
TC1600008242.hg.1	4.3	2.87	0.27	0.42	2.7	-2.7	0.0096	0.6713	D	WW domain containing E3 ubiquitin protein ligase 2	
TC0900007518.hg.1	9.91	8.47	0.42	0.43	2.71	-2.71	0.0017	0.5917	MAMDC2	MAM domain containing 2	
TC0800008340.hg.1	6.35	4.91	0.34	0.81	2.72	-2.72	0.0104	0.6742	D	STK3	serine/threonine kinase 3
TC1700011016.hg.1	5.2	3.76	0.87	0.36	2.72	-2.72	0.041	0.7524	UBE2Z	ubiquitin conjugating enzyme E2 Z	
TC0300012081.hg.1	6.22	4.77	0.44	0.33	2.74	-2.74	0.0016	0.5917	LSAMP	limbic system associated membrane protein	
TC0600006833.hg.1	4.28	2.82	0.64	0.54	2.75	-2.75	0.0157	0.7053	LY86-AS1	LY86 antisense RNA 1	
TC0500006738.hg.1	4.63	3.17	0.58	0.27	2.75	-2.75	0.0196	0.7205	MARCH6	membrane-associated ring-CH-type finger 6	
TC0700012912.hg.1	5.42	3.96	0.96	0.04	2.75	-2.75	0.0483	0.7639	D	OR2A1-AS1	OR2A1 antisense RNA 1
TC1800008781.hg.1	4.64	3.18	0.84	0.31	2.76	-2.76	0.0149	0.6973	ATP8B1	ATPase, aminophospholipid transporter, class I, type 8B, member 1	
TC1600009946.hg.1	5.16	3.69	0.77	0.55	2.77	-2.77	0.0036	0.6269	KCTD13	potassium channel tetramerization domain containing 13	
TC0900008465.hg.1	11.24	9.77	0.31	0.37	2.78	-2.78	0.0001	0.4854	HSDL2	hydroxysteroid dehydrogenase like 2	
TC0600013560.hg.1	4.55	3.08	0.6	0.31	2.78	-2.78	0.0013	0.5917	D	MTHFD1L	methylenetetrahydrofolate dehydrogenase 1 like
TC1400008245.hg.1	8.03	6.56	0.57	0.34	2.78	-2.78	0.0053	0.6602	SNORD113-1	small nucleolar RNA, C/D box 113-1	
TC1600011166.hg.1	5.94	4.45	0.31	0.92	2.81	-2.81	0.0081	0.6679	C16orf95	chromosome 16 open reading frame 95	
TC1900011262.hg.1	5.91	4.41	0.46	0.56	2.83	-2.83	0.0038	0.6395	SIGLEC29P	sialic acid binding Ig like lectin 29, pseudogene	
TC0400010477.hg.1	5.52	4	0.92	0.15	2.87	-2.87	0.0301	0.7392	UBE2K	ubiquitin conjugating enzyme E2K	
TC0800011539.hg.1	8.82	7.29	0.65	0.62	2.88	-2.88	0.0372	0.7449	D	TRPS1	transcriptional repressor GATA binding 1
TC0700011581.hg.1	10.37	8.83	1.42	0.62	2.9	-2.9	0.0263	0.7354	DTX2P1-UPK3BP1-PMS2P11	DTX2P1-UPK3BP1-PMS2P11 readthrough, transcribed pseudogene	
TC1000009135.hg.1	4.42	2.88	0.66	0.18	2.91	-2.91	0.0045	0.6495	ATE1	arginyltransferase 1	
TC1400008247.hg.1	9.76	8.21	0.64	0.18	2.91	-2.91	0.0096	0.6713	SNORD113-2	small nucleolar RNA, C/D box 113-2	
TC0800008784.hg.1	6.31	4.77	0.33	0.53	2.91	-2.91	9.42E-05	0.4854	WASHCS	WASH complex subunit 5	
TC2000009715.hg.1	12.79	11.25	0.87	0.58	2.92	-2.92	0.0098	0.6713	CDH4	cadherin 4	
TC2000006823.hg.1	7.17	5.63	0.44	0.37	2.92	-2.92	0.003	0.6194	ZNF133	zinc finger protein 133	
TC0900007776.hg.1	6.46	4.91	0.92	0.26	2.94	-2.94	0.012	0.6866	NAA35	N(alpha)-acetyltransferase 35, NatC auxiliary subunit	
TC0600013116.hg.1	5.99	4.42	0.5	0.23	2.97	-2.97	0.0025	0.6123	ECHDC1	ethylmalonyl-CoA decarboxylase 1	
TC1000009147.hg.1	5.3	3.72	0.17	0.64	2.98	-2.98	0.0122	0.6876	D	PTBP2	polyglutamine tract binding protein 2
TC0300009176.hg.1	4.87	3.29	0.71	0.84	3	-3	0.0204	0.7205	CLRN1-AS1	CLRN1 antisense RNA 1	
TC1600009837.hg.1	6.85	5.26	0.43	0.66	3.02	-3.02	0.003	0.6175	GTF3C1	general transcription factor IIIC subunit 1	
TC0700007767.hg.1	7.11	5.48	0.38	0.26	3.09	-3.09	0.0002	0.5406	ZNF679	zinc finger protein 679	
TC0900011305.hg.1	8.14	6.49	0.38	0.04	3.14	-3.14	0.0009	0.5917	D	TNC	tenascin C
TC1400010178.hg.1	8.79	7.13	0.53	0.43	3.17	-3.17	0.0047	0.6495	EVL	Enah/Vasp-like	
TC0700008330.hg.1	6.46	4.8	0.96	0.61	3.18	-3.18	0.012	0.6866	FAM133B	family with sequence similarity 133 member B	
TC0300010726.hg.1	5.07	3.36	0.21	0.83	3.27	-3.27	0.0091	0.671	LRRFIP2	leucine rich repeat (in flightless) interacting protein 2	

TC1400010648.hg.1	10.7	8.99	0.91	0.43	3.28	-3.28	0.0132	0.6916		BDKRB1	bradykinin receptor B1
TC0300013137.hg.1	5.16	3.45	1.21	0.3	3.28	-3.28	0.0201	0.7205		FNDC3B	fibronectin type III domain containing 3B
TC0900008551.hg.1	7.21	5.49	0.48	0.1	3.29	-3.29	0.0004	0.5406	D	PAPPA	pregnancy-associated plasma protein A, pappalysin 1
TC1400008244.hg.1	9.41	7.69	0.95	0.68	3.3	-3.3	0.0065	0.6674	D	MEG8	long intergenic non-protein RNA (Bsr)
TC1300009298.hg.1	5.01	3.29	0.77	0.39	3.3	-3.3	0.0089	0.6696	D	MYCBP2	MYC binding protein 2, E3 ubiquitin protein ligase
TC1100012095.hg.1	16.62	14.9	1.29	1.15	3.3	-3.3	0.0333	0.7419		PGR	progesterone receptor
TC0800011541.hg.1	6.87	5.14	0.34	0.83	3.31	-3.31	3.73E-05	0.4807	D	TRPS1	transcriptional repressor GATA binding 1
TC1700011061.hg.1	5.48	3.75	1.18	0.39	3.32	-3.32	0.0067	0.6679		FAM117A	family with sequence similarity 117 member A
TC1300009980.hg.1	5.52	3.79	0.32	0.16	3.32	-3.32	1.86E-05	0.4807		LMO7	LIM domain 7
TC1500007387.hg.1	4.99	3.24	0.55	0.35	3.35	-3.35	0.0003	0.5406	D	RNF111	ring finger protein 111
TC1500007387.hg.1	4.99	3.24	0.55	0.35	3.35	-3.35	0.0003	0.5406	D	SLTM	SAFB-like, transcription modulator
TC0300012378.hg.1	8.59	6.82	0.81	1.12	3.4	-3.4	0.0115	0.6848		CNBP	CCHC-type zinc finger, nucleic acid binding protein
TC0200009077.hg.1	5.27	3.5	1.02	0.22	3.41	-3.41	0.04	0.751		PTPN4	protein tyrosine phosphatase, nonreceptor type 4
TC0900011306.hg.1	5.74	3.97	0.73	0.95	3.42	-3.42	0.0093	0.6713	D	TNC	tenascin C
TC1400009289.hg.1	5.85	4.06	0.59	0.21	3.45	-3.45	0.0001	0.5406		OTX2-AS1	OTX1 antisense RNA 1
TC1600007203.hg.1	5.48	3.66	0.86	0.3	3.54	-3.54	0.008	0.6679	D	NIPPB5	nuclear pore complex interacting protein family member B5
TC1300007131.hg.1	5.85	4.01	0.49	0.62	3.57	-3.57	0.0126	0.6893		MED4	mediator complex subunit 4
TC0900008623.hg.1	7.94	6.09	0.42	0.11	3.6	-3.6	1.54E-05	0.4807		B3GNT10	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 10 pseudogene
TC1400008248.hg.1	6.65	4.79	0.72	0.44	3.63	-3.63	0.0067	0.6679		SNORD113-3	small nucleolar RNA, C/D box 113-3
TC0500011272.hg.1	5.78	3.92	0.57	0.89	3.64	-3.64	0.0168	0.7092		RNU6-211P	RNA, U6 small nuclear 211, pseudogene
TC1300009178.hg.1	5.02	3.16	0.86	0.46	3.65	-3.65	0.0387	0.7486		LINC00364	long intergenic non-protein coding RNA 364
TC0600011086.hg.1	8.5	6.62	0.39	1.43	3.68	-3.68	0.0151	0.6997		CMAHP	cytidine monophospho-N-acetylneurameric acid hydroxylase, pseudogene
TC0X00009102.hg.1	4.84	2.96	0.45	0.46	3.69	-3.69	0.0013	0.5917		GPM6B	glycoprotein M6B
TC1500009662.hg.1	5.17	3.26	0.56	0.24	3.76	-3.76	0.001	0.5917		RORA	RAR-related orphan receptor alpha
TC0900010881.hg.1	7.62	5.67	0.43	0.48	3.86	-3.86	0.0016	0.5917		FANCC	Fanconi anemia complementation group C
TC0100012205.hg.1	5.33	3.38	1.15	0.35	3.86	-3.86	0.0236	0.7299		SDCCAG8	serologically defined colon cancer antigen 8
TC1100012133.hg.1	9.85	7.89	0.69	0.56	3.88	-3.88	0.0008	0.5917		MMP3	matrix metallopeptidase 3
TC1400006715.hg.1	4.9	2.91	0.29	0.29	3.97	-3.97	3.22E-05	0.4807		PCK2	phosphoenolpyruvate carboxylase 2
TC0500007703.hg.1	5.64	3.62	0.94	0.81	4.05	-4.05	0.028	0.7374		NAIP	NLR family apoptosis inhibitory protein
TC0200016651.hg.1	12.53	10.44	0.41	0.34	4.26	-4.26	1.20E-05	0.4807		CYP1B1	cytochrome P450, family 1, subfamily B, polypeptide 1
TC1600009698.hg.1	5.45	3.35	0.38	0.84	4.29	-4.29	0.0075	0.6679		EEF2K	eukaryotic elongation factor-2 kinase
TC0100014568.hg.1	4.89	2.79	3.06	0.32	4.3	-4.3	0.0453	0.7593		HHLA3	HERV-H LTR-associated 3

TC0800011540.hg.1	7.65	5.54	0.91	1.09	4.33	-4.33	0.028	0.7374	D	TRPS1	transcriptional repressor GATA binding 1
TC1800008830.hg.1	15.16	13.01	1.87	0.62	4.45	-4.45	0.0428	0.7556	D	CCBE1	collagen and calcium binding EGF domains 1
TC0400011187.hg.1	5.69	3.52	0.75	0.81	4.53	-4.53	0.0186	0.7163		SEC31A	Sec31 homolog A
TC0800006784.hg.1	6.39	4.2	1.2	0.07	4.56	-4.56	0.0113	0.6846		ALG1L12P	asparagine-linked glycosylation 1-like 12, pseudogene
TC1700011577.hg.1	9.62	7.43	0.78	0.86	4.57	-4.57	0.0006	0.5837		ABCA9	ATP binding cassette subfamily A member 9
TC0900008545.hg.1	8.08	5.86	0.46	0.65	4.64	-4.64	0.0008	0.5917	D	PAPPA	pregnancy-associated plasma protein A, pappalyin 1
TC2000007581.hg.1	5.1	2.87	0.71	0.86	4.68	-4.68	0.0114	0.6847		SULF2	sulfatase 2
TC0100014528.hg.1	7.4	5.15	0.4	0.66	4.75	-4.75	0.0008	0.5917		DIRAS3	DIRAS family, GTP-binding RAS-like 3
TC1200012203.hg.1	7.84	5.48	0.91	0.48	5.12	-5.12	0.0027	0.6175		ANAPC5	anaphase promoting complex subunit 5

Supplemental Table 2

Ingenuity canonical pathways in EIPA-unique transcriptome.

Ingenuity Canonical Pathways	-log(p-value)	Ratio	z-score	Molecules
Telomerase Signaling	5.04E+00	1.14E-01	2.333	K3
Chronic Myeloid Leukemia Signaling	4.47E+00	1.08E-01	NaN	RAP2A,HDAC9,IKBKG,HDAC3,HDAC8,PIK3R1,ABL1,PIK3C2G,RAP1A,PTGES3,HDAC3,MRAS,PIK3CB,EL
Integrin Signaling	3.84E+00	7.58E-02	3.742	RAP2A,PIK3R1,DIRAS3,ITGA8,WASL,PIK3C2G,ABL1,GSN,RAP1A,DOCK1,RND3,ITGA11,MRAS
Glioma Invasiveness Signaling	3.79E+00	1.18E-01	2.333	,PIK3CB,NEDD9,ACTN1
Germ Cell-Sertoli Cell Junction Signaling	3.69E+00	8.05E-02	NaN	RAP2A,TIMP3,RND3,PIK3R1,DIRAS3,PIK3C2G,MRAS,PIK3CB,RAP1A
Epithelial Adherens Junction Signaling	3.33E+00	8.22E-02	NaN	RAP2A,PIK3R1,DIRAS3,WASL,PIK3C2G,GSN,RAP1A,EPN2,CDH2,RND3,SORBS1,MRAS,PIK3CB
Hereditary Breast Cancer Signaling	3.30E+00	8.16E-02	NaN	,ACTN1
Role of NFAT in Cardiac Hypertrophy	3.13E+00	6.79E-02	3.317	RAP2A,HDAC9,HDAC8,CAMK1D,PIK3R1,MEF2A,PIK3C2G,CSNK1A1,CACNA1C,RAP1A,PLCB4,PRKAR2B,HD
Paxillin Signaling	3.05E+00	8.70E-02	2.828	AC3,MRAS,PIK3CB,RAP1A,ACTN1
TR/RXR Activation	2.97E+00	9.18E-02	NaN	F10,HDAC3,LDLR,SLC2A1,PIK3R1,PIK3C2G,SLC16A2,PIK3CB,ME1
G β 12/13 Signaling	2.94E+00	7.86E-02	1.508	RAP2A,CDH2,IKBKG,CDH4,PIK3R1,MEF2A,PIK3C2G,MRAS,PIK3CB,RAP1A,CDH13
AMPK Signaling	2.82E+00	6.57E-02	1.732	SLC2A1,STRADA,PIK3R1,CPT1B,PIK3C2G,PRKAR2B,PCK2,TBC1D1,MRAS,PIK3CB,SMARCC1,E
Renal Cell Carcinoma Signaling	2.73E+00	9.30E-02	2.646	EF2K,HNF4A,HLTF
Calcium Signaling	2.69E+00	6.63E-02	2.828	ET51,RAP2A,MYH10,HDAC9,TP63,HDAC8,CAMK1D,RYR2,MEF2A,CACNA1C,RAP1A,PRKAR2B,HD
NF- κ B Signaling	2.57E+00	6.70E-02	3.464	A,PIK3CB,RAP1A,TNFRSF11B
Cancer Drug Resistance By Drug Efflux	2.56E+00	1.11E-01	NaN	mir-154,RAP2A,PIK3R1,MRAS,PIK3CB,RAP1A
NF- κ B Activation by Viruses	2.55E+00	8.70E-02	2.828	RAP2A,IKBKG,RIPK1,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
PEDF Signaling	2.52E+00	8.60E-02	2.828	RAP2A,IKBKG,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A,TCF12
TGF- β Signaling	2.52E+00	8.60E-02	0.816	RAP2A,RNF111,SKI,MRAS,BMPR2,SMURF2,HNF4A,RAP1A
HMGBl Signaling	2.48E+00	7.30E-02	3.162	RAP2A,RND3,PIK3R1,DIRAS3,KAT6A,PIK3C2G,MRAS,PIK3CB,RAP1A,TNFRSF11B
Oncostatin M Signaling	2.43E+00	1.25E-01	2.236	RAP2A,TIMP3,MMP3,MRAS,RAP1A
HGF Signaling	2.41E+00	7.63E-02	2.646	ET51,RAP2A,DOCK1,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A,ELK3
Cholesterol Biosynthesis I	2.38E+00	2.31E-01	NaN	DHCR7,DHCR24,MSMO1
Cholesterol Biosynthesis II (via 24,25-dihydrolanosterol)	2.38E+00	2.31E-01	NaN	DHCR7,DHCR24,MSMO1
Cholesterol Biosynthesis III (via Desmosterol)	2.38E+00	2.31E-01	NaN	DHCR7,DHCR24,MSMO1
Antiproliferative Role of Somatostatin Receptor 2	2.37E+00	8.97E-02	2.449	RAP2A,NPR3,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
GM-CSF Signaling	2.34E+00	8.86E-02	1.89	ET51,RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
PXR/RXR Activation	2.33E+00	1.00E-01	NaN	SCD,PRKAR2B,PCK2,CYP2A6 (includes others),HNF4A,NR3C1
Prostate Cancer Signaling	2.30E+00	7.92E-02	NaN	RAP2A,IKBKG,PIK3R1,PIK3C2G,MRAS,ABL1,PIK3CB,RAP1A
Superpathway of Cholesterol Biosynthesis	2.30E+00	1.48E-01	2	MVD,DHCR7,DHCR24,MSMO1
Melanoma Signaling	2.29E+00	9.84E-02	2.449	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
CXCR4 Signaling	2.28E+00	6.47E-02	3.162	RAP2A,DOCK1,PLCB4,RND3,PIK3R1,DIRAS3,PIK3C2G,MRAS,PIK3CB,ELMO1,RAP1A
PTEN Signaling	2.27E+00	7.26E-02	-2.828	RAP2A,IKBKG,MAGI1,GHR,PIK3R1,MRAS,BMPR2,PIK3CB,RAP1A
Actin Nucleation by ARP-WASP Complex	2.25E+00	9.68E-02	2.449	RAP2A,RND3,DIRAS3,WASL,MRAS,RAP1A
STAT3 Pathway	2.25E+00	7.77E-02	2.121	RAP2A,GHR,PTPN2,MAP3K20,MRAS,BMPR2,RAP1A,IFNAR1
GDNF Family Ligand-Receptor Interactions	2.25E+00	8.54E-02	2.646	RAP2A,PIK3R1,GFRA1,PIK3C2G,MRAS,PIK3CB,RAP1A
Acute Phase Response Signaling	2.24E+00	6.40E-02	1.414	RAP2A,IKBKG,RIPK1,C1S,PIK3R1,C9,MRAS,PIK3CB,RAP1A,NR3C1,TNFRSF11B
SAPK/JNK Signaling	2.22E+00	7.69E-02	2.828	RAP2A,RIPK1,PIK3R1,MAP3K20,PIK3C2G,MRAS,PIK3CB,RAP1A
Angiopoietin Signaling	2.22E+00	8.43E-02	1	RAP2A,IKBKG,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
Non-Small Cell Lung Cancer Signaling	2.22E+00	8.43E-02	2.449	RAP2A,PIK3R1,PIK3C2G,MRAS,ABL1,PIK3CB,RAP1A
Neurotrophin/TRK Signaling	2.22E+00	8.43E-02	2.646	RAP2A,NTF3,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
Tetrahydrofolate Salvage from 5,10-methenyltetrahydrofolate	2.19E+00	4.00E-01	NaN	MTHFD1L,MTHFD2
VEGF Signaling	2.17E+00	7.55E-02	2.646	RAP2A,EIF2B4,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A,ACTN1
Fc γ RIII Signaling in B Lymphocytes	2.16E+00	8.24E-02	2.449	RAP2A,PIK3R1,PIK3C2G,MRAS,CACNA1C,PIK3CB,RAP1A
G-Protein Coupled Receptor Signaling	2.16E+00	5.38E-02	NaN	RAP2A,GDPD1,PIK3R1,PIK3C2G,RAP1A,GRM7,GABBR2,PLCB4,IKBKG,PRKAR2B,GPER1,NPR3
CNTF Signaling	2.16E+00	9.23E-02	2.449	,MRAS,PIK3CB,PDE4D
Phospholipase C Signaling	2.15E+00	5.73E-02	3.606	RAP2A,HDAC9,HDAC8,DIRAS3,MEF2A,ARHGFE17,RAP1A,PLCB4,HDAC3,RND3,MRAS,ARHG
Adipogenesis pathway	2.12E+00	6.87E-02	NaN	EF3,LCP2
Relaxin Signaling	2.11E+00	6.45E-02	2.121	HDAC9,HDAC3,RUNX1T1,DDIT3,HDAC8,KAT6A,CTBP2,BMPR2,PER2
Erythropoietin Signaling	2.11E+00	8.05E-02	NaN	IKBKG,PRKAR2B,GDPD1,NPR3,PIK3R1,PIK3C2G,MRAS,PIK3CB,PDE4D,RAP1A
Role of NFAT in Regulation of the Immune Response	2.10E+00	6.11E-02	3.317	RAP2A,PLCB4,IKBKG,PIK3R1,MEF2A,PIK3C2G,MRAS,CSNK1A1,PIK3CB,RAP1A,LCP2
Estrogen Receptor Signaling	2.08E+00	6.77E-02	NaN	RAP2A,HDAC3,PCK2,CTBP2,MRAS,RAP1A,NR3C1,MED4,PGR
IGF-1 Signaling	2.06E+00	7.21E-02	2.646	RAP2A,PRKAR2B,PIK3R1,PIK3C2G,MRAS,PIK3CB,CYR61,RAP1A

Prolactin Signaling	2.06E+00	7.87E-02	2.449	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A,NR3C1
14-3-3-mediated Signaling	2.04E+00	6.67E-02	1.667	RAP2A,PLCB4,PIK3R1,STRADA,PIK3C2G,MRAS,PIK3CB,RAP1A,SNCA
T Cell Receptor Signaling	2.03E+00	7.14E-02	NaN	RAP2A,IKBKG,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A,LCP2
IL-4 Signaling	2.03E+00	7.78E-02	NaN	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A,NR3C1
			3.051	RAP2A,PLCB4,EIF2B4,PRKAR2B,RND3,DIRAS3,PIK3R1,MEF2A,PIK3C2G,MRAS,CACNA1C,PIK3CB,RAP1A
Cardiac Hypertrophy Signaling	2.01E+00	5.49E-02		RAP2A,MMP3,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
IL-17 Signaling	2.01E+00	7.69E-02	NaN	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
Endometrial Cancer Signaling	2.00E+00	8.57E-02	2.449	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
IL-2 Signaling	2.00E+00	8.57E-02	2.449	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
Thrombopoietin Signaling	1.97E+00	8.45E-02	2.449	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
LPS-stimulated MAPK Signaling	1.96E+00	7.53E-02	2.646	RAP2A,IKBKG,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
TWEAK Signaling	1.94E+00	1.18E-01	0	NAIP,TRAF3,IKBKG,RIPK1
Chemokine Signaling	1.92E+00	8.22E-02	2.449	RAP2A,PLCB4,CAMK1D,PIK3C2G,MRAS,RAP1A
ErbB2-ErbB3 Signaling	1.89E+00	8.11E-02	2.449	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
PDGF Signaling	1.88E+00	7.29E-02	2.646	RAP2A,PIK3R1,PIK3C2G,MRAS,ABL1,PIK3CB,RAP1A
Sumoylation Pathway	1.88E+00	7.29E-02	-1.633	ETS1,RND3,DNMT3A,DIRAS3,CTBP2,NR3C1,SNCA
Glioma Signaling	1.88E+00	6.72E-02	2.646	RAP2A,CAMK1D,PIK3R1,PIK3C2G,MRAS,ABL1,PIK3CB,RAP1A
NRF2-mediated Oxidative Stress Response	1.87E+00	5.67E-02	1.342	RAP2A,DNAJB4,DNAJC4,PIK3R1,PIK3C2G,UBE2K,MRAS,PIK3CB,DNAJC1,RAP1A,BACH1
Gap Junction Signaling	1.87E+00	5.67E-02	NaN	RAP2A,PLCB4,PRKAR2B,NPR3,PIK3R1,PIK3C2G,MRAS,CSNK1A1,PIK3CB,RAP1A,GRIK1
Role of JAK1 and JAK3 in T ^c Cytokine Signaling	1.86E+00	8.00E-02	NaN	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
Molecular Mechanisms of Cancer	1.86E+00	4.65E-02	NaN	RAP2A,NAIP,PIK3R1,DIRAS3,PIK3C2G,ABL1,BMPR2,ARHGEF17,RALBP1,RAP1A,RASGRF2,PLCB4,IKBKG,PRKAR2B,RND3,MRAS,PIK3CB,ARHGEF3
Ceramide Signaling	1.84E+00	7.14E-02	0.378	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A,TNFRSF11B
Myc Mediated Apoptosis Signaling	1.84E+00	7.89E-02	NaN	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
ErbB4 Signaling	1.84E+00	7.89E-02	2.449	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
HIF1 \pm Signaling	1.82E+00	6.56E-02	NaN	RAP2A,SLC2A1,MMP3,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
Signaling by Rho Family GTPases	1.81E+00	5.18E-02	3.606	CDH4,PIK3R1,DIRAS3,WASL,PIK3C2G,ARHGEF17,CDH2,RND3,MAP3K20,MRAS,PIK3CB,ARHGEF3,CDH13
Ovarian Cancer Signaling	1.79E+00	6.08E-02	2.828	RAP2A,PRKAR2B,PIK3R1,PIK3C2G,MRAS,ABL1,PIK3CB,CGA,RAP1A
Histidine Degradation III	1.76E+00	2.50E-01	NaN	MTHFD1L,MTHFD2
RhoGDI Signaling	1.75E+00	5.68E-02	-3.162	CDH2,CDH4,RND3,DIRAS3,WASL,MRAS,ARHGEF17,ARHGEF3,DLC1,CDH13
Glucocorticoid Receptor Signaling	1.75E+00	4.71E-02	NaN	RAP2A,PIK3R1,PIK3C2G,PBX1,CCL3,NR3C1,RAP1A,PTGES3,PGR,IKBKG,PCK2,KRT19,MRAS,PIK3CB,SMARCC1,HLTF
Role of Tissue Factor in Cancer	1.75E+00	6.35E-02	NaN	RAP2A,F10,PIK3R1,PIK3C2G,MRAS,PIK3CB,CYR61,RAP1A
Melanocyte Development and Pigmentation Signaling	1.73E+00	6.80E-02	2.646	RAP2A,PRKAR2B,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
fMLP Signaling in Neutrophils	1.71E+00	6.25E-02	2.121	RAP2A,PLCB4,IKBKG,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
FAK Signaling	1.71E+00	6.73E-02	NaN	RAP2A,DOCK1,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
Leukocyte Extravasation Signaling	1.71E+00	5.37E-02	1.508	TIMP3,EDIL3,MMP3,PIK3R1,WASL,PIK3C2G,ABL1,PIK3CB,RAP1A,DLC1,ACTN1
IL-15 Signaling	1.69E+00	7.32E-02	NaN	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
Thrombin Signaling	1.68E+00	5.31E-02	3.317	RAP2A,PLCB4,RND3,CAMK1D,PIK3R1,DIRAS3,PIK3C2G,MRAS,PIK3CB,ARHGEF3,RAP1A
PKC ζ , Signaling in T Lymphocytes	1.68E+00	5.81E-02	2.828	RAP2A,IKBKG,PIK3R1,PIK3C2G,MRAS,CACNA1C,PIK3CB,RAP1A,LCP2
Cholecystokinin/Gastrin-mediated Signaling	1.67E+00	6.60E-02	2.646	RAP2A,PLCB4,RND3,DIRAS3,MEF2A,MRAS,RAP1A
PAK Signaling	1.67E+00	6.60E-02	2.646	RAP2A,PIK3R1,WASL,PIK3C2G,MRAS,PIK3CB,RAP1A
Regulation of Cellular Mechanics by Calpain Protease	1.67E+00	8.20E-02	NaN	RAP2A,MRAS,RAP1A,CNGA1,ACTN1
Folate Transformations I	1.66E+00	2.22E-01	NaN	MTHFD1L,MTHFD2
PI3K Signaling in B Lymphocytes	1.66E+00	6.11E-02	2.828	RAP2A,PLCB4,IKBKG,PIK3R1,MRAS,ABL1,PIK3CB,RAP1A
Breast Cancer Regulation by Stathmin1	1.66E+00	5.26E-02	NaN	RAP2A,PLCB4,PRKAR2B,CAMK1D,PIK3R1,PIK3C2G,MRAS,PIK3CB,ARHGEF17,ARHGEF3,RAP1A
Nitric Oxide Signaling in the Cardiovascular System	1.63E+00	6.48E-02	2.449	BDKRB2,PRKAR2B,PIK3R1,RYR2,PIK3C2G,CACNA1C,PIK3CB
IL-6 Signaling	1.62E+00	6.02E-02	2.828	RAP2A,IKBKG,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A,TNFRSF11B
Role of JAK1, JAK2 and TYK2 in Interferon Signaling	1.62E+00	1.25E-01	NaN	PTPN2,CGA,IFNAR1
Small Cell Lung Cancer Signaling	1.62E+00	7.06E-02	2.236	TRAFF3,IKBKG,PIK3R1,PIK3C2G,ABL1,PIK3CB
Estrogen-Dependent Breast Cancer Signaling	1.62E+00	7.06E-02	2.449	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
Regulation of eIF4 and p70S6K Signaling	1.61E+00	5.66E-02	2.449	PABPC1,RAP2A,EIF2B4,PIK3R1,PIK3C2G,MRAS,EIF3A,PIK3CB,RAP1A
UVA-Induced MAPK Signaling	1.61E+00	6.42E-02	2.646	RAP2A,PLCB4,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
p53 Signaling	1.59E+00	6.36E-02	0	HDAC9,TP63,THBS1,PIK3R1,PIK3C2G,PIK3CB,RPRM
Adenine and Adenosine Salvage VI	1.58E+00	1.00E+00	NaN	ADK
Macropinocytosis Signaling	1.58E+00	6.90E-02	2.449	RAP2A,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
Mouse Embryonic Stem Cell Pluripotency	1.57E+00	6.31E-02	1.89	RAP2A,PIK3R1,PIK3C2G,MRAS,BMPR2,PIK3CB,RAP1A
Oleate Biosynthesis II (Animals)	1.57E+00	2.00E-01	NaN	SCD,FADS2
CREB Signaling in Neurons	1.56E+00	5.09E-02	3.162	GRM7,RAP2A,PLCB4,PRKAR2B,PIK3R1,PIK3C2G,MRAS,CACNA1C,PIK3CB,RAP1A,GRIK1
p70S6K Signaling	1.56E+00	5.84E-02	2.121	RAP2A,PLCB4,PIK3R1,PIK3C2G,MRAS,PIK3CB,EFF2K,RAP1A

TNFR2 Signaling	7.56E-01	6.90E-02	NaN	NAIP,IKBKG
Acetone Degradation I (to Methylglyoxal)	7.56E-01	6.90E-02	NaN	CYP2A6 (includes others),CYP1B1
Growth Hormone Signaling	7.50E-01	4.76E-02	2	GHR,PIK3R1,PIK3C2G,PIK3CB
Opioid Signaling Pathway	7.46E-01	3.75E-02	2.333	RAP2A,PRKAR2B,CAMK1D,RYR2,PIK3C2G,MRAS,CACNA1C,GRK5,RAP1A
Ephrin Receptor Signaling	7.37E-01	3.95E-02	2.646	RAP2A,SORBS1,WASL,PIK3C2G,MRAS,ABL1,RAP1A
Fatty Acid β -oxidation I	7.33E-01	6.67E-02	NaN	ECI2,ACSL4
Regulation of Actin-based Motility by Rho	7.25E-01	4.65E-02	NaN	RND3,DIRAS3,WASL,GSN
Systemic Lupus Erythematosus Signaling	7.21E-01	3.79E-02	NaN	BDKRB2,RAP2A,PIK3R1,C9,PIK3C2G,MRAS,PIK3CB,RAP1A
Pathogenesis of Multiple Sclerosis	7.18E-01	1.25E-01	NaN	CCL3
Role of JAK2 in Hormone-like Cytokine Signaling	6.90E-01	6.25E-02	NaN	GHR,HLTF
Pancreatic Adenocarcinoma Signaling	6.85E-01	4.17E-02	2	PIK3R1,PIK3C2G,ABL1,PIK3CB,RALBP1
G Beta Gamma Signaling	6.85E-01	4.17E-02	2.236	RAP2A,PRKAR2B,MRAS,CACNA1C,RAP1A
Ephrin A Signaling	6.83E-01	5.00E-02	NaN	PIK3R1,PIK3C2G,PIK3CB
Prostanoid Biosynthesis	6.73E-01	1.11E-01	NaN	PTGES3
DNA Methylation and Transcriptional Repression Signaling	6.70E-01	6.06E-02	NaN	DNMT3A,HIST1H4H
MIF-mediated Glucocorticoid Regulation	6.70E-01	6.06E-02	NaN	IKBKG,NR3C1
Neuregulin Signaling	6.67E-01	4.40E-02	2	RAP2A,PIK3R1,MRAS,RAP1A
β -Adrenergic Signaling	6.67E-01	4.40E-02	NaN	RAP2A,PRKAR2B,MRAS,RAP1A
CD28 Signaling in T Helper Cells	6.66E-01	4.10E-02	2.236	IKBKG,PIK3R1,PIK3C2G,PIK3CB,LCP2
Th1 Pathway	6.56E-01	4.07E-02	2.236	NFIL3,PIK3R1,PIK3C2G,PIK3CB,IFNAR1
Fc γ Receptor-mediated Phagocytosis in Macrophages and Monocytes	6.56E-01	4.35E-02	2	DOCK1,PIK3R1,PIK3C2G,LCP2
CTLA4 Signaling in Cytotoxic T Lymphocytes	6.45E-01	4.30E-02	NaN	PIK3R1,PIK3C2G,PIK3CB,LCP2
Cellular Effects of Sildenafil (Viagra)	6.29E-01	3.97E-02	NaN	MYH10,PLCB4,PRKAR2B,CACNA1C,PDE4D
Endothelin-1 Signaling	6.29E-01	3.66E-02	2.646	RAP2A,PLCB4,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A
Netrin Signaling	6.16E-01	4.62E-02	NaN	PRKAR2B,RYR2,CACNA1C
UVB-Induced MAPK Signaling	6.16E-01	4.62E-02	NaN	PIK3R1,PIK3C2G,PIK3CB
Interferon Signaling	6.15E-01	5.56E-02	NaN	PTPN2,IFNAR1
Complement System	6.15E-01	5.56E-02	NaN	C1S,C9
Superpathway of Inositol Phosphate Compounds	6.04E-01	3.51E-02	2.828	PLCB4,TNS3,IPMK,PTPN2,PIK3R1,PPM1H,PIK3C2G,PIK3CB
Tec Kinase Signaling	6.00E-01	3.70E-02	2.449	RND3,PIK3R1,DIRAS3,PIK3C2G,MRAS,PIK3CB
Acyl-CoA Hydrolysis	5.97E-01	9.09E-02	NaN	HNF4A
Dolichyl-diphosphooligosaccharide Biosynthesis	5.97E-01	9.09E-02	NaN	ALG1
Inhibition of Matrix Metalloproteases	5.81E-01	5.26E-02	NaN	TIMP3,MMP3
EGF Signaling	5.80E-01	4.41E-02	NaN	PIK3R1,PIK3C2G,PIK3CB
Caveolar-mediated Endocytosis Signaling	5.68E-01	4.35E-02	NaN	ITGA11,ITGA8,ABL1
April Mediated Signaling	5.65E-01	5.13E-02	NaN	TRAF3,IKBKG
Estrogen Biosynthesis	5.65E-01	5.13E-02	NaN	CYP2A6 (includes others),CYP1B1
Cleavage and Polyadenylation of Pre-mRNA	5.64E-01	8.33E-02	NaN	CPSF2
Mevalonate Pathway I	5.64E-01	8.33E-02	NaN	MVD
Guanosine Nucleotides Degradation III	5.64E-01	8.33E-02	NaN	NT5C3A
Pregnenolone Biosynthesis	5.64E-01	8.33E-02	NaN	MICAL2
Corticotropin Releasing Hormone Signaling	5.62E-01	3.73E-02	1.342	PRKAR2B,NPR3,MEF2A,CACNA1C,RAP1A
Xenobiotic Metabolism Signaling	5.57E-01	3.33E-02	NaN	RAP2A,CAMK1D,PIK3R1,PIK3C2G,MRAS,PIK3CB,RAP1A,CYP1B1,PTGES3
Melatonin Signaling	5.57E-01	4.29E-02	NaN	PLCB4,PRKAR2B,RORA
GNRH Signaling	5.56E-01	3.57E-02	2.236	RAP2A,PLCB4,PRKAR2B,MRAS,CACNA1C,RAP1A
nNOS Signaling in Skeletal Muscle Cells	5.50E-01	5.00E-02	NaN	RYR2,CACNA1C
Antioxidant Action of Vitamin C	5.47E-01	3.88E-02	NaN	PLCB4,IKBKG,SLC2A1,TXNRD3
Role of PKR in Interferon Induction and Antiviral Response	5.35E-01	4.88E-02	NaN	TRAF3,IKBKG
B Cell Activating Factor Signaling	5.35E-01	4.88E-02	NaN	TRAF3,IKBKG
Intrinsic Prothrombin Activation Pathway	5.35E-01	4.88E-02	NaN	KLK9,F10
Fatty Acid Activation	5.35E-01	7.69E-02	NaN	ACSL4
NAD biosynthesis II (from tryptophan)	5.35E-01	7.69E-02	NaN	ABL1
Urate Biosynthesis/Inosine 5'-phosphate Degradation	5.35E-01	7.69E-02	NaN	NT5C3A
tRNA Splicing	5.21E-01	4.76E-02	NaN	GDPD1,PDE4D
DNA Double-Strand Break Repair by Homologous Recombination	5.08E-01	7.14E-02	NaN	ABL1
Chondroitin Sulfate Degradation (Metazoa)	5.08E-01	7.14E-02	NaN	CEMIP
Adenosine Nucleotides Degradation II	5.08E-01	7.14E-02	NaN	NT5C3A

Nicotine Degradation III	5.07E-01	4.65E-02	NaN	CYP2A6 (includes others),CYP1B1
Role of MAPK Signaling in the Pathogenesis of Influenza	5.04E-01	4.00E-02	NaN	RAP2A,MRAS,RAP1A
Role of Oct4 in Mammalian Embryonic Stem Cell Pluripotency	4.94E-01	4.55E-02	NaN	MEF2A,WWP2
Dermatan Sulfate Degradation (Metazoa)	4.84E-01	6.67E-02	NaN	CEMIP
Histidine Degradation VI	4.84E-01	6.67E-02	NaN	MICAL2
Extrinsic Prothrombin Activation Pathway	4.61E-01	6.25E-02	NaN	F10
Superpathway of Geranylgeranyldiphosphate Biosynthesis I (via Mevalonate)	4.61E-01	6.25E-02	NaN	MVD
Parkinson's Signaling	4.61E-01	6.25E-02	NaN	SNCA
Role of BRCA1 in DNA Damage Response	4.57E-01	3.75E-02	NaN	SMARCC1,FANCC,HLTF
RAN Signaling	4.40E-01	5.88E-02	NaN	KPNA6
Differential Regulation of Cytokine Production in Macrophages and T Helper Cells by IL-17A and IL-17F	4.40E-01	5.88E-02	NaN	CCL3
Purine Nucleotides Degradation II (Aerobic)	4.40E-01	5.88E-02	NaN	NT5C3A
LXR/RXR Activation	4.35E-01	3.42E-02	NaN	SCD,LDLR,C9,TNFRSF11B
Nicotine Degradation II	4.34E-01	4.08E-02	NaN	CYP2A6 (includes others),CYP1B1
Amyloid Processing	4.23E-01	4.00E-02	NaN	PRKAR2B,CSNK1A1
Cell Cycle: G2/M DNA Damage Checkpoint Regulation	4.23E-01	4.00E-02	NaN	ABL1,RPRM
Phototransduction Pathway	4.12E-01	3.92E-02	NaN	PRKAR2B,CNGA1
Cardiomyocyte Differentiation via BMP Receptors	4.02E-01	5.26E-02	NaN	BMPR2
1D-myo-inositol Hexakisphosphate Biosynthesis II (Mammalian)	4.02E-01	5.26E-02	NaN	IPMK
D-myo-inositol (1,3,4)-trisphosphate Biosynthesis	4.02E-01	5.26E-02	NaN	IPMK
Melatonin Degradation I	4.02E-01	3.85E-02	NaN	CYP2A6 (includes others),CYP1B1
3-phosphoinositide Biosynthesis	4.00E-01	3.09E-02	2.449	TNS3,PTPN2,PIK3R1,PPM1H,PIK3C2G,PIK3CB
Hepatic Cholestasis	4.00E-01	3.16E-02	NaN	IKBKG,PRKAR2B,HNF4A,ATP8B1,TNFRSF11B
CCR5 Signaling in Macrophages	3.99E-01	3.45E-02	NaN	MRAS,CACNA1C,CCL3
Role of Lipids/Lipid Rafts in the Pathogenesis of Influenza	3.85E-01	5.00E-02	NaN	IFNAR1
FGF Signaling	3.69E-01	3.30E-02	NaN	PIK3R1,PIK3C2G,PIK3CB
Death Receptor Signaling	3.69E-01	3.30E-02	NaN	NAIP,IKBKG,RIPK1
NAD Salvage Pathway II	3.69E-01	4.76E-02	NaN	NT5C3A
Superpathway of Melatonin Degradation	3.63E-01	3.57E-02	NaN	CYP2A6 (includes others),CYP1B1
Glutamate Receptor Signaling	3.63E-01	3.57E-02	NaN	GRM7,GRIK1
IL-1 Signaling	3.62E-01	3.26E-02	NaN	IKBKG,PRKAR2B,MRAS
Tight Junction Signaling	3.57E-01	3.01E-02	NaN	CPSF2,MYH10,PRKAR2B,SNAP25,TNFRSF11B
Polyamine Regulation in Colon Cancer	3.54E-01	4.55E-02	NaN	PSMF1
Differential Regulation of Cytokine Production in Intestinal Epithelial Cells by IL-17A and IL-17F	3.54E-01	4.55E-02	NaN	CCL3
GABA Receptor Signaling	3.49E-01	3.19E-02	NaN	GABBR2,MRAS,CACNA1C
Clathrin-mediated Endocytosis Signaling	3.48E-01	2.93E-02	NaN	LDLR,PIK3R1,WASL,PIK3C2G,AAK1,PIK3CB
Superpathway of D-myo-inositol (1,4,5)-trisphosphate Metabolism	3.27E-01	4.17E-02	NaN	IPMK
D-myo-inositol (1,4,5,6)-Tetrakisphosphate Biosynthesis	3.15E-01	2.92E-02	2	TNS3,IPMK,PTPN2,PPM1H
D-myo-inositol (3,4,5,6)-tetrakisphosphate Biosynthesis	3.15E-01	2.92E-02	2	TNS3,IPMK,PTPN2,PPM1H
Gluconeogenesis I	3.14E-01	4.00E-02	NaN	ME1
Antiproliferative Role of TOB in T Cell Signaling	3.02E-01	3.85E-02	NaN	PABPC1
Type I Diabetes Mellitus Signaling	3.00E-01	2.94E-02	NaN	IKBKG,RIPK1,TNFRSF11B
Pyridoxal 5'-phosphate Salvage Pathway	2.99E-01	3.12E-02	NaN	CSNK1A1,GRK5
D-myo-inositol (1,4,5)-Trisphosphate Biosynthesis	2.91E-01	3.70E-02	NaN	PLCB4
IL-12 Signaling and Production in Macrophages	2.86E-01	2.80E-02	NaN	IKBKG,PIK3R1,PIK3C2G,PIK3CB
IL-15 Production	2.80E-01	3.57E-02	NaN	PTK7
Sonic Hedgehog Signaling	2.70E-01	3.45E-02	NaN	PRKAR2B
RAR Activation	2.68E-01	2.69E-02	NaN	PRKAR2B,PIK3R1,PIK3CB,SMARCC1,HLTF
Gustation Pathway	2.64E-01	2.70E-02	NaN	PRKAR2B,GDPD1,CACNA1C,PDE4D

TREM1 Signaling	2.59E-01	2.86E-02	NaN	NLRP10,CCL3
GPCR-Mediated Nutrient Sensing in Enteroendocrine Cells	2.53E-01	2.70E-02	NaN	PLCB4,PRKAR2B,CACNA1C
3-phosphoinositide Degradation	2.51E-01	2.65E-02	2	TNS3,INPP4B,PTPN2,PPM1H
Role of Wnt/GSK-3 β^2 Signaling in the Pathogenesis of Influenza	2.47E-01	2.78E-02	NaN	CSNK1A1,IFNAR1
GPCR-Mediated Integration of Enteroendocrine Signaling Exemplified by an L Cell	2.47E-01	2.78E-02	NaN	PLCB4,PRKAR2B
4-1BB Signaling in T Lymphocytes	2.42E-01	3.12E-02	NaN	IKBKG
Inhibition of Angiogenesis by TSP1	2.42E-01	3.12E-02	NaN	THBS1
Ephrin B Signaling	2.42E-01	2.74E-02	NaN	MRAS,ITSN2
p38 MAPK Signaling	2.39E-01	2.63E-02	NaN	DDIT3,MEF2A,EEF2K
Autoimmune Thyroid Disease Signaling	2.18E-01	2.86E-02	NaN	CGA
IL-17A Signaling in Fibroblasts	2.18E-01	2.86E-02	NaN	IKBKG
Notch Signaling	2.04E-01	2.70E-02	NaN	MAML2
Triacylglycerol Degradation	1.97E-01	2.63E-02	NaN	MGLL
IL-10 Signaling	0.00E+00	1.45E-02	NaN	IKBKG
Aryl Hydrocarbon Receptor Signaling	0.00E+00	1.49E-02	NaN	CYP1B1,PTGES3
LPS/IL-1 Mediated Inhibition of RXR Function	0.00E+00	2.43E-02	NaN	CPT1B,ACSL4,CYP2A6 (includes others),FABP3,TNFRSF11B
Hepatic Fibrosis / Hepatic Stellate Cell Activation	0.00E+00	2.20E-02	NaN	MYH10,COL2A1,IFNAR1,TNFRSF11B
Mitochondrial Dysfunction	0.00E+00	1.24E-02	NaN	CPT1B,SNCA
VDR/RXR Activation	0.00E+00	1.32E-02	NaN	CST6
FXR/RXR Activation	0.00E+00	2.46E-02	NaN	PCK2,C9,HNF4A
Role of Pattern Recognition Receptors in Recognition of Bacteria and Viruses	0.00E+00	2.29E-02	NaN	PIK3R1,PIK3C2G,PIK3CB
MIF Regulation of Innate Immunity	0.00E+00	2.44E-02	NaN	IKBKG
CD27 Signaling in Lymphocytes	0.00E+00	1.92E-02	NaN	IKBKG
T Helper Cell Differentiation	0.00E+00	1.56E-02	NaN	TNFRSF11B
Factors Promoting Cardiogenesis in Vertebrates	0.00E+00	1.12E-02	NaN	BMPR2
Mitotic Roles of Polo-Like Kinase	0.00E+00	1.59E-02	NaN	ANAPC5
ATM Signaling	0.00E+00	1.03E-02	NaN	ABL1
Androgen Signaling	0.00E+00	2.21E-02	NaN	PRKAR2B,MRAS,CACNA1C
Primary Immunodeficiency Signaling	0.00E+00	2.56E-02	NaN	IKBKG
Communication between Innate and Adaptive Immune Cells	0.00E+00	1.33E-02	NaN	CCL3
Cdc42 Signaling	0.00E+00	8.20E-03	NaN	WASL
Retinoic acid Mediated Apoptosis Signaling	0.00E+00	1.69E-02	NaN	IFNAR1
RhoA Signaling	0.00E+00	2.46E-02	NaN	RND3,RAPGEF6,DLC1
Altered T Cell and B Cell Signaling in Rheumatoid Arthritis	0.00E+00	1.28E-02	NaN	TRAF3
Atherosclerosis Signaling	0.00E+00	8.20E-03	NaN	MMMP3
Neuroprotective Role of THOP1 in Alzheimer's Disease	0.00E+00	1.79E-02	NaN	PRKAR2B,NFYA
Nur77 Signaling in T Lymphocytes	0.00E+00	2.08E-02	NaN	HDAC9
Role of Hypercytokinemia/hyperchemokinemia in the Pathogenesis of Influenza	0.00E+00	2.50E-02	NaN	CCL3
Dopamine-DARPP32 Feedback in cAMP Signaling	0.00E+00	2.52E-02	2	PLCB4,PRKAR2B,CSNK1A1,CACNA1C
iNOS Signaling	0.00E+00	2.27E-02	NaN	IKBKG
D-myo-inositol-5-phosphate Metabolism	0.00E+00	2.58E-02	2	PLCB4,TNS3,PTPN2,PPM1H
Phospholipases	0.00E+00	1.72E-02	NaN	PLCB4
Triacylglycerol Biosynthesis	0.00E+00	2.27E-02	NaN	PLPP3
Salvage Pathways of Pyrimidine Ribonucleotides	0.00E+00	2.15E-02	NaN	CSNK1A1,GRK5
Remodeling of Epithelial Adherens Junctions	0.00E+00	1.56E-02	NaN	ACTN1
Agranulocyte Adhesion and Diapedesis	0.00E+00	2.31E-02	NaN	MYH10,ICAM2,MMP3,CCL3
Granulocyte Adhesion and Diapedesis	0.00E+00	2.45E-02	NaN	ICAM2,MMP3,CCL3,TNFRSF11B
HIPPO signaling	0.00E+00	1.16E-02	NaN	STK3
Unfolded protein response	0.00E+00	1.85E-02	NaN	DDIT3
Wnt/Ca v pathway	0.00E+00	1.61E-02	NaN	PLCB4
Toll-like Receptor Signaling	0.00E+00	1.33E-02	NaN	IKBKG
Wnt/ β -catenin Signaling	0.00E+00	2.38E-02	NaN	CDH2,CSNK1A1,DKK2,BMPR2
Dopamine Receptor Signaling	0.00E+00	1.33E-02	NaN	PRKAR2B
Phagosome Maturation	0.00E+00	7.41E-03	NaN	SNAP25
Osteoarthritis Pathway	0.00E+00	2.46E-02	1	TIMP3,HDAC3,MMP3,BMPR2,SLC39A8
Sirtuin Signaling Pathway	0.00E+00	1.08E-02	NaN	SLC2A1,PCK2,CPT1B
Iron homeostasis signaling pathway	0.00E+00	7.69E-03	NaN	BMPR2

Supplemental Table 3

Ingenuity upstream regulator analysis in EIPA-unique transcriptome.

Upstream Regulator	Expr Log Ratio	Molecule Type	Predicted Activation State	Activation z-score	Flags	p-value of overlap	Target molecules in dataset
pirinixic acid		chemical toxicant	Activated	2.081	bias	3.44E-02	ACSL4,C9,CDH2,CGA,CPT1B,ECI2,ELOVL5,FADS2,HNF4A,KLF11,LDLR,MGLL,NPC2,PCK2,RORA,SCD,UBE2K
beta-estradiol		chemical - endogenous mammalian	Activated	2.96	bias	9.81E-04	ADK,ARNT2,BHLHE40,BMPR2,CAP2,CDH2,CGA,CLCA2,CNBP,CPT1B,CWC25,CYP1B1,CYP2A6 (includes others),CYR61,DIT1,CDHCR7,DNAJ1C1,DSP,EIF3A,ENPP2,ETS1,FABP3,FADS3,GHR,GIPC2,GPC1,GPER1,HELLS,IKBK G,INPP4B,KAT6A,KRT19,LDLR,LIN7A,LMO7,MEF2A,MGLL,MSMO1,NEDD9,NFYA,NPR3,NR3C1,OXTR,PBX1,PGR,PIK3R1,PLAA,PTBP2,PTPN2,PTTG1IP1,RAP1A,RAPGEF6,RND3,RRPM,RYR2,SHISA4,SLC2A1,SNAP25,SNE1,STK3,STS,T
8-bromo-cAMP		chemical reagent	Activated	2.761	bias	2.41E-02	ACSL4,CGA,CYP1B1,FDXR,LDLR,NFIL3,PDE4D,PGR,SLC2A1
Calcineurin protein(s)		complex	Activated	2.2	bias	7.71E-03	CBLB,CCL3,CPT1B,LIN7A,NFIL3,RNF128
PDGF BB		complex	Activated	2.383	bias	5.58E-03	BDKRB1,BDKRB2,BHLHE40,CYR61,DIT3,ETS1,GHR,LDLR,MMMP3,NEXN,NFIL3,NPR3,RND3,SCD,THBS1,TNC
Insulin		group	Activated	2.233		2.69E-01	FADS2,ME1,MMMP3,NFIL3,NR3C1,PER2,PBK3R1,SCD,SLC2A1,SORBS1,SORT1
Cg		complex	Activated	3.297	bias	6.25E-04	BHLHE40,CDH2,CDHCR7,DNAH11,ELK3,ENPP2,GPC1,HAPLN1,LDLR,LRP1B,LRRN3,NPR3,OXTR,PAPPA,PDE4D,PGR,P
Lh		complex	Activated	2.138	bias	8.22E-05	ACTN1,ATP9A,CAP2,CSNK1A1,DHCR7,FDXR,GRK5,MSM01,NPC2,NTF3,PDE4D,PGR,PSMD1,PSMD3,PRPM,SNAP25,THBS1,TNFRSF11B
Ins1		other	Activated	2.143	bias	2.85E-02	DDIT3,EC1,FABP3,FADS2,LDLR,MMMP3,NTF3,PGR,PIK3R1,SCD,SLC2A1,SNAP25,TIMP3
SOX4		transcription regulator	Activated	2.896	bias	1.04E-03	ARP221,BMPR2,CDH2,EVL,HDAC8,LMO7,LRRN3,MAGI1,SEL1L3,SNX10,SORT1,THSD1
WNT1		cytokine	Activated	2.425	bias	1.47E-02	DKK2,DNAJC1,ENPP2,HNF4A,KRT19,MMMP3,MRAS,ZIC1
AGT		growth factor	Activated	2.748	bias	1.02E-02	BACH1,BDKRB2,CACNA1C,CDH13,ETS1,FDXR,FOXP2,GRK5,LDLR,LPP,MSMO1,MHY10,NPR3,PIK3R1,PTBP2,SLC2A1,SNCAG,UGCG,WASL
PDGFB		growth factor	Activated	2	bias	4.76E-02	CCL3,MMMP3,THBS1,TNC
HIF1A		transcription regulator	Activated	3.386	bias	2.68E-02	BHLHE40,BHLHE41,CDH2,CEMIP,CYR61,ETS1,FAM13A,GHR,GPER1,HDAC3,HIST1H2AC,KRT19,QKI,RAPGEF6,SLC2A1,A1,THBS1,TNFRSF11B
RASSF1		other	Activated	2.433		2.85E-02	BHLHE40,BMPR2,CDH2,GHR,GSN,MRAS
SP1		transcription regulator	Activated	2.486	bias	1.38E-02	CDH2,CYP1B1,DHCR24,DLC1,DNMT3A,F10,GHR,HDAC3,HNF4A,KRT19,LDLR,LTPB3,PGR,PLAA,PRKR2B,SLC2A1,SLC39A8,SLC4A7,SMARCC1,SNAP25,TIMP3,TNC,UGCG
PTK2		kinase	Activated	2.378	bias	2.42E-04	CYR61,DSP,LDLR,LPP,THBS1,TIMP3,TNC
SREBF1		transcription regulator	Activated	3.617	bias	4.28E-04	ACSL4,BHLHE40,BHLHE41,CAMK1D,CAP2,CYP4F2,DHCR7,FABP3,FADS2,HNF4A,LDLR,MSMO1,MVD,NFIL3,PCK2,S
FGF10		growth factor	Activated	2.213	bias	1.07E-02	CD,CYR61,ELP,LMO7,SCD,TIMP3
TNF		cytokine	Activated	3.052	bias	1.08E-02	AAK1,ARHGEF17,BBOX1,BDKRB1,BDKRB2,BHLHE40,BHLHE41,CCL3,CDH13,CDH2,CPT1B,CYP1B1,CYR61,DIT3,ELK3,ENPP2,ETS1,GHR,HAPLN1,HDAC9,HNF4A,ICAM2,KCTD13,LAMC1,LDLR,MAGI1,MAN1C1,MAP3K20,MMMP3,MYH10,NAIP,NEDD9,NNMT,NR3C1,PAPPA,PCK2,PER2,PIK3CB,PLAA,QKI,RAPGEFS,RPK1,RND3,RORA,SCD,SKI,SLC16A2,SLC2A1,SMURF2,SORBS1,THBS1,TIMP3,TNC,TNFRSF11B
IFI16		transcription regulator	Activated	2.236	bias	3.51E-02	CCL3,CGA,FAF1,LDLR,MTHFD2
PIK3R1	5.61	kinase	Activated	2.213	bias	4.31E-02	CCL3,DIT3,PIK3CB,PIK3R1,SLC2A1
NR1I2		ligand-dependent nuclear receptor	Activated	2.216		8.32E-02	CYP2A6 (includes others),DHCR7,HNF4A,HTT,SCD,TNFRSF11B
ERG		transcription regulator	Activated	3.162	bias	4.23E-06	ACTN1,BDKRB1,CAMK1D,DOCK1,DOCK2,ELMO1,ETS1,ICAM2,IKBKG,MAGI1,MMMP3,NFIL3,PLPP3,PTPN4,RAPGEF5,RBMS1,SNCAG,THBS1
TGFB1		growth factor	Activated	3.182	bias	2.30E-07	ABL1,ACTN1,ADK,AQP11,ARNT2,ATXN1,B3GALT2,BDKRB2,BHLHE40,C15,CCL3,CDH2,CDH4,CEMIP,CLCA2,CPT1B,CYB561,CYR61,DNAJ1B4,DNMT3A,DOCK2,DSP,ELK3,ELMO1,ETS1,FDXR,FNDC3B,GPER1,GRMT7,GSN,HDAC9,HLTf,HNF4A,ICAM2,ITGA11,KPNA6,KRT19,LAMC1,LANC1,LDLR,LEMD3,LTPB3,MBNL2,mir-154,MMMP3,MSMO1,MTHFD2,MVD,NEDD9,NNMT,PAPP,PLXNB1,PDE4D,PHACTR1,PSMD1,RAP1A,RASGRF2,RBMS1,RERE,RNF111,RORA,SCD,SEMA7A,SKI,SLC2A18,SLC2A1,SLC39A8,SMURF2,SRSF4,TBC1D1,TCF12,THBS1,TIA1,TIAMP3,TMEM17,TNC,TNFRSF11B
PLG		peptidase	Activated	2.393	bias	9.53E-03	CYR61,DOCK1,ELMO1,PIK3CB,PRKR2B,TNFRSF11B
ZAP70		kinase	Activated	2	bias	4.76E-02	EDIL3,MYCBP2,PLEC,SCD
AR		ligand-dependent nuclear receptor	Activated	3.583	bias	3.33E-03	BMPR2,CACNA1C,CDH2,CGA,DHCR24,DHCR7,ELMO1,GA6,GSN,INPP4B,MRAS,MSMO1,MTHFD2,NR3C1,PGR,SLC39A8,SLC7A11,SMARCC1,THBS1,TIMP3,TP63
EGF		growth factor	Activated	3.031	bias	1.02E-02	ACSL4,ACTN1,DHCR7,CGA,CYR61,DIT3,ETS1,GPER1,HNF4A,KRT19,MAP3K20,MMMP3,PGR,PLPP3,SCD,SLC4A7,SNA,TP25,THBS1,TIMP3,TNC,TP63

TGFB3		growth factor	Activated	3.358	bias	1.37E-05	BHLHE40,CDH2,CYR61,ETS1,MICAL2,MMP3,SCD,SH3PXD2A,THBS1,TIMP3,TNC,TNFRSF11B	
ELK1		transcription regulator	Activated	2.236	bias	1.26E-02	BMPR2,MTHFD2,SLC2A1,SLC7A11,THBS1	
CREBBP		transcription regulator	Activated	2.236	bias	3.57E-02	AQP11,ARHGEF3,BDKRB2,CGA,CYR61,DNAJ4B,EVL,FNDC3B,GFRA1,GRAMD2B,LDR,NR3C1,PGR,PPM1E,SLC7A11,TNC	
SREBF2		transcription regulator	Activated	2.745	bias	5.39E-04	CAMK1D,CYP4F2,DHCR7,FADS2,LDLR,MSMO1,MVD,SCD	
TP53		transcription regulator	Activated	3.242		1.04E-02	ACTN1,APBB2,ASTN2,ATXN1,BDKRB2,BHLHE40,BHLHE41,C9orf116,CLCA2,CYR61,DDIT3,DHCR24,DHCR7,DLC1,EDIL3,ENPP2,FABP2,FAM196A,FDXR,GAS6,GSN,HDAC3,HDAC9,HTT,KAT6A,KMT2D,LPP,MBNL2,ME1,MMP3,MV,MYH10,NPEPPS,PGR,PIK3R1,PSMD1,PSMD3,RALBP1,AP2A,RRBP6,RND3,RPRM,SCMH1,SFPQ,SHROOM3,SLC2A1,SMURF2,SORBS1,SULF2,THBS1,TIMP3,TOM1,TP63	
ESR1		ligand-dependent nuclear receptor	Activated	2.823		6.59E-04	ANAPC5,BMPR2,CAP2,CCPG1,CEP135,CGA,CSNK1A1,CY1P181,DHCR7,DNAJC1,DST,EEF2K,ENPP2,GABBR2,GHR,GPER1,GSN,HELLS,KCTD13,KRT19,LANC1,LDLR,LEM3D,MAG1,MAP3K20,MYH10,NEDD9,NPR3,OXTR,PGR,PSMD3,PTPN4,PTTG1IP,RAPGEF6,RERE,RIPK1,RND3,RPRM,RRBP1,SCIN,SDCCAG8,SEC31A,SFPQ,SLC16A2,SLC39A8,SLC7A11,SMURF2,SPTBN1,STK3,TNFRSF11B,TNS3,TOM1	
rosiglitazone		chemical drug	Activated	2.286	bias	4.46E-02	CGA,CPT1B,ETS1,FABP3,KLF11,MAN1C1,MGLL,PIK3R1,PP3,RORA,SCD,SKI,SLC2A1,SORBS1,THBS1,TNC	
methotrexate		chemical drug	Activated	2.142		7.12E-02	ACSL4,CCL3,GSN,NR3C1,PBX1,PEX7,SCD,THBS1,TIMP3,TNFRSF11B	
lovastatin		chemical drug	Activated	2.012	bias	2.00E-02	CYP4F2,DDIT3,DHCR7,HELLS,LDLR,MVD,TNFRSF11B	
fatty acid		chemical - endogenous mammalian	Activated	2.378	bias	1.41E-02	CPT1B,CYR61,DDIT3,FADS2,LDLR,MSMO1,SCD,SLC2A1	
forskolin		chemical toxicant	Activated	3.341	bias	2.48E-03	ACTN1,ATP9A,BHLHE40,CAP2,CDH2,CGA,CYP1B1,DDIT3,DHCR7,FDXR,GFRA1,GRK5,HAPLN1,MFN1,MMP3,MSMO1,NFIL3,NPC2,PDE4D,PGR,PRKAR2B,PSMD3,RPRM,SERIN2,SLC2A1,SLC7A11,SNAP25,THBS1,TNFRSF11B	
fenofibrate		chemical drug	Activated	2.36	bias	1.97E-02	ACSL4,CDH2,CPT1B,EC1,FADS2,LDLR,MGLL,NR3C1,PCK2,PIK3C2G,RORA,SCD	
decitabine		chemical drug	Activated	4.254	bias	3.76E-05	BMPR2,CDH13,CDH2,CDH4,CYP1B1,CYP2A6 (includes others),DIRAS3,DLC1,DST,FBN2,FDXR,GFRA1,GSN,HELLS,HNF4A,LDLR,mir-154,MMP3,MOK,NR3C1,PABPC1,PER2,PGR,RASGRF2,RP1,STK1,SCD,SLC2A1,SLC7A11	
tunicamycin		chemical - endogenous non-mammalian	Activated	2.726	bias	4.40E-03	DDIT3,ETS1,HAPLN1,LMF1,MMP3,MORF4L2,MVD,PCK2,RIPK1,SCD,SLC2A1,SLC7A11	
dihydrotestosterone		chemical - endogenous mammalian	Activated	3.007	bias	2.23E-04	AIG1,CDH2,CGA,CST6,DHCR24,DNMT3A,FOXP2,GAS6,GHR,GSN,HNRNPU,KRT19,LDLR,ME1,MGLL,MMP3,NPEPPS,NR3C1,OXTR,PER2,SCD,SLC25A40,SLC2A1,SLC4A7,SMARCC1,SORT1,THBS1,TIMP3	
progesterone		chemical - endogenous mammalian	Activated	2.086	bias	8.21E-04	BHLHE40,CDH2,CYP1B1,CYP2A6 (includes others),DDIT3,DLC1,DNAJ4B,ENPP2,GAS6,GHR,JTGAI11,KLF11,LMOT2,ME1,MMP3,NEDD9,NFIL3,NTF3,PER2,PGR,PIK3R1,PLPP3,PM1H,SCD,SLC2A1,STX18,TIMP3,UGCG	
ADRB		group	Inhibited	-2.333	bias	9.91E-03	ABL1,ARHGEF3,BHLHE40,DDIT3,IKBKG,MSMO1,MVD,SLC7A11,TRAF3	
miR-124-3p (and other miRNAs w)	mature microrna	Inhibited		-3.831	bias	1.04E-03	CDC14B,CYP1B1,DHCR24,DNAJC1,EC1,ELK3,ELOVL5,FA1177A1,GSN,LAMC1,LDLR,PTBP2,PTTG1IP,QSER1,RBMS1	
mir-29	microrna	Inhibited		-2.166	bias	7.71E-03	BDKRB2,DNMT3A,ITGA11,PIK3R1,THBS1,TIMP3	
miR-133a-3p (and other miRNAs w)	mature microrna	Inhibited		-2.183	bias	9.89E-03	CTBP2,FBN2,PTBP2,QKI,STK3	
let-7a-5p (and other miRNAs w/se)	mature microrna	Inhibited		-2.767	bias	3.81E-02	CDH2,DOCK5,DSP,FADS2,KRT19,POM121/POM121C,SCD,THBS1	
FBN1	other	Inhibited		-2	bias	1.34E-03	CYR61,LTBP3,MMP3,TIMP3	
POR		enzyme	Inhibited		-2.219	bias	2.41E-02	CYP2A6 (includes others),DHCR24,DHCR7,ELOVL5,FADS2,LDLR,MSMO1,MVD,SCD
KLF2		transcription regulator	Inhibited		-2.412	bias	1.59E-02	CCL3,CDH2,CYP1B1,DOCK2,MYH10,PLPP3,SLC2A1,SMURF2,THBS1
INSIG1	other	Inhibited			-2.573	bias	1.34E-02	ACSL4,CYP4F2,DHCR24,DHCR7,FADS2,LDLR,MSMO1,M
CST5	other	Inhibited			-2.183	bias	9.56E-04	ATP8B1,CEMIP,CNPB,DNAJ4B,DOCK5,DSP,DTNB,ELK3,FA1133B,FRAS1,HNRNPU,INTS4,LAMC1,MYCBP2,NR3C1,S
LMNB1	other	Inhibited			-2	bias	3.14E-04	DNMT3A,ITGA11,MSMO1,PAPPA,SCD,SERINC1
4-(2-aminoethyl)benzenesulfonyl	chemical - protease inhibitor	Inhibited			-2	bias	7.54E-03	DDIT3,ENPP2,FBN2,TNC
U0126		chemical - kinase inhibitor	Inhibited		-2.085	bias	2.22E-02	BHLHE40,CCL3,CYP1B1,CYP2A6 (includes others),CYP4F2,DDIT3,ENPP2,ETS1,GSN,HAPLN1,LDLR,MAP3K1,PIK3R1,PLPP3,PM1H,SCD,SLC2A1,STX18,TIMP3,TNFRSF11B,TOM1
camptothecin	chemical drug	Inhibited			-2.111	bias	2.78E-02	APBB2,BDKRB1,BFAR,CCL3,EHBP1,FND3B,GRK5,LDLR,MBNL2,NR3C1,PBX1,PLEC,PRKAR2B,RALBP1,RAPGEF5,RBM51,PIK1,SPDYA,SPTBN1,STK3,TBC1D1,TNS3,TRAF3,UGCG
leukotriene A4	chemical - endogenous mammalian					2.63E-02	TNC	
lopinavir	chemical drug					2.04E-03	DDIT3,TNFRSF11B	

3,5-L-diiodothyronine		chemical - endogenous mammalian			1.74E-02	ME1,SCD
L-cysteine		chemical - endogenous mammalian			1.74E-02	PCK2,SCD
L-lysine		chemical - endogenous mammalian			1.33E-02	DDIT3,PCK2
L-glutamic acid		chemical - endogenous mammalian		1.698 bias	2.58E-02	CACNA1C,CDH2,FADS2,MGLL,NFIL3,SORBS1
glycerol		chemical - endogenous mammalian			3.25E-02	LDLR,NR3C1
dexamethasone phosphate		chemical drug			1.92E-02	CGA,TBBS1,TNFRSF11B
estrone		chemical - endogenous mammalian			3.83E-02	PGR,PIK3R1
azide		chemical reagent			2.63E-02	SLC2A1
1-oleoyleylsophosphatidic acid		chemical - endogenous mammalian			2.63E-02	ENPP2
phosphatidylcholine		chemical - endogenous mammalian			1.74E-02	DDIT3,SCD
linoleic acid		chemical - endogenous mammalian		1.455 bias	7.71E-03	ACSL4,CPT1B,CYP4F2,DDIT3,LDLR,SCD
meldonium		chemical drug			1.74E-02	CPT1B,LDLR
cortivazol		chemical reagent			2.63E-02	NR3C1
hydrocortisone		chemical - endogenous mammalian		-1.134	4.73E-02	ACHE,BDKRB2,BMPR2,GABBR2,NR3C1,PTPN4,TNFRSF11B
BARH12		transcription regulator			2.63E-02	CNTN2
FFAR3		g-protein coupled receptor		-1.89 bias	2.60E-03	ADGRV1,CACNA1C,ENPP2,FADS2,GAS6,RASGRF2,SGIP1
triamcinolone acetonide		chemical drug		-0.894	2.01E-02	BHLHE40,DDIT3,ELK3,F10,LDLR,NEK7,NR3C1,SCD,SLC4A7,7,TBC1D1,TNFSF4
AEE 788		chemical drug			2.63E-02	PGR
Sos		group			1.68E-03	ATF7IP,DOCK1,LTPB3,MAP3K20,MMP3,NFIL3,PIK3CB,QK1,RPK1,SCD,SEMA6D,STK3,UGCG
Creb		group		-0.038 bias	9.04E-03	ADK,CACNA1C,CGA,CYR61,HTT,LDLR,LTPB3,NEDD9,NR3C1,PER2,RIPK1,RYR2,SLC7A11,TIA1,TNFRSF11B
Tgf beta		group		1.755 bias	2.05E-03	BACH1,BHLHE40,CCL3,CDH2,CYR61,F10,MMP3,NEDD9,P,LPP3,RNF111,RORA,RYR2,TIMP3,TNFRSF11B
RNA polymerase II		complex			1.55E-02	CAP2,CYP1B1,DDIT3,GHR,HNF4A,HNRNPU,LDLR,MEF2A,NBPFL10 (includes others),PBX1,RND3,PRPM,SORBS1
Pka		complex		0.788 bias	1.91E-02	CDH2,DDIT3,HNF4A,LDLR,MMP3,OXTR,PDE4D,TNFRSF11B
glucose oxidase		group			2.63E-02	SLC2A1
Rock		group		1 bias	3.47E-02	ETS1,LPP,SORT1,TBBS1
DNAJ		group			2.63E-02	ENPP2
ziram		chemical toxicant			2.63E-02	SNCA
maslinic acid		chemical - endogenous non-mammalian			4.74E-03	ACTN1,DOCK1,ETS1,PIK3R1,PRKAR2B,SORBS1,TBBS1
T3-TR-RXR		complex		1.982 bias	2.22E-02	F10,LDLR,ME1,SLC2A1
ERK		group		1.681 bias	1.39E-02	ACTN1,CGA,ETS1,IFNAR1,LDLR,MMP3,SLC2A1,SLC4A7,SORT1,SPTBN1,TBBS1,UGCG
(E)-2',3',4',5'-tetramethoxystilbene		chemical drug			2.63E-02	CYP1B1
CLTA		other			2.63E-02	LDLR
FSH		complex		1.881 bias	1.49E-03	ACTN1,ATP9A,BMPR2,CAP2,CDH2,CSNK1A1,DHCR7,FDX,R,GPER1,GRK5,LDLR,MSMO1,NPC2,PGR,PSMD1,PSMD3,RPRM,SLC2A1,SNAP25,TBBS1,TNFRSF11B
Ces1b/Ces1c		enzyme			2.63E-02	GHR
BDNF		growth factor		0.042 bias	3.29E-03	ARPP21,BHLHE40,CYR61,GPC4,LAMC1,mir-154,mir-329,MVD,NTF3,PER2,RPRM,RYR2,SNAP25,TBBS1,TNFRSF11B,F11B,TRAF3
SEN P7		peptidase			1.33E-02	CACNA1C,CDH2
RHOJ		enzyme			1.08E-03	CNBP,GSN,LRP18,RND3
NPC1		transporter			2.22E-02	DDIT3,LDLR,NPC2,SCD
MGEA5		enzyme		-0.908	4.71E-04	ACSL4,AHNAK2,BACH1,CAMK1D,CCBE1,CNOT1,DHCR7,DS,T,FABP3,GAS6,GPER1,GSN,MSMO1,PIK3R1,PLPP3,RAP2A,SORBS1,TBBS1,THSD1,TIMP3,TNC,TNFRSF11B,A11,TRAF3
EIF2A		translation regulator			9.66E-03	DDIT3,PCK2
ZNF100		other			1.33E-02	ENPP5,NEDD9
ZNF85		transcription regulator			1.33E-02	ENPP5,NEDD9
E. coli serotype 0127B8 lipopolysaccharide		chemical - endogenous non-mammalian		0.333 bias	4.76E-02	AQP11,DDIT3,GPER1,LAMC1,MMP3,PCK2,SEMA7A,SLC7A11,TBBS1,THSD1,TIMP3,TNC,TNFRSF11B
ZNF254		other			1.33E-02	ENPP5,NEDD9
H2BFM		other			2.63E-02	DNMT3A
FGF21		growth factor		1.328 bias	4.71E-03	CPT1B,GHR,LDLR,ME1,SLC2A1
CH3L1		enzyme			2.43E-02	BHLHE40,NNMT,TNC
CLEC1B		transmembrane receptor			3.25E-02	LCP2,TNC
ZBTB20	4.26	transcription regulator		0	2.05E-02	GAS6,GHR,NEDD9,NR3C1
STAT1/3/5 dimer		complex			3.83E-02	MMP3,TIMP3
MFSD2A		transporter			9.11E-06	ACSL4,DHCR7,FADS2,LDLR,MVD,SCD
RASSF8		other			1.33E-02	ENPP5,NEDD9
MIR17HG		other			3.77E-03	BMPR2,FBN2,FNDC3B,FRAS1,HEG1,PTK7,RNF111,SKI,SO,RT1
RDH11		enzyme			2.63E-02	NR3C1
Collagen(s)		complex		-0.849 bias	1.57E-02	CYR61,DDIT3,TBBS1,TNC
ZNF431		other			1.33E-02	ENPP5,NEDD9
RB M24		other			2.63E-02	TP63
SH3TC2		other			3.64E-02	DHCR24,DHCR7,MVD

miR-574-3p (miRNAs w/seed ACG)	mature microrna				2.63E-02	TP63
mir-574	microrna				4.00E-03	QKI,TP63
NUPR1	transcription regulator		-1.528	bias	2.26E-02	ATP8B1,CYR61,CYSTM1,DDIT3,DHCR24,ETS1,GCNT2,GRAMD2B,HDAC8,HLT,F,MAGI1,MGLL,MYH10,NFIL3,PIK3R1,RBMS1,SHROOM3,SLC2A1,SLC39A8,TNS3,WASHCS
AKT1	kinase		1.026	bias	1.33E-02	DHCR7,ME1,MSMO1,MYH10,NEXN,PGR,PIK3R1,SCD,SEMA6D,SLC2A1,SLC4A7,SORT1,THBS1
TWIST1	transcription regulator		1.718	bias	1.52E-02	CDH2,ETS1,FBN2,GPC1,GSN,HEG1,ITGA8,PAWR1,TIMP3
NEUROG1	transcription regulator		-1.134		1.42E-03	C15,CEMP1,DSP,FABP3,LRRN3,PAPP,THBS1
ADCYAP1	other		0.979		1.06E-02	ACTN1,CCBE1,CGA,DNMT3A,EDIL3,ENPP2,GRKS,HAPLN1,NPR3,QKI,SLC2A1,SNAP25
MMP12	peptidase				2.20E-02	ACTN1,ADK,HNF4A,NPEPPS,PSMD1
JUN	transcription regulator		0.738	bias	2.43E-02	CGA,CYP1B1,CYR61,GAS6,HNRNPU,mir-154,MMP3,MVD,NBP10 (includes others),OXTR,PGR,PTBP2,SCD,SDK1,SULF2,THBS1,TIMP3,TNC
CREB1	transcription regulator		0.74	bias	9.53E-05	ACHE,AQP11,BHLHE40,CACNA1C,CAMK1D,CCL3,CDH13,CDH2,CGA,CYR61,DKK2,EDIL3,ERC2,GFRA1,LDLR,mir-154,mir-329,MSMO1,MVD,MYH10,NFIL3,NPC2,PER2,RPRM,RUNX1,SCD,SEMA7A,SERINC2,TOM1,TRPS1,CCPG1,EIF3A,HNF4A,PGR,PLCB4,RBMS1,TNFRSF11B,TNS3
SUZ12	enzyme				2.54E-02	
CCT3	other				2.63E-02	HTT
ARNT	transcription regulator				2.19E-02	BHLHE40,BHLHE41,CYP1B1,CYP2A6 (includes others),HNF4A,PCK2,SLC2A1
NKX2-1	transcription regulator				2.87E-02	EDIL3,ENPP2,HELLS,QKI,SCD,SEC14L2,SH3PXD2A,THBS1,TP63
TSC2	other		-0.853	bias	3.10E-02	B3GALT2,CST6,DDIT3,GSN,PSMD1,SCD,SLC2A1
Trp53-ps	other				2.63E-02	C9orf116
FOXO4	transcription regulator				8.50E-03	DHCR24,ELOVL5,LCP2,LEMD3,PTPRB,SCD,SLC2A1
LCN2	transporter		1.982	bias	2.65E-02	ACTN1,CDH2,LDLR,SCD,TNFRSF11B
ZNF665	other				1.33E-02	ENPP5,NEDD9
CHRNAs	transmembrane receptor				2.63E-02	TP63
GH1	growth factor		1.842		1.43E-03	CDH2,DDIT3,GHR,LDLR,SKI
ZNF528	other				1.33E-02	ENPP5,NEDD9
EGFR	kinase		1.485	bias	3.36E-02	DDIT3,GHR,GPC1,KIA0391,MMP3,PABPC1,PBX1,QTRT2,SEMA7A,SLC2A1,SLC4A7,SLC7A11,THBS1,TNC,TNFRSF11B,WASL
CLOCK	transcription regulator				3.57E-03	ACSL4,ARHGEF28,ARNT2,BHLHE40,BPHL,DDIT3,EEF2,K,NFIL3,PER2,ZZ3
TRIB3	kinase				2.71E-02	DDIT3,MTHFD2,PCK2
PPARGC1A	transcription regulator		1.484	bias	3.44E-02	CPT1B,CYP2A6 (includes others),FABP3,GA56,HAPLN1,LDLR,ME1,MSMO1,PCK2,P,IK3R1,SCD
PPP1R13L	transcription regulator				1.28E-02	DSP,SLC2A1,TP63
PML	transcription regulator				-0.97	ACSL4,CDH2,CPT1B,DNAJB4,LDLR,NR3C1,PIK3CB,SCD
MFGE8	other				9.66E-03	CDH2,EDIL3
ONECUT1	transcription regulator				5.81E-03	C15,CDCD198,FADS3,FAM117A,GBF1,HIST1H4H,HNF4A,RORA,SCD,SGIP1,SMARCC1,SUPT16H,TAOK3,TMEM62,T,RPC4AP
NFE2L2	transcription regulator				1.32	ARHGEF3,DDIT3,DHCR7,F10,GHR,IKBKG,ME1,MGLL,MRP4L2,MSMO1,PSMD1,PSMD3,PTPRB,SLC16A2,SLC2A1,SLC7A11,UBE2K
ATP2A2	transporter				4.45E-02	DDIT3,SCD
HNF4A	3.03 transcription regulator		-0.57	bias	2.23E-02	AAMDC,ABC46,ACTN1,BPHL,C15,CMSS1,CNBP,CPT1B,CWC25,CYP1B1,CYP2A6 (includes others),CYP4F2,DNAJB4,EC1,ELMO1,FAHD2A,FAM117A,FDXR,GBF1,GIPC2,GSN,HDAC8,HNF4A,HSDL2,IFNAR1,INTS4,L2HGDH,LDLR,LUC7L2,N4BP2L2,NEK7,NFYA,PCK2,PLAA,PRDM5,PSMD1,PTGES3,PTK7,PTPN4,QTRT2,RAB18,ORA,SCD,SEC31A,SEMA7A,SH3PXD2A,SKI,SLC22A18,SLC25A40,STX18,SUGT1,SUPT16H,TAOK3,TCF12,TIA1,TIMP3,TM9SF4,TMEM17,TNC,TNFRSF11B,TOM1,TRPC4AP,UBE2D3,WASH5C,WASL,WBP4,ZNF133,ZSCAN5A
SP3	transcription regulator				4.90E-02	CDH2,DNMT3A,F10,GHR,LDLR,PGR,SLC39A8,SLC4A7,SMARCC1,TNC
ATF3	transcription regulator		0.371		1.99E-02	BHLHE41,CGA,DDIT3,GSN,LDLR,MMP3
Ea4	other				2.63E-02	CYP1B1
ERBB4	kinase		-0.356		1.10E-03	DDIT3,GHR,GPC1,PGR,SLC2A1,THBS1,TIMP3,TNC
HSPA9	other				1.69E-02	NAV2,NEDD9,PBX1
MAP3K1	kinase		0.418	bias	1.16E-02	LDLR,MMP3,PGR,THBS1,TNC
LPA	other				1.74E-02	GHR,NR3C1
ERBB3	kinase		-0.537		1.78E-02	GHR,MMP3,SLC4A7,THBS1,TIMP3,TNC
NPPC	other				3.25E-02	CDH2,HAPLN1
PGR	ligand-dependent nuclear receptor		1.864	bias	5.81E-03	ATXN1,CGA,CPT1B,DNAJB4,DST,GAS6,GPER1,KLF11,NEDD9,PGR,PPM1H,SLC39A8,SNAP25,TNC,UGCG
PEPB1	other				2.43E-02	BACH1,PRKAR2B,SCD
LMO4	transcription regulator				3.25E-02	PGR,RYR2
AHR	ligand-dependent nuclear receptor		-0.137		1.60E-02	ACTN1,CDH2,CYP1B1,CYP2A6 (includes others),DMXL2,FBN2,GAS6,HDAC9,LTBP3,NEDD9,NNMT,SCD,SLC2A1,THBS1,TIMP3
ZNF43	other				1.33E-02	ENPP5,NEDD9
ZNF429	other				1.33E-02	ENPP5,NEDD9
DNAJC5	other				2.63E-02	SNAP25

BDKRB2	13.46	g-protein coupled receptor				4.45E-02	BDKRB1,SNCA
HNRNPA2B1		other				3.94E-02	CEMIP,GSN,NPR3,PAPPA,PBX1,PLCB4,SNAP25,TNS3
PPP1R3A		phosphatase				2.63E-02	THBS1
SATB1		transcription regulator		-0.853		8.37E-03	ACTN1,DNMT3A,ENOSF1,ETS1,LRRN3,MEF2A,PGR,PTGE S3,RIPK1,TRPS1
CACNB3		ion channel				2.63E-02	CACNA1C
OTX1		transcription regulator				3.25E-02	CGA,ENPP2
VLDLR		transporter				6.55E-03	DAB1,SLC2A1
RNF216		enzyme				2.20E-02	RIPK1,TRAF3
EBF1		transcription regulator				3.93E-02	CBLB,NFIL3,PCK2,PIK3R1,PRKAR2B,RASGRF2,SCD
SUPT4H1		transcription regulator				2.63E-02	HTT
SIGLEC10		other				2.63E-02	ETS1
MEF2C		transcription regulator		1.342	bias	3.37E-02	CACNA1C,CCEB1,CPT1B,HDAC9,MEF2A,PTPRB,RYR2
HERPUD1		other				2.63E-02	DDIT3
RASGRP2		other				2.63E-02	RAP2A
RGCC		other				2.20E-02	CDH2,SCD
RBP3		transporter				4.45E-02	DDIT3,RIPK1
DYNC1H1		peptidase				2.63E-02	HTT
ANK2		other				2.63E-02	SPTBN1
Cyp2g1		enzyme				2.63E-02	CYP2A6 (includes others)
MAP7		other				2.63E-02	TRPV4
SNAI2		transcription regulator		-1.496		1.16E-02	CYR61,DSP,TP63,TRPS1,UBE2D3
TAL1		transcription regulator		1.633		1.26E-02	ARP2P1,DOCK1,ETS1,HELLS,IFNAR1,LRRN3,MVD,NFYA,R ARPF5,STRADA,TNFSF4,TRAF3
SIRT1		transcription regulator		-0.784	bias	4.17E-02	AQP11,ARNT2,ATXN10,CDH2,CPT1B,KIF13B,LDLR,MMP3 MTHFD1L,NAIP,PCK2,SKI,SLC7A11,TIMP3
PAGR1		other				2.63E-02	NR3C1
MAPK7		kinase		0.83	bias	3.47E-02	CDH2,DLC1,MEF2A,TP63
IL13		cytokine		0.79	bias	4.38E-02	CCL3,DHCR24,DMXL2,ENPP2,EVL,FADS2,GAS6,GSN,MM P3,MSMO1,SNCA,SORT1,THBS1,TNFRSF11B,TRPS1
TAZ		enzyme				2.20E-02	AHNAK2,CDH2,CYP1B1,CYR61,ENPP2
HDAC4		transcription regulator				3.79E-02	CACNA1C,CAP2,HDAC9,MYH10,PPM1E,SLC2A1,SNAP25
NR0B2		ligand-dependent nuclear receptor		-1.963	bias	2.97E-02	HNF4A,mir-154,mir-329,PCK2,SCD
ADRB1		g-protein coupled receptor				5.31E-03	DDIT3,RYR2,THBS1
SLC16A2	7.56	transporter				3.64E-02	CNTN2,HAPLN1,SEMA7A
SCX		transcription regulator		-1.98	bias	8.58E-04	HAPLN1,MMP3,TIMP3,TNC
GATA1		transcription regulator		1.982		2.03E-01	ACTN1,ETS1,F10,MAMDC2,NFIL3,SCIN,SKI,SNCA
DNMT3B		enzyme		-1.89	bias	3.73E-02	CACNA1C,CYP1B1,DDIT3,DLC1,HDAC9,RYR2,SLC16A2,SL C7A11,TIMP3
CYP51A1		enzyme				4.45E-02	DHCR24,MSMO1
HNRNPK		transcription regulator				2.60E-02	LDLR,LPP,MMP3,ZBTB20
FOS		transcription regulator		0.555	bias	1.59E-02	ATF2IP,CGA,DOCK1,GPER1,LTBP3,MAP3K20,MMP3,NBP F10 (includes others),NFIL3,NR3C1,OXTR,PGR,PIK3CB,QKI,RIPK1,SCD,S DK1,SEMA6D,STK3,SULF2,TNFRSF11B,UGCG
CRTC1		transcription regulator				3.83E-02	CGA,NEDD9
BRCA1		transcription regulator		1.94	bias	2.68E-02	BACH1,CYP1B1,DDIT3,ENPP2,IFNAR1,NEDD9,NR3C1,SFP Q,TP63
RARRES1		other				2.63E-02	GRK5
alirocumab		biologic drug				2.63E-02	LDLR
SNAI1		transcription regulator		-1.413		1.22E-02	ACTN1,CDH2,CDH4,CLCA2,CYR61,GSN,HNF4A,TP63
NR3C1	7.43	ligand-dependent nuclear receptor		0.692		1.64E-03	ABL1,ACTN1,ARHGEF3,ATXN1,BHLHE40,CGA,CORO2A,C YP2A6 (includes others),CYR61,GRM7,HNRNPU,MAP3K20,NAIP,NFIL3,NL RP10,NR3C1,NTF3,PIK3CB,PIK3R1,PP1R21,RERE,RIPK1, SNCA,THBS1,TIMP3,TNFRSF11B,TNFSF4,TRAF3,UBE2K,U GCG
HRAS		enzyme		-0.239	bias	1.50E-02	ATXN1,CGA,DDIT3,ELK3,ETS1,FABP3,GAS6,GSN,KRT19,L PP,MMP3,MSMO1,MTHFD1L,MYH10,NEXN,PPP6R3,SHR
CNPY2		other				2.63E-02	OOM3,SORBS1,SPON1,THBS1,TIMP3,TOM1,TP63
ERBB2		kinase		0.695	bias	2.37E-02	ABL1,ACSL4,BHLHE40,CDC14B,CDH2,CVBS61,DDIT3,ELK 3,GAS6,GHR,GPC1,LTBP3,MMP3,NEDD9,NNMT,NPC2,PB X1,PCK2,PTPRB,QKI,SHROOM3,SLC2A1,SLC4A7,SORBS1, THBS1,THSD1,TIMP3,TNC
DIO2		enzyme				3.64E-02	CNTN2,HAPLN1,SEMA7A
CNB-001		chemical reagent				2.70E-02	DDIT3,SLC7A11
OSM		cytokine		1.281	bias	9.90E-03	ATP9A,BBOX1,BHLHE40,C1S,CDH2,CGA,CST6,CYP1B1,DH CR24,KRT19,LDLR,MGLL,MMP3,MYCBP2,MYH10,PLCB4, QKI,RAP2A,RORA,TIMP3,TNC,TNFRSF11B,TP101,SEC31A, SFPQ,SLC16A2,SLC7A11,SMURF2,TNFRSF11B,TP63
BHLHA15		transcription regulator				4.45E-02	CCPG1,KRT19
GJD2		transporter				2.63E-02	DDIT3
RARA		ligand-dependent nuclear receptor		1.373		3.57E-02	ARNT2,CCPG1,GHR,HELLS,NAV2,NEDD9,RAP1A,SEC31A, SFPQ,SLC16A2,SLC7A11,SMURF2,TNFRSF11B,TP63
CDS		transmembrane receptor		1.98	bias	4.21E-02	CCL3,LDLR,MSMO1,PCK2
pevonedistat		chemical drug				2.20E-02	DDIT3,IFNAR1
PCYT1A		enzyme				1.69E-02	GFR1,GSN,SCD
ZBTB17		transcription regulator		1.941	bias	1.38E-03	BHLHE40,DDIT3,LDLR,LRRN3,SPTBN1

CTNNB1		transcription regulator		1.584	bias	3.88E-02
ZNF91		transcription regulator				1.74E-02
MYZAP		other				2.70E-02
HIC1		transcription regulator		-1.134		1.07E-03
Nedd4		enzyme				2.63E-02
ZNF708		other				1.33E-02
TBX2		transcription regulator		0	bias	1.49E-02
PRSS1		peptidase				2.63E-02
PRR13		other				2.63E-02
RBFOX2		transcription regulator				1.33E-02
PPP3R1		phosphatase				6.67E-03
COLQ		other				3.51E-02
anti-miR-29a inhibitor		chemical reagent				2.63E-02
3-mercaptopicolinic acid		chemical - kinase inhibitor				2.63E-02
chlorpromazine		chemical drug				6.62E-04
amiodarone		chemical drug				9.50E-03
rilmenidine		chemical drug				2.63E-02
impromidine		chemical drug				2.63E-02
LG100268		chemical reagent		1.718	bias	8.48E-03
BMS-275183		chemical drug				2.63E-02
nefnavir		chemical drug				3.83E-02
aminoglutethimide		chemical drug				9.66E-03
SU6656		chemical toxicant				3.00E-02
GW501516		chemical drug		1.969	bias	6.63E-03
monorden		chemical - endogenous non-mammalian				3.25E-02
trichostatin A		chemical drug		1.617	bias	2.77E-02
clozapine		chemical drug		0.973	bias	1.36E-02
toxaphene		chemical toxicant				2.63E-02
brefeldin A		chemical - endogenous non-mammalian		1.188		3.71E-02
sulindac sulfide		chemical drug		-1.066		9.83E-05
KN 93		chemical - kinase inhibitor				3.00E-02
1,2-dithiol-3-thione		chemical reagent		0.387	bias	1.16E-02
tetrachlorodibenzodioxin		chemical toxicant		0.995		3.95E-04
ritonavir		chemical drug				1.04E-02
trichlorfon		chemical toxicant				2.63E-02
troglitazone		chemical drug		0.906		1.99E-02
soman		chemical toxicant				2.63E-02
CDN1163		chemical reagent				2.55E-03
pamidronic acid		chemical drug				2.63E-02
enclomiphene		chemical drug				2.63E-02
Cga enhancer		other				2.63E-02
mirtazapine		chemical drug				3.25E-02
rosuvastatin		chemical drug				3.00E-02
1-chloro-2-(2,2,2-trichloro-1-(4-chlorophenoxy)ethyl)hexafluoropropane		chemical toxicant				4.45E-02
tetracycline		chemical drug		1.982		1.04E-01
SP600125		chemical - kinase inhibitor		-0.898	bias	2.42E-03
diehrin		chemical toxicant				9.66E-03
3-methylcholanthrene		chemical toxicant				2.09E-03
SB 216763		chemical toxicant		1.982	bias	1.72E-02
4-hydroxytamoxifen		chemical drug		1.76	bias	6.46E-03
ezetimibe		chemical drug				7.85E-03
SU1498		chemical - kinase inhibitor				2.20E-02
cobalt chloride		chemical reagent		0.555	bias	4.10E-02
arsenic trioxide		chemical drug		-0.642		2.59E-03
cisplatin		chemical drug		-0.214	bias	2.26E-03
spermidine		chemical - endogenous mammalian				4.45E-02
triptorelin		biologic drug				3.25E-02
icitabant		biologic drug				4.45E-02
enalaprilat		chemical - endogenous mammalian				6.91E-04

steroid		chemical - endogenous mammalian				3.99E-02	CYR61,NR3C1,TNC
genistein		chemical drug		0.916 bias		1.40E-02	ABC49,ADK,BDKRB1,C17orf75,CYP4F2,DIRAS3,HDAC3,LCP2,LDLR,MMP3,NPC2,NR3C1,PGR,PIK3R1,SORT1,TNFRSF11B,VPS52
isoquercitrin		chemical drug				5.31E-03	DHCR7,LDLR,MSMO1
daidzein		chemical drug		0.816 bias		2.10E-02	ADK,C17orf75,LCP2,LDLR,PIK3R1,VPS52
naringenin		chemical - endogenous non-mammalian				3.00E-02	LDLR,NR3C1,PGR
hesperetin		chemical drug				2.55E-03	DHCR24,LDLR,MMP3
columbamine		chemical - endogenous non-mammalian				2.63E-02	LDLR
choline		chemical - endogenous mammalian				4.35E-02	DDIT3,DNMT3A,OXTR
sphingomyelin		chemical - endogenous mammalian				1.74E-02	ELOVL5,SCD
9Z,11E-octadecadienoic acid		chemical - endogenous non-mammalian		1.091		2.38E-03	CPT1B,LDLR,SORBS1,THBS1
n-3 fatty acids		chemical drug		-0.655		2.05E-02	ADK,FADS2,PIK3R1,SCD
tridecanoic acid		chemical - endogenous mammalian				2.20E-02	DDIT3,TNC
valproic acid		chemical drug		0.301		8.82E-04	CAP2,CYP1B1,CYP2A6 (includes others),CVRG1,DDIT3,DHCR7,GRM7,HAPLN1,HDAC3,LDLR,MSMO1,MVD,NFYA,NPC2,NR3C1,NTF3,PSMD1,PSMD3,PSMF1,SCD,SEL1L3,THBS1,TRAF3
10E,12Z-octadecadienoic acid		chemical - endogenous mammalian		1.491		8.89E-03	CPT1B,DDIT3,LDLR,ME1,SCD,SORBS1
mycophenolic acid		chemical drug		0.896 bias		1.88E-02	CYR61,ETS1,HDAC3,KRT19,LDLR,UGCG
P1,P4-Di(adenosine-5') tetraphos		chemical - endogenous mammalian				1.74E-02	NR3C1,THBS1
L-triiodothyronine		chemical - endogenous mammalian		1.471 bias		2.40E-02	ACHE,C1S,CGA,CPT1B,ENPP2,LDLR,MAMDC2,ME1,NTF3,PCK2,PGR,RYR2,SCD,SEMA7A,SORBS1
D-glucose		chemical - endogenous mammalian		1.367 bias		6.20E-03	ACHE,ATP8B1,CACNA1C,CCPG1,CPT1B,DDIT3,EIF2B4,HA PLN1,HNF4A,JTGA8,LAMC1,LDLR,mir-154,mir-329,NEXN,NR3C1,PCK2,SCD,SLC2A1,SLC39A8,SNAP25,SORBS1,THBS1,TRPS1,TRPV4
DL-fructose		chemical - endogenous mammalian				2.70E-02	NR3C1,SCD
mannose		chemical - endogenous mammalian				3.83E-02	NR3C1,THBS1
dihydroxyacetone		chemical - endogenous mammalian				2.63E-02	NR3C1
methylprednisolone		chemical drug		0.392		9.72E-03	ADK,C9,CAMK1D,CBLB,CDH13,CDH2,ELOVL5,ENPP2,EPN2,GHR,GPC1,KRT19,LDLR,ME1,MED4,NR3C1,PER2,PLAA,RND3,SLC4A7,TIMP3,UGCG
desmosterol		chemical - endogenous mammalian				2.04E-03	ACSL4,DHCR24
metribolone		chemical reagent		1.394 bias		4.40E-02	ACTN1,CYB561,DHCR24,INPP4B,LDLR,MGLL,NPEPPS,PD E4D,THBS1,TRPS1
U18666A		chemical reagent				3.25E-02	DDIT3,DHCR24
cholesterol		chemical - endogenous mammalian		-0.139 bias		1.16E-02	ABC6,CAMK1D,DDIT3,DHCR7,KLF11,LDLR,ME1,MSMO1,SCD,THBS1,TIMP3
clofibric acid		chemical drug				3.25E-02	CGA,SCD
iron		chemical - endogenous mammalian		-0.225		1.38E-03	DDIT3,EIF3A,HTT,NFYA,SLC39A8,SNCA