

Supplementary information for “Histone Modifications in a Mouse Model of Early Adversities and Panic Disorder: Role for *Asic1* and Neurodevelopmental Genes”

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Figure S1: Multiple ChIP-seq profiles at promoters of genes considered positive (A) and negative controls (B) for medulla oblongata tissue. For each gene, the expression levels in different brain sections is reported according to the Allen Brain Atlas.

ChIP-seq signal for RCF mouse

ChIP-seq signal for Control mouse

A



B



Figure S2: Scatterplot showing the relationship between fold change of significant peaks in all ChIP-seq experiments and the fold change of the corresponding transcript level according to SAGE. Labeled genes were simultaneously and significantly different between RCF and CT animals for enrichment at the ChIP-seq analyses and altered expression at the SAGE

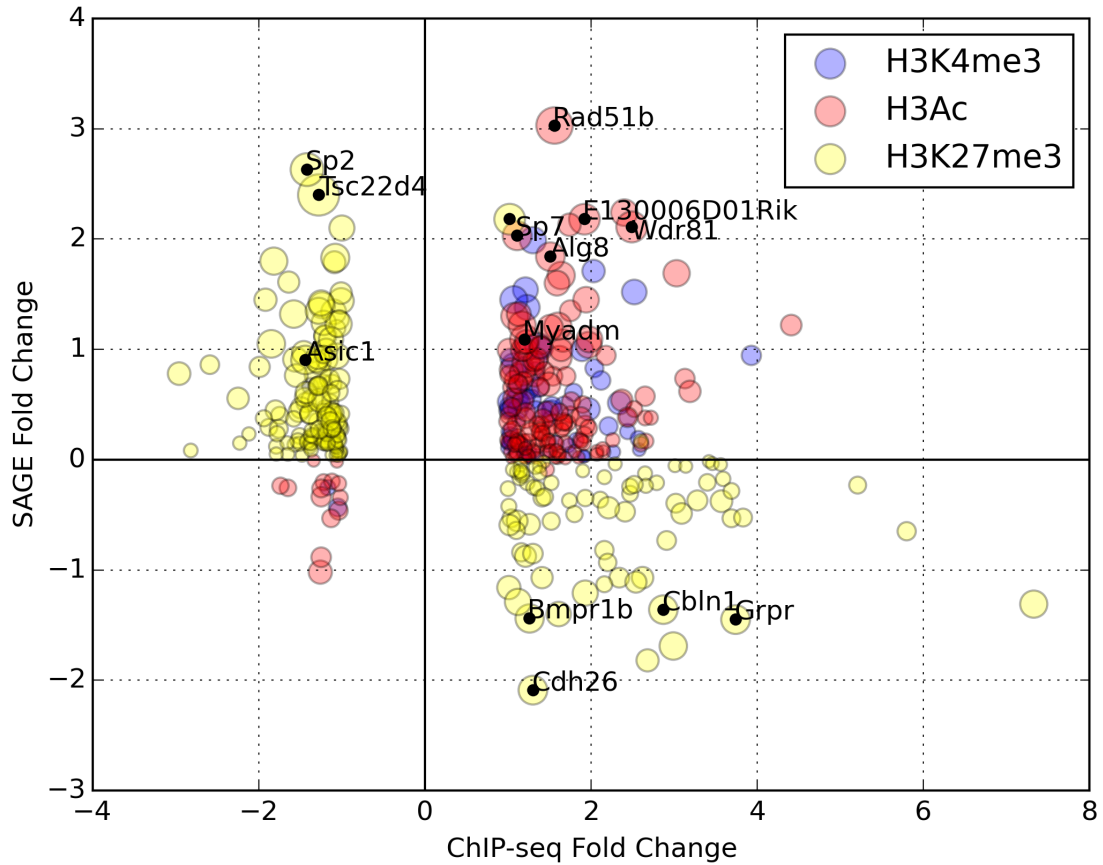


Figure S3: Synopsis of methods employed for the epigenetic analyses

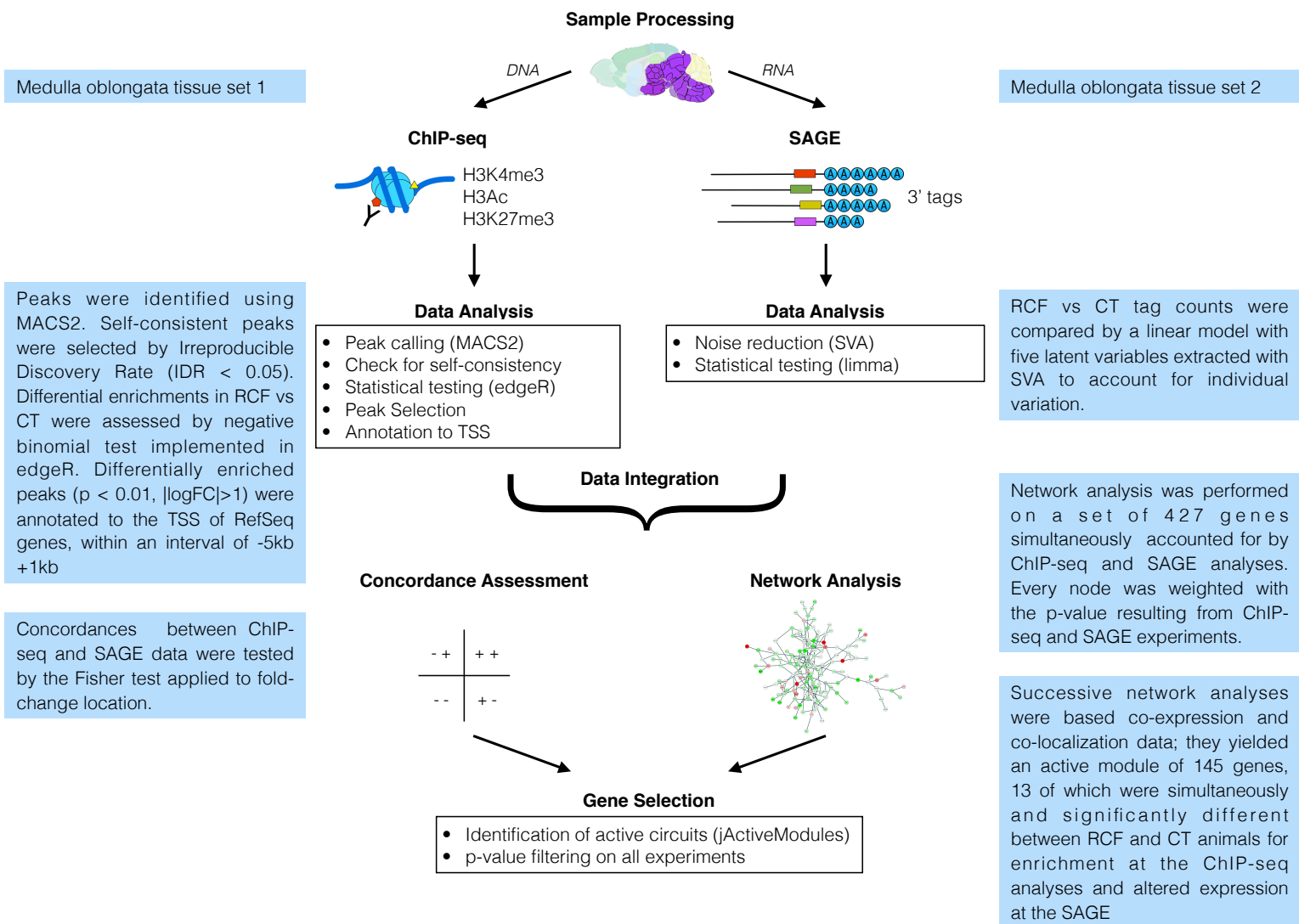


Table S1: Number of reads recovered for each ChIP-seq experiment

Marker	Condition	Total reads
H3Ac	CT	17127549
H3K27me3	CT	12136204
H3K4me3	CT	10877097
Control	CT	27182302
H3Ac	RCF	21085548
H3K27me3	RCF	17818983
H3K4me3	RCF	12717825
Control	RCF	27784026

Table S2: Counts of TSS-proximal peaks (-5kb+1kb) that are significantly different in enrichment comparing RCF to CT mice.

	H3K4me3	H3Ac	H3K27me3
Enriched	232	459	439
Depleted	12	53	572
Total	244	512	1011

Table S3: List of genes associated with at least one significantly different peak in any ChIP-seq experiment in their TSS-proximal region when comparing RCF to CT mice.

MGI symbol	Entrez ID	Description
0610031J06Rik	.	.
0610040B10Rik	67672	RIKEN cDNA 0610040B10 gene
0610040B10Rik	.	.
1600029I14Rik	69797	RIKEN cDNA 1600029I14 gene
1700003M07Rik	72225	RIKEN cDNA 1700003M07 gene
1700003M07Rik	.	.
1700011A15Rik	66322	RIKEN cDNA 1700011A15 gene
1700012D01Rik	72243	RIKEN cDNA 1700012D01 gene
1700019O17Rik	71863	RIKEN cDNA 1700019O17 gene
1700021N21Rik	.	.
1700021N21Rik	69409	RIKEN cDNA 1700021N21 gene
1700025G04Rik	69399	RIKEN cDNA 1700025G04 gene
1700028D13Rik	.	.
1700028D13Rik	75569	RIKEN cDNA 1700028D13 gene
1700029F12Rik	66479	RIKEN cDNA 1700029F12 gene
1700029M20Rik	73937	RIKEN cDNA 1700029M20 gene
1700029M20Rik	.	.
1700031F05Rik	73300	RIKEN cDNA 1700031F05 gene
1700034H15Rik	98736	RIKEN cDNA 1700034H15 gene
1700034H15Rik	.	.
1700044C05Rik	.	.
1700044C05Rik	73306	RIKEN cDNA 1700044C05 gene
1700084C01Rik	78465	RIKEN cDNA 1700084C01 gene
1700102P08Rik	112418	RIKEN cDNA 1700102P08 gene
1700113H08Rik	76640	RIKEN cDNA 1700113H08 gene
1700125G02Rik	.	.
1700125G02Rik	73628	RIKEN cDNA 1700125G02 gene
1810009A15Rik	66276	RIKEN cDNA 1810009A15 gene
1810013A23Rik	69050	RIKEN cDNA 1810013A23 gene
1810044D09Rik	.	.
1810044D09Rik	69798	RIKEN cDNA 1810044D09 gene
2310036O22Rik	68544	RIKEN cDNA 2310036O22 gene
2310045N01Rik	72368	RIKEN cDNA 2310045N01 gene
2410004I01Rik	.	.
2410004I01Rik	69739	RIKEN cDNA 2410004I01 gene
2410016O06Rik	71952	RIKEN cDNA 2410016O06 gene
2410124H12Rik	.	.
2410124H12Rik	76785	RIKEN cDNA 2410124H12 gene

2610002J02Rik	.	.
2610028E06Rik	72395	RIKEN cDNA 2610028E06 gene
2610028E06Rik	.	.
2610206C17Rik	.	.
2610206C17Rik	72495	RIKEN cDNA 2610206C17 gene
2610306M01Rik	67170	RIKEN cDNA 2610306M01 gene
2610306M01Rik	.	.
2810408I11Rik	.	.
2810408I11Rik	69941	RIKEN cDNA 2810408I11 gene
2900076A07Rik	.	.
2900076A07Rik	100504421	RIKEN cDNA 2900076A07 gene
3110007F17Rik	.	.
3110009E18Rik	73103	RIKEN cDNA 3110009E18 gene
3200001D21Rik	71818	RIKEN cDNA 3200001D21 gene
4631405J19Rik	433456	RIKEN cDNA 4631405J19 gene
4631405J19Rik	.	.
4732416N19Rik	320737	RIKEN cDNA 4732416N19 gene
4732491K20Rik	.	.
4732491K20Rik	224523	RIKEN cDNA 4732491K20 gene
4833420G17Rik	67392	RIKEN cDNA 4833420G17 gene
4921504E06Rik	70909	RIKEN cDNA 4921504E06 gene
4921509O07Rik	70917	RIKEN cDNA 4921509O07 gene
4921513I03Rik	.	.
4921513I03Rik	70874	RIKEN cDNA 4921513I03 gene
4921530L21Rik	66732	RIKEN cDNA 4921530L21 gene
4930413E15Rik	74627	RIKEN cDNA 4930413E15 gene
4930432J09Rik	73877	RIKEN cDNA 4930432J09 gene
4930455H04Rik	.	.
4930455H04Rik	74654	RIKEN cDNA 4930455H04 gene
4930470P17Rik	.	.
4930470P17Rik	67637	RIKEN cDNA 4930470P17 gene
4930471M09Rik	.	.
4930471M09Rik	75787	RIKEN cDNA 4930471M09 gene
4930483J18Rik	.	.
4930483J18Rik	67638	RIKEN cDNA 4930483J18 gene
4930483O08Rik	74970	RIKEN cDNA 4930483O08 gene
4930500F04Rik	70969	RIKEN cDNA 4930500F04 gene
4930519F16Rik	.	.
4930519F16Rik	75106	RIKEN cDNA 4930519F16 gene
4930522H14Rik	67646	RIKEN cDNA 4930522H14 gene
4930543E12Rik	75239	RIKEN cDNA 4930543E12 gene
4930570G19Rik	.	.
4930570G19Rik	329782	RIKEN cDNA 4930570G19 gene

4931428F04Rik	74356	RIKEN cDNA 4931428F04 gene
4933406K04Rik	.	.
4933406K04Rik	71033	RIKEN cDNA 4933406K04 gene
4933407E24Rik	108809	RIKEN cDNA 4933407E24 gene
4933407E24Rik	.	.
4933416E03Rik	.	.
4933416E03Rik	71081	RIKEN cDNA 4933416E03 gene
4933417O13Rik	71153	RIKEN cDNA 4933417O13 gene
4933417O13Rik	.	.
4933428G20Rik	100141474	RIKEN cDNA 4933428G20 gene
4933432K03Rik	75793	RIKEN cDNA 4933432K03 gene
4933433G15Rik	71274	RIKEN cDNA 4933433G15 gene
4933433G15Rik	.	.
4933434E20Rik	99650	RIKEN cDNA 4933434E20 gene
4933439K11Rik	71319	RIKEN cDNA 4933439K11 gene
4933439K11Rik	.	.
5530601H04Rik	71445	RIKEN cDNA 5530601H04 gene
5530601H04Rik	.	.
5730408K05Rik	67531	RIKEN cDNA 5730408K05 gene
5830416I19Rik	74757	RIKEN cDNA 5830416I19 gene
6030408B16Rik	.	.
6030408B16Rik	77717	RIKEN cDNA 6030408B16 gene
6530411M01Rik	.	.
6530411M01Rik	67791	RIKEN cDNA 6530411M01 gene
8430408G22Rik	213393	RIKEN cDNA 8430408G22 gene
9130023H24Rik	100043133	RIKEN cDNA 9130023H24 gene
9230105E05Rik	.	.
9230105E05Rik	320626	RIKEN cDNA 9230105E05 gene
9330133O14Rik	100689703	RIKEN cDNA 9330133O14 gene
9330133O14Rik	.	.
9430038I01Rik	77252	RIKEN cDNA 9430038I01 gene
9530080O11Rik	.	.
9530080O11Rik	319247	RIKEN cDNA 9530080O11 gene
A130010J15Rik	319266	RIKEN cDNA A130010J15 gene
A230056J06Rik	319469	RIKEN cDNA A230056J06 gene
A330041J22Rik	319556	RIKEN cDNA A330041J22 gene
A330041J22Rik	.	.
A330069E16Rik	.	.
A330069E16Rik	606735	RIKEN cDNA A330069E16 gene
A330070K13Rik	381673	RIKEN cDNA A330070K13 gene
A630019I02Rik	408254	RIKEN cDNA A630019I02 gene
A630075F10Rik	.	.
A630075F10Rik	100043910	RIKEN cDNA A630075F10 gene

A730018C14Rik	100504733	RIKEN cDNA A730018C14 gene
A730043L09Rik	330958	RIKEN cDNA A730043L09 gene
AU015836	385493	expressed sequence AU015836
AU015836	.	.
AU040320	100317	expressed sequence AU040320
Aak1	269774	AP2 associated kinase 1
Aanat	11298	arylalkylamine N-acetyltransferase
Abcf3	27406	ATP-binding cassette, sub-family F (GCN20), member 3
Abhd4	105501	abhydrolase domain containing 4
Abi3	66610	ABI gene family, member 3
Acn9	.	.
Aco2	11429	aconitase 2, mitochondrial
Acot11	329910	acyl-CoA thioesterase 11
Acot13	66834	acyl-CoA thioesterase 13
Acox3	80911	acyl-Coenzyme A oxidase 3, pristanoyl
Actl10	70362	actin-like 10
Actrt2	73353	actin-related protein T2
Adam11	11488	a disintegrin and metallopeptidase domain 11
Adam33	110751	a disintegrin and metallopeptidase domain 33
Adap1	231821	ArfGAP with dual PH domains 1
Add2	11519	adducin 2 (beta)
Adrbk2	320129	adrenergic receptor kinase, beta 2
Agbl2	271813	ATP/GTP binding protein-like 2
Agmat	75986	agmatine ureohydrolase (agmatinase)
Ago2	239528	argonate RISC catalytic subunit 2
Agpat9	231510	1-acylglycerol-3-phosphate O-acyltransferase 9
Ahdcl1	230793	AT hook, DNA binding motif, containing 1
Aicda	11628	activation-induced cytidine deaminase
Ak4	11639	adenylate kinase 4
Akap3	11642	A kinase (PRKA) anchor protein 3
Akap6	238161	A kinase (PRKA) anchor protein 6
Akr1b10	67861	aldo-keto reductase family 1, member B10 (aldose reductase)
Akt2	11652	thymoma viral proto-oncogene 2
Alg13	67574	asparagine-linked glycosylation 13
Alg8	381903	asparagine-linked glycosylation 8 (alpha-1,3-glucosyltransferase)
Alkbh4	72041	alkB, alkylation repair homolog 4 (E. coli)
Alkbh6	233065	alkB, alkylation repair homolog 6 (E. coli)
Alpk1	71481	alpha-kinase 1
Amer1	72345	APC membrane recruitment 1
Amn	93835	amnionless
Ankrd34a	545554	ankyrin repeat domain 34A
Ankrd42	73845	ankyrin repeat domain 42
Ano2	243634	anoctamin 2

Ap1b1	11764	adaptor protein complex AP-1, beta 1 subunit
Ap5z1	231855	adaptor-related protein complex 5, zeta 1 subunit
Apeh	235606	acylpeptide hydrolase
Apoo	68316	apolipoprotein O
Apoo-ps	621156	apolipoprotein O, pseudogene
Apoo-ps	.	.
Apool	68117	apolipoprotein O-like
Aqp2	11827	aquaporin 2
Arhgap26	71302	Rho GTPase activating protein 26
Arhgdia	192662	Rho GDP dissociation inhibitor (GDI) alpha
Arl5c	217151	ADP-ribosylation factor-like 5C
Arl6ip5	65106	ADP-ribosylation factor-like 6 interacting protein 5
Arl8a	68724	ADP-ribosylation factor-like 8A
Arpc5l	74192	actin related protein 2/3 complex, subunit 5-like
Arrdc2	70807	arrestin domain containing 2
Arsg	74008	arylsulfatase G
Asb16	217217	ankyrin repeat and SOCS box-containing 16
Asf1b	66929	anti-silencing function 1B histone chaperone
Asic1	11419	acid-sensing (proton-gated) ion channel 1
Asna1	56495	arsA arsenite transporter, ATP-binding, homolog 1 (bacterial)
Asphd2	72898	aspartate beta-hydroxylase domain containing 2
Asprv1	67855	aspartic peptidase, retroviral-like 1
Aste1	66595	asteroid homolog 1 (Drosophila)
Atf5	107503	activating transcription factor 5
Atg4a	666468	autophagy related 4A, cysteine peptidase
Atp1b1	11931	ATPase, Na ⁺ /K ⁺ transporting, beta 1 polypeptide
Auts2	.	.
Auts2	319974	autism susceptibility candidate 2
Avp	11998	arginine vasopressin
Awat2	245532	acyl-CoA wax alcohol acyltransferase 2
B230217C12Rik	68127	RIKEN cDNA B230217C12 gene
B3galt5	93961	UDP-Gal:betaGlcNAc beta 1,3-galactosyltransferase, polypeptide 5
B3glct	381694	beta-3-glucosyltransferase
B4galnt1	14421	beta-1,4-N-acetyl-galactosaminyl transferase 1
B4galnt3	330406	beta-1,4-N-acetyl-galactosaminyl transferase 3
B930059L03Rik	319786	RIKEN cDNA B930059L03 gene
BC018473	193217	cDNA sequence BC018473
BC018473	.	.
BC029214	227622	cDNA sequence BC029214
BC030867	217216	cDNA sequence BC030867
BC039966	.	.
BC039966	407793	cDNA sequence BC039966
BC048562	434439	cDNA sequence BC048562

Bach1	12013	BTB and CNC homology 1
Bag3	29810	BCL2-associated athanogene 3
Banp	53325	BTG3 associated nuclear protein
Barhl1	54422	BarH-like 1 (Drosophila)
Baz2a	116848	bromodomain adjacent to zinc finger domain, 2A
Bcl6b	12029	B cell CLL/lymphoma 6, member B
Best3	382427	bestrophin 3
Bet1	12068	blocked early in transport 1 homolog (S. cerevisiae)
Bhlha15	17341	basic helix-loop-helix family, member a15
Bhmt	12116	betaine-homocysteine methyltransferase
Bmpr1b	12167	bone morphogenetic protein receptor, type 1B
Boll	75388	bol, boule-like (Drosophila)
Brd8	78656	bromodomain containing 8
Brinp2	240843	bone morphogenic protein/retinoic acid inducible neural-specific 2
Brip1	237911	BRCA1 interacting protein C-terminal helicase 1
Btaf1	107182	BTAf1 RNA polymerase II, B-TFIID transcription factor-associated, (Mot1 homolog, S. cerevisiae)
Btbd11	74007	BTB (POZ) domain containing 11
Btbd18	100270744	BTB (POZ) domain containing 18
Btbd19	.	.
Btbd19	78611	BTB (POZ) domain containing 19
Btbd2	208198	BTB (POZ) domain containing 2
Btbd3	228662	BTB (POZ) domain containing 3
Bysl	53414	bystin-like
C1ql4	239659	complement component 1, q subcomponent-like 4
C1rl	232371	complement component 1, r subcomponent-like
C330006A16Rik	.	.
C330006A16Rik	109299	RIKEN cDNA C330006A16 gene
C77080	97130	expressed sequence C77080
Cabp1	29867	calcium binding protein 1
Cacnb3	12297	calcium channel, voltage-dependent, beta 3 subunit
Cacng4	54377	calcium channel, voltage-dependent, gamma subunit 4
Cacng5	140723	calcium channel, voltage-dependent, gamma subunit 5
Calca	12310	calcitonin/calcitonin-related polypeptide, alpha
Calcb	116903	calcitonin-related polypeptide, beta
Cald1	109624	caldesmon 1
Camk1g	215303	calcium/calmodulin-dependent protein kinase I gamma
Cap1	12331	CAP, adenylate cyclase-associated protein 1 (yeast)
Car11	12348	carbonic anhydrase 11
Car14	23831	carbonic anhydrase 14
Car5a	12352	carbonic anhydrase 5a, mitochondrial
Cartpt	27220	CART prepropeptide
Cbfa2t3	12398	core-binding factor, runt domain, alpha subunit 2, translocated to, 3 (human)

Cbln1	12404	cerebellin 1 precursor protein
Cbx8	30951	chromobox 8
Ccdc113	244608	coiled-coil domain containing 113
Ccdc132	73288	coiled-coil domain containing 132
Ccdc174	232236	coiled-coil domain containing 174
Ccdc24	381546	coiled-coil domain containing 24
Ccdc36	434438	coiled-coil domain containing 36
Ccdc58	381045	coiled-coil domain containing 58
Ccdc60	269693	coiled-coil domain containing 60
Ccdc64	75665	coiled-coil domain containing 64
Ccdc65	105833	coiled-coil domain containing 65
Ccdc74a	72315	coiled-coil domain containing 74A
Ccdc85c	668158	coiled-coil domain containing 85C
Ccdc93	70829	coiled-coil domain containing 93
Cnd3	12445	cyclin D3
Cng2	12452	cyclin G2
Cny11	227210	cyclin Y-like 1
Ccr10	12777	chemokine (C-C motif) receptor 10
Ccr4	12773	chemokine (C-C motif) receptor 4
Ccr12	54199	chemokine (C-C motif) receptor-like 2
Cd16311	244233	CD163 molecule-like 1
Cd164	53599	CD164 antigen
Cdc34	216150	cell division cycle 34
Cdca3	14793	cell division cycle associated 3
Cdca5	67849	cell division cycle associated 5
Cdcp2	242603	CUB domain containing protein 2
Cdh26	381409	cadherin-like 26
Cdh4	12561	cadherin 4
Cdk8	264064	cyclin-dependent kinase 8
Cdk9	107951	cyclin-dependent kinase 9 (CDC2-related kinase)
Cdkn1b	12576	cyclin-dependent kinase inhibitor 1B
Cdkn1c	12577	cyclin-dependent kinase inhibitor 1C (P57)
Cdt1	67177	chromatin licensing and DNA replication factor 1
Cdv3	321022	carnitine deficiency-associated gene expressed in ventricle 3
Ccer2	330409	cat eye syndrome chromosome region, candidate 2
Cel	12613	carboxyl ester lipase
Celrr	98452	cerebellum expressed regulatory RNA
Celrr	.	.
Cenpi	102920	centromere protein I
Cenpl	70454	centromere protein L
Cenpu	71876	centromere protein U
Cerk	223753	ceramide kinase
Ces2h	436059	carboxylesterase 2H

Ces3b	13909	carboxylesterase 3B
Ces4a	234677	carboxylesterase 4A
Chic2	74277	cysteine-rich hydrophobic domain 2
Chml	12663	choroideremia-like
Chn1	108699	chimerin 1
Chrne	11448	cholinergic receptor, nicotinic, epsilon polypeptide
Chst1	76969	carbohydrate (keratan sulfate Gal-6) sulfotransferase 1
Chst15	77590	carbohydrate (N-acetylgalactosamine 4-sulfate 6-O) sulfotransferase 15
Chtop	66511	chromatin target of PRMT1
Cisd1	52637	CDGSH iron sulfur domain 1
Ckap2l	70466	cytoskeleton associated protein 2-like
Cldn11	18417	claudin 11
Cldn13	57255	claudin 13
Cldn14	56173	claudin 14
Cldn15	60363	claudin 15
Cldn2	12738	claudin 2
Clec16a	74374	C-type lectin domain family 16, member A
Clec1b	56760	C-type lectin domain family 1, member b
Clec4a1	269799	C-type lectin domain family 4, member a1
Clic4	29876	chloride intracellular channel 4 (mitochondrial)
Clk2	12748	CDC-like kinase 2
Clptm1	56457	cleft lip and palate associated transmembrane protein 1
Clstn3	232370	calsyntenin 3
Cmas	12764	cytidine monophospho-N-acetylneuraminic acid synthetase
Cmtm7	102545	CKLF-like MARVEL transmembrane domain containing 7
Cnksr2	245684	connector enhancer of kinase suppressor of Ras 2
Cnn2	12798	calponin 2
Cnn3	71994	calponin 3, acidic
Cntd1	68107	cyclin N-terminal domain containing 1
Cog1	16834	component of oligomeric golgi complex 1
Cog2	76332	component of oligomeric golgi complex 2
Col6a3	12835	collagen, type VI, alpha 3
Cox4i1	12857	cytochrome c oxidase subunit IV isoform 1
Cox6b1	110323	cytochrome c oxidase, subunit VIb polypeptide 1
Cox7a2	12866	cytochrome c oxidase subunit VIIa 2
Cox7b	66142	cytochrome c oxidase subunit VIIb
Cpeb1	12877	cytoplasmic polyadenylation element binding protein 1
Cpt1c	78070	carnitine palmitoyltransferase 1c
Crhr1	12921	corticotropin releasing hormone receptor 1
Crip1	12925	cysteine-rich protein 1 (intestinal)
Csf3	12985	colony stimulating factor 3 (granulocyte)
Csrnp3	77771	cysteine-serine-rich nuclear protein 3
Cstf1	67337	cleavage stimulation factor, 3' pre-RNA, subunit 1

Ctbp2	13017	C-terminal binding protein 2
Ctcflos	74161	CCCTC-binding factor (zinc finger protein)-like, opposite strand
Ctcflos	.	.
Ctdsp2	52468	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) small phosphatase 2
Cth	107869	cystathionase (cystathionine gamma-lyase)
Ctxn2	381418	cortexin 2
Cwc25	67480	CWC25 spliceosome-associated protein homolog (<i>S. cerevisiae</i>)
Cwc27	67285	CWC27 spliceosome-associated protein homolog (<i>S. cerevisiae</i>)
Cxcl10	15945	chemokine (C-X-C motif) ligand 10
Cxcr3	12766	chemokine (C-X-C motif) receptor 3
Cxxc4	319478	CXXC finger 4
Cyb561a3	225912	cytochrome b561 family, member A3
Cyth1	19157	cytohesin 1
D130040H23Rik	211135	RIKEN cDNA D130040H23 gene
D3Bwg0562e	.	.
D430020J02Rik	319545	RIKEN cDNA D430020J02 gene
D430041D05Rik	241589	RIKEN cDNA D430041D05 gene
D630010B17Rik	328594	RIKEN cDNA D630010B17 gene
D6Ertd527e	52372	DNA segment, Chr 6, ERATO Doi 527, expressed
D7Ertd443e	71007	DNA segment, Chr 7, ERATO Doi 443, expressed
Daam2	76441	dishevelled associated activator of morphogenesis 2
Dars2	226539	aspartyl-tRNA synthetase 2 (mitochondrial)
Dbi	13167	diazepam binding inhibitor
Dcaf13	223499	DDB1 and CUL4 associated factor 13
Delre1c	227525	DNA cross-link repair 1C, PSO2 homolog (<i>S. cerevisiae</i>)
Dctn2	69654	dynactin 2
Ddb2	107986	damage specific DNA binding protein 2
Ddx10	77591	DEAD (Asp-Glu-Ala-Asp) box polypeptide 10
Ddx17	67040	DEAD (Asp-Glu-Ala-Asp) box polypeptide 17
Ddx39b	53817	DEAD (Asp-Glu-Ala-Asp) box polypeptide 39B
Ddx5	13207	DEAD (Asp-Glu-Ala-Asp) box polypeptide 5
Dennd1b	329260	DENN/MADD domain containing 1B
Dgat2l6	668257	diacylglycerol O-acyltransferase 2-like 6
Dhx8	217207	DEAH (Asp-Glu-Ala-His) box polypeptide 8
Diap2	54004	diaphanous homolog 2 (<i>Drosophila</i>)
Dido1	23856	death inducer-obliterator 1
Disp2	214240	dispatched homolog 2 (<i>Drosophila</i>)
Dlg1	13383	discs, large homolog 1 (<i>Drosophila</i>)
Dmtn	13829	dematin actin binding protein
Dnajc14	74330	DnaJ (Hsp40) homolog, subfamily C, member 14
Dnajc6	72685	DnaJ (Hsp40) homolog, subfamily C, member 6
Dnali1	75563	dynein, axonemal, light intermediate polypeptide 1

Dner	227325	delta/notch-like EGF-related receptor
Dock9	105445	dedicator of cytokinesis 9
Dpep3	71854	dipeptidase 3
Dpf3	70127	D4, zinc and double PHD fingers, family 3
Dppa3	73708	developmental pluripotency-associated 3
Drg2	13495	developmentally regulated GTP binding protein 2
Drp2	13497	dystrophin related protein 2
Dtwd2	68857	DTW domain containing 2
Dtx1	14357	deltex 1 homolog (Drosophila)
Dusp15	252864	dual specificity phosphatase-like 15
Dyrk2	69181	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 2
Dyrk3	226419	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 3
E130006D01Rik	269683	RIKEN cDNA E130006D01 gene
E130006D01Rik	.	.
E130218I03Rik	.	.
E130218I03Rik	77490	RIKEN cDNA E130218I03 gene
E2f1	13555	E2F transcription factor 1
E2f4	104394	E2F transcription factor 4
E2f7	52679	E2F transcription factor 7
Ebna1bp2	69072	EBNA1 binding protein 2
Ech1	51798	enoyl coenzyme A hydratase 1, peroxisomal
Eci3	69123	enoyl-Coenzyme A delta isomerase 3
Eda2r	245527	ectodysplasin A2 receptor
Edf1	59022	endothelial differentiation-related factor 1
Efna1	13636	ephrin A1
Efna2	13637	ephrin A2
Egr4	13656	early growth response 4
Eid3	66341	EP300 interacting inhibitor of differentiation 3
Eif4b	75705	eukaryotic translation initiation factor 4B
Eif4e3	66892	eukaryotic translation initiation factor 4E member 3
Elavl2	15569	ELAV (embryonic lethal, abnormal vision, Drosophila)-like 2 (Hu antigen B)
Elavl4	15572	ELAV (embryonic lethal, abnormal vision, Drosophila)-like 4 (Hu antigen D)
Emb	13723	embigin
Eme1	268465	essential meiotic endonuclease 1 homolog 1 (S. pombe)
Endou	19011	endonuclease, polyU-specific
Eno4	226265	enolase 4
Enpep	13809	glutamyl aminopeptidase
Entpd6	12497	ectonucleoside triphosphate diphosphohydrolase 6
Epb4.1	269587	erythrocyte protein band 4.1
Epc1	13831	enhancer of polycomb homolog 1 (Drosophila)
Ephb1	270190	Eph receptor B1
Ephb2	13844	Eph receptor B2

Eppin	75526	epididymal peptidase inhibitor
Ercc3	13872	excision repair cross-complementing rodent repair deficiency, complementation group 3
Erg	13876	avian erythroblastosis virus E-26 (v-ets) oncogene related
Ergic2	67456	ERGIC and golgi 2
Erh	13877	enhancer of rudimentary homolog (Drosophila)
Esrp2	77411	epithelial splicing regulatory protein 2
Esrra	26379	estrogen related receptor, alpha
Evalc	70967	eva-1 homolog C (C. elegans)
Evi5l	213027	ecotropic viral integration site 5 like
Exoc3l	277978	exocyst complex component 3-like
Ext1	14042	exostoses (multiple) 1
Ezh1	14055	enhancer of zeste homolog 1 (Drosophila)
F3	14066	coagulation factor III
F5	14067	coagulation factor V
Fabp3	14077	fatty acid binding protein 3, muscle and heart
Faim2	72393	Fas apoptotic inhibitory molecule 2
Fam109a	231717	family with sequence similarity 109, member A
Fam162a	70186	family with sequence similarity 162, member A
Fam169a	320557	family with sequence similarity 169, member A
Fam171a1	269233	family with sequence similarity 171, member A1
Fam19a5	106014	family with sequence similarity 19, member A5
Fam210a	108654	family with sequence similarity 210, member A
Fam222a	433940	family with sequence similarity 222, member A
Fam229a	68233	family with sequence similarity 229, member A
Fam78b	226610	family with sequence similarity 78, member B
Fam83d	71878	family with sequence similarity 83, member D
Fancl	67030	Fanconi anemia, complementation group L
Farp1	223254	FERM, RhoGEF (Arhgef) and pleckstrin domain protein 1 (chondrocyte-derived)
Fastkd5	380601	FAST kinase domains 5
Fbln5	23876	fibulin 5
Fbrsl1	381668	fibrosin-like 1
Fbx119	233902	F-box and leucine-rich repeat protein 19
Fbx15	242960	F-box and leucine-rich repeat protein 5
Fcgr4	246256	Fc receptor, IgG, low affinity IV
Fchsd1	319262	FCH and double SH3 domains 1
Fen1	14156	flap structure specific endonuclease 1
Fes	14159	feline sarcoma oncogene
Fgf14	14169	fibroblast growth factor 14
Fgf23	64654	fibroblast growth factor 23
Fgf3	14174	fibroblast growth factor 3
Fhod1	234686	formin homology 2 domain containing 1
Figln2	668225	fidetin-like 2

Fis1	66437	fission 1 (mitochondrial outer membrane) homolog (yeast)
Fjx1	14221	four jointed box 1 (Drosophila)
Fmn1	57778	formin-like 1
Fndc5	384061	fibronectin type III domain containing 5
Foxd2	17301	forkhead box D2
Foxg1	15228	forkhead box G1
Foxp1	108655	forkhead box P1
Foxs1	14239	forkhead box S1
Fpgt	75540	fucose-1-phosphate guanylyltransferase
Frmd4b	232288	FERM domain containing 4B
Frmd6	319710	FERM domain containing 6
Frmd8	67457	FERM domain containing 8
Frmpd3	245643	FERM and PDZ domain containing 3
Fscn1	14086	fascin homolog 1, actin bundling protein (Strongylocentrotus purpuratus)
Fzd7	14369	frizzled homolog 7 (Drosophila)
Gabrd	14403	gamma-aminobutyric acid (GABA) A receptor, subunit delta
Gal3st3	545276	galactose-3-O-sulfotransferase 3
Ganc	76051	glucosidase, alpha; neutral C
Gcnt4	218476	glucosaminyl (N-acetyl) transferase 4, core 2 (beta-1,6-N-acetylglucosaminyltransferase)
Gdap111	228858	ganglioside-induced differentiation-associated protein 1-like 1
Gdf11	14561	growth differentiation factor 11
Ghrh	14601	growth hormone releasing hormone
Gid8	76425	GID complex subunit 8 homolog (S. cerevisiae)
Gin1	252876	gypsy retrotransposon integrase 1
Gip	14607	gastric inhibitory polypeptide
Gja8	14616	gap junction protein, alpha 8
Gjb5	14622	gap junction protein, beta 5
Glr4	14657	glycine receptor, alpha 4 subunit
Gltp	56356	glycolipid transfer protein
Gm10584	100043682	predicted gene 10584
Gm11562	100502803	predicted gene 11562
Gm11595	100040276	predicted gene 11595
Gm12695	620779	predicted gene 12695
Gm12718	622167	predicted gene 12718
Gm12718	.	.
Gm13238	.	.
Gm13238	236069	carnitine deficiency-associated gene expressed in ventricle 3 pseudogene
Gm13826	.	.
Gm13889	620695	predicted gene 13889
Gm14023	.	.
Gm14023	100503468	predicted gene 14023
Gm14164	.	.

Gm14164	791417	predicted gene 14164
Gm15412	.	.
Gm15412	670727	predicted gene 15412
Gm1564	268491	predicted gene 1564
Gm15663	.	.
Gm15663	327812	predicted gene 15663
Gm15760	.	.
Gm15760	100042948	mitochondrial ribosomal protein S18B pseudogene
Gm16063	330183	predicted gene 16063
Gm16063	.	.
Gm166	233899	predicted gene 166
Gm16701	.	.
Gm16701	.	.
Gm16701	100503962	predicted gene, 16701
Gm17296	212728	predicted gene, 17296
Gm2061	100039138	predicted gene 2061
Gm2061	.	.
Gm2109	.	.
Gm2109	100039222	predicted gene 2109
Gm2694	.	.
Gm2694	100040294	predicted gene 2694
Gm4013	100042757	predicted gene 4013
Gm4262	.	.
Gm4262	100043147	predicted gene 4262
Gm4980	100503386	predicted gene 4980
Gm5166	.	.
Gm5166	382233	DMRT-like family pseudogene
Gm53	193022	predicted gene 53
Gm53	.	.
Gm5475	.	.
Gm5475	432982	predicted gene 5475
Gm5477	432986	type II keratin Kb16P
Gm6042	574415	type II keratin Kb32P
Gm614	245536	predicted gene 614
Gm7157	.	.
Gm7538	665194	predicted gene 7538
Gm826	329554	predicted gene 826
Gmfg	63986	glia maturation factor, gamma
Gnai3	14679	guanine nucleotide binding protein (G protein), alpha inhibiting 3
Gnas	14683	GNAS (guanine nucleotide binding protein, alpha stimulating) complex locus
Gnb3	14695	guanine nucleotide binding protein (G protein), beta 3
Gopc	94221	golgi associated PDZ and coiled-coil motif containing

Gpc1	14733	glypican 1
Gpc6	23888	glypican 6
Gpr133	.	.
Gpr143	18241	G protein-coupled receptor 143
Gpr182	11536	G protein-coupled receptor 182
Gpr27	14761	G protein-coupled receptor 27
Gpr3	14748	G-protein coupled receptor 3
Gpr84	80910	G protein-coupled receptor 84
Gprc5b	64297	G protein-coupled receptor, family C, group 5, member B
Gpsm1	67839	G-protein signalling modulator 1 (AGS3-like, <i>C. elegans</i>)
Gpx7	67305	glutathione peroxidase 7
Grik3	14807	glutamate receptor, ionotropic, kainate 3
Grip1	74053	glutamate receptor interacting protein 1
Grpr	14829	gastrin releasing peptide receptor
Gsdma	57911	gasdermin A
Gsg1l	269994	GSG1-like
Gsr	14782	glutathione reductase
Gtf2a2	235459	general transcription factor II A, 2
Gtf3c6	67371	general transcription factor IIIC, polypeptide 6, alpha
Gtsf1	74174	gametocyte specific factor 1
Hamp2	66438	hepcidin antimicrobial peptide 2
Haus5	71909	HAUS augmin-like complex, subunit 5
Hcn3	15168	hyperpolarization-activated, cyclic nucleotide-gated K+ 3
Hdac8	70315	histone deacetylase 8
Helz	78455	helicase with zinc finger domain
Hepacam2	101202	HEPACAM family member 2
Hexim1	192231	hexamethylene bis-acetamide inducible 1
Higd1c	380975	HIG1 domain family, member 1C
Higd2a	67044	HIG1 domain family, member 2A
Hist2h2aa1	15267	histone cluster 2, H2aa1
Hist2h2aa2	319192	histone cluster 2, H2aa2
Hist2h3c1	15077	histone cluster 2, H3c1
Hist2h3c2	97114	histone cluster 2, H3c2
Hlf	217082	hepatic leukemia factor
Hmx2	15372	H6 homeobox 2
Hnrnp1	15388	heterogeneous nuclear ribonucleoprotein L
Hook1	77963	hook homolog 1 (<i>Drosophila</i>)
Hook2	170833	hook homolog 2 (<i>Drosophila</i>)
Hoxa5	15402	homeobox A5
Hoxa6	15403	homeobox A6
Hoxb2	103889	homeobox B2
Hoxc8	15426	homeobox C8
Hp	15439	haptoglobin

Hpd1	242642	4-hydroxyphenylpyruvate dioxygenase-like
Hrh3	99296	histamine receptor H3
Hs6st3	50787	heparan sulfate 6-O-sulfotransferase 3
Hsd17b14	66065	hydroxysteroid (17-beta) dehydrogenase 14
Hsd17b2	15486	hydroxysteroid (17-beta) dehydrogenase 2
Hunk	26559	hormonally upregulated Neu-associated kinase
Ier2	15936	immediate early response 2
Iffo2	212632	intermediate filament family orphan 2
Ifitm10	320802	interferon induced transmembrane protein 10
Ift122	81896	intraflagellar transport 122
Ift46	76568	intraflagellar transport 46
Igbp1	18518	immunoglobulin (CD79A) binding protein 1
Igbp1b	50540	immunoglobulin (CD79A) binding protein 1b
Igf2bp1	140486	insulin-like growth factor 2 mRNA binding protein 1
Igfals	16005	insulin-like growth factor binding protein, acid labile subunit
Igsf9	93842	immunoglobulin superfamily, member 9
Il12b	16160	interleukin 12b
Il4ra	16190	interleukin 4 receptor, alpha
Ints5	109077	integrator complex subunit 5
Ipmk	69718	inositol polyphosphate multikinase
Iqsec1	232227	IQ motif and Sec7 domain 1
Iqsec2	245666	IQ motif and Sec7 domain 2
Irf9	16391	interferon regulatory factor 9
Irgm1	15944	immunity-related GTPase family M member 1
Irs4	16370	insulin receptor substrate 4
Isyna1	71780	myo-inositol 1-phosphate synthase A1
Itga3	16400	integrin alpha 3
Itgb7	16421	integrin beta 7
Itpril2	319622	inositol 1,4,5-triphosphate receptor interacting protein-like 2
Junb	16477	jun B proto-oncogene
Kcnab2	16498	potassium voltage-gated channel, shaker-related subfamily, beta member 2
Kcnc4	99738	potassium voltage gated channel, Shaw-related subfamily, member 4
Kcnd3	56543	potassium voltage-gated channel, Shal-related family, member 3
Kcnd3os	.	.
Kcnd3os	78635	potassium voltage-gated channel, Shal-related family, member 3, opposite strand
Kcne2	246133	potassium voltage-gated channel, Isk-related subfamily, gene 2
Kcnj10	16513	potassium inwardly-rectifying channel, subfamily J, member 10
Kcnj12	16515	potassium inwardly-rectifying channel, subfamily J, member 12
Kcnk15	241769	potassium channel, subfamily K, member 15
Kctd12	239217	potassium channel tetramerisation domain containing 12
Kctd13	233877	potassium channel tetramerisation domain containing 13
Kctd3	226823	potassium channel tetramerisation domain containing 3

Khsrp	16549	KH-type splicing regulatory protein
Kif20a	19348	kinesin family member 20A
Kif22	110033	kinesin family member 22
Kif5a	16572	kinesin family member 5A
Kifc3	16582	kinesin family member C3
Kiss1	280287	KiSS-1 metastasis-suppressor
Klf15	66277	Kruppel-like factor 15
Klhdc8a	213417	kelch domain containing 8A
Klh136	234796	kelch-like 36
Klh142	232539	kelch-like 42
Klk1b4	18048	kallikrein 1-related peptidase b4
Klk1b5	16622	kallikrein 1-related peptidase b5
Klk8	259277	kallikrein related-peptidase 8
Klr1c	17059	killer cell lectin-like receptor subfamily B member 1C
Kpna7	381686	karyopherin alpha 7 (importin alpha 8)
Krt10	16661	keratin 10
Krt13	16663	keratin 13
Krt2	16681	keratin 2
Krt5	110308	keratin 5
Krt6a	16687	keratin 6A
Krt77	406220	keratin 77
Krtap17-1	77914	keratin associated protein 17-1
Krtap2-4	71453	keratin associated protein 2-4
Krtap4-6	68768	keratin associated protein 4-6
Krtap4-8	665992	keratin associated protein 4-8
Krtap4-9	665998	keratin associated protein 4-9
Krtap9-3	75586	keratin associated protein 9-3
Krtcap2	66059	keratinocyte associated protein 2
LOC100503676	.	.
LOC100504703	.	.
LOC381967	.	.
Lama5	16776	laminin, alpha 5
Lce1b	68720	late cornified envelope 1B
Lck	16818	lymphocyte protein tyrosine kinase
Ldhd	16832	lactate dehydrogenase B
Ldlrap1	100017	low density lipoprotein receptor adaptor protein 1
Ldoc1l	223732	leucine zipper, down-regulated in cancer 1-like
Lef1	16842	lymphoid enhancer binding factor 1
Leo1	235497	Leo1, Paf1/RNA polymerase II complex component, homolog (S. cerevisiae)
Lepr	16847	leptin receptor
Lin28a	83557	lin-28 homolog A (C. elegans)
Lingo4	320747	leucine rich repeat and Ig domain containing 4

Liph	239759	lipase, member H
Litaf	56722	LPS-induced TN factor
Lix1l	280411	Lix1-like
Lkaaeear1	277496	LKAAEAR motif containing 1 (IKAAEAR murine motif)
Lgl1	16897	lethal giant larvae homolog 1 (Drosophila)
Lmo4	16911	LIM domain only 4
Lmod1	93689	leiomodulin 1 (smooth muscle)
Lmtk2	231876	lemur tyrosine kinase 2
Lpar5	381810	lysophosphatidic acid receptor 5
Lpin2	64898	lipin 2
Lpin3	64899	lipin 3
Lrig2	269473	leucine-rich repeats and immunoglobulin-like domains 2
Lrp1	16971	low density lipoprotein receptor-related protein 1
Lrp8	16975	low density lipoprotein receptor-related protein 8, apolipoprotein e receptor
Lrrc38	242735	leucine rich repeat containing 38
Lrrc4c	241568	leucine rich repeat containing 4C
Lrriq3	74435	leucine-rich repeats and IQ motif containing 3
Lrrn1	16979	leucine rich repeat protein 1, neuronal
Lrwd1	71735	leucine-rich repeats and WD repeat domain containing 1
Luzp4	105246601	leucine zipper protein 4
Luzp4	434865	leucine zipper protein 4
Ly6g5c	114652	lymphocyte antigen 6 complex, locus G5C
Lyzl6	69444	lysozyme-like 6
Macf1	11426	microtubule-actin crosslinking factor 1
Maf	17132	avian musculoaponeurotic fibrosarcoma (v-maf) AS42 oncogene homolog
Maged1	94275	melanoma antigen, family D, 1
Magi3	99470	membrane associated guanylate kinase, WW and PDZ domain containing 3
Magt1	67075	magnesium transporter 1
Malat1	.	.
Malat1	72289	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
Maneal	215090	mannosidase, endo-alpha-like
Mansc4	545893	MANSC domain containing 4
Map2k6	26399	mitogen-activated protein kinase kinase 6
Map3k1	26401	mitogen-activated protein kinase kinase kinase 1
Map6	17760	microtubule-associated protein 6
Mapkapk3	102626	mitogen-activated protein kinase-activated protein kinase 3
Marcks	17118	myristoylated alanine rich protein kinase C substrate
Marveld3	73608	MARVEL (membrane-associating) domain containing 3
Mbd4	17193	methyl-CpG binding domain protein 4
Mc3r	17201	melanocortin 3 receptor
Mcm2	17216	minichromosome maintenance deficient 2 mitotin (S. cerevisiae)
Mdk	17242	midkine
Mdm1	17245	transformed mouse 3T3 cell double minute 1

Me1	17436	malic enzyme 1, NADP(+)-dependent, cytosolic
Med18	67219	mediator complex subunit 18
Med19	381379	mediator complex subunit 19
Med20	56771	mediator complex subunit 20
Meig1	104362	meiosis expressed gene 1
Mettl11b	240879	methyltransferase like 11B
Mfsd5	106073	major facilitator superfamily domain containing 5
Mgat3	17309	mannoside acetylglucosaminyltransferase 3
Mid1	17318	midline 1
Mid2	23947	midline 2
Mif4gd	69674	MIF4G domain containing
Mir130a	.	.
Mir130a	387149	microRNA 130a
Mir138-1	387156	microRNA 138-1
Mir138-1	.	.
Mir141	.	.
Mir141	387159	microRNA 141
Mir17	723905	microRNA 17
Mir17	.	.
Mir17hg	.	.
Mir17hg	75957	Mir17 host gene (non-protein coding)
Mir18	.	.
Mir18	387135	microRNA 18
Mir181c	.	.
Mir181c	723819	microRNA 181c
Mir181d	100049549	microRNA 181d
Mir181d	.	.
Mir184	.	.
Mir184	387179	microRNA 184
Mir1893	100316773	microRNA 1893
Mir1893	.	.
Mir1895	100316832	microRNA 1895
Mir1895	.	.
Mir1905	100316808	microRNA 1905
Mir1905	.	.
Mir1934	.	.
Mir1934	100316840	microRNA 1934
Mir1940	.	.
Mir195a	.	.
Mir195a	387190	microRNA 195a
Mir1966	100316712	microRNA 1966
Mir1966	.	.
Mir1981	.	.

Mir1981	100316821	microRNA 1981
Mir19a	.	.
Mir19a	723891	microRNA 19a
Mir19b-1	.	.
Mir19b-1	751527	microRNA 19b-1
Mir200c	.	.
Mir200c	723944	microRNA 200c
Mir20a	.	.
Mir20a	387139	microRNA 20a
Mir22	.	.
Mir22	387141	microRNA 22
Mir22hg	.	.
Mir22hg	100042498	Mir22 host gene (non-protein coding)
Mir26a-2	723962	microRNA 26a-2
Mir26a-2	.	.
Mir2861	.	.
Mir2861	100499514	microRNA 2861
Mir3065	100526518	microRNA 3065
Mir3076	.	.
Mir3076	100526475	microRNA 3076
Mir3088	.	.
Mir3088	100526498	microRNA 3088
Mir3093	.	.
Mir3093	100526540	microRNA 3093
Mir30c-1	.	.
Mir30c-1	387227	microRNA 30c-1
Mir30f	102466650	microRNA 30f
Mir3102	.	.
Mir3102	100526508	microRNA 3102
Mir3108	.	.
Mir3108	100526511	microRNA 3108
Mir326	723840	microRNA 326
Mir326	.	.
Mir3475	.	.
Mir3475	100499512	microRNA 3475
Mir3960	100628606	microRNA 3960
Mir449a	.	.
Mir449a	723868	microRNA 449a
Mir449b	.	.
Mir449b	100190765	microRNA 449b
Mir497	751537	microRNA 497
Mir497b	102465891	microRNA 497b
Mir497b	.	.

Mir499	735275	microRNA 499
Mir499	.	.
Mir5114	100628619	microRNA 5114
Mir5114	.	.
Mir5126	.	.
Mir5126	100628595	microRNA 5126
Mir5130	.	.
Mir5130	100628599	microRNA 5130
Mir5136	100628605	microRNA 5136
Mir5136	.	.
Mir6391	.	.
Mir6391	102465208	microRNA 6391
Mir672	.	.
Mir672	751535	microRNA 672
Mir676	.	.
Mir676	751534	microRNA 676
Mir6916	.	.
Mir6916	102465552	microRNA 6916
Mir6931	102466988	microRNA 6931
Mir6931	.	.
Mir6934	.	.
Mir6934	102465563	microRNA 6934
Mir6959	.	.
Mir6959	102465981	microRNA 6959
Mir6975	.	.
Mir6975	102465589	microRNA 6975
Mir6977	102465590	microRNA 6977
Mir6977	.	.
Mir7003	.	.
Mir7003	102465607	microRNA 7003
Mir7004	102466784	microRNA 7004
Mir702	735283	microRNA 702
Mir702	.	.
Mir7022	.	.
Mir7022	102465619	microRNA 7022
Mir7054	.	.
Mir7054	102466218	microRNA 7054
Mir7072	102466800	microRNA 7072
Mir7072	.	.
Mir7088	102466914	microRNA 7088
Mir7088	.	.
Mir7222	.	.
Mir7222	102465704	microRNA 7222

Mir7233	102466996	microRNA 7233
Mir7235	102466822	microRNA 7235
Mir7235	.	.
Mir763	791076	microRNA 763
Mir763	.	.
Mir7678	.	.
Mir7678	102465780	microRNA 7678
Mir7686	102465788	microRNA mir-7686
Mir7687	.	.
Mir7687	102466849	microRNA 7687
Mir802	.	.
Mir802	791074	microRNA 802
Mir8103	102465893	microRNA 8103
Mir8103	.	.
Mir8107	.	.
Mir8107	102466885	microRNA 8107
Mir9-1	387133	microRNA 9-1
Mir92-1	.	.
Mir92-1	751549	microRNA 92-1
Mirlet7k	.	.
Mixl1	27217	Mix1 homeobox-like 1 (<i>Xenopus laevis</i>)
Mlxipl	58805	MLX interacting protein-like
Mmd	67468	monocyte to macrophage differentiation-associated
Mmp23	26561	matrix metalloproteinase 23
Mmp24	17391	matrix metalloproteinase 24
Mn1	433938	meningioma 1
Mnat1	17420	menage a trois 1
Mon1b	270096	MON1 homolog b (yeast)
Mon2	67074	MON2 homolog (yeast)
Mospd3	68929	motile sperm domain containing 3
Mpdu1	24070	mannose-P-dolichol utilization defect 1
Mpped2	77015	metallophosphoesterase domain containing 2
Mpv17	17527	MpV17 mitochondrial inner membrane protein
Mrc2	17534	mannose receptor, C type 2
Mrgpre	244238	MAS-related GPR, member E
Mroh1	223658	maestro heat-like repeat family member 1
Mrpl18	67681	mitochondrial ribosomal protein L18
Mrpl27	94064	mitochondrial ribosomal protein L27
Mrpl32	75398	mitochondrial ribosomal protein L32
Mrps17	66258	mitochondrial ribosomal protein S17
Mrps6	121022	mitochondrial ribosomal protein S6
Mrvil	17540	MRV integration site 1
Msi1	17690	musashi RNA-binding protein 1

Msmg	100039672	microseminoprotein, prostate associated
Msrbl	27361	methionine sulfoxide reductase B1
Msrbl3	320183	methionine sulfoxide reductase B3
Mst1	15235	macrophage stimulating 1 (hepatocyte growth factor-like)
Mt4	17752	metallothionein 4
Mterfd3	.	.
Mtmr4	170749	myotubularin related protein 4
Muc6	353328	mucin 6, gastric
Muc6	.	.
Mvd	192156	mevalonate (diphospho) decarboxylase
Mvp	78388	major vault protein
Mxd4	17122	Max dimerization protein 4
Myadm	50918	myeloid-associated differentiation marker
Myadml2	68515	myeloid-associated differentiation marker-like 2
Mybph	53311	myosin binding protein H
Myl10	59310	myosin, light chain 10, regulatory
Myo1a	432516	myosin IA
Myo9a	270163	myosin IXa
Myog	17928	myogenin
Naa35	78689	N(alpha)-acetyltransferase 35, NatC auxiliary subunit
Nalcn	338370	sodium leak channel, non-selective
Ncapg2	76044	non-SMC condensin II complex, subunit G2
Nckap5	210356	NCK-associated protein 5
Nctc1	330677	non-coding transcript 1
Nctc1	.	.
Ndnl2	66647	necdin-like 2
Ndufa3	66091	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 3
Ndufa9	66108	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 9
Ndufb2	68198	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 2
Negr1	320840	neuronal growth regulator 1
Neurod4	11923	neurogenic differentiation 4
Nfib	18028	nuclear factor I/B
Ngdn	68966	neuroguidin, EIF4E binding protein
Ngf	18049	nerve growth factor
Nhsl2	100042480	NHS-like 2
Nipal3	74552	NIPA-like domain containing 3
Nisch	64652	nischarin
Nkd1	93960	naked cuticle 1 homolog (Drosophila)
Nlrp6	101613	NLR family, pyrin domain containing 6
Nme5	75533	NME/NM23 family member 5
Nme9	.	.
Nme9	623534	NME/NM23 family member 9
Nmnat2	226518	nicotinamide nucleotide adenylyltransferase 2

Nmur1	14767	neuromedin U receptor 1
Nnat	18111	neuronatin
Nop16	28126	NOP16 nucleolar protein
Noxa1	241275	NADPH oxidase activator 1
Nphp4	260305	nephronophthisis 4 (juvenile) homolog (human)
Npl	74091	N-acetylneuraminate pyruvate lyase
Nppa	230899	natriuretic peptide type A
Nps	100043254	neuropeptide S
Nptxr	73340	neuronal pentraxin receptor
Nr1h3	22259	nuclear receptor subfamily 1, group H, member 3
Nr4a1	15370	nuclear receptor subfamily 4, group A, member 1
Nr5a2	26424	nuclear receptor subfamily 5, group A, member 2
Nt5c1a	230718	5'-nucleotidase, cytosolic IA
Nt5e	23959	5' nucleotidase, ecto
Ntm	235106	neurotrimin
Nuak2	74137	NUAK family, SNF1-like kinase, 2
Nyap1	243300	neuronal tyrosine-phosphorylated phosphoinositide 3-kinase adaptor 1
Oas1f	243262	2'-5' oligoadenylate synthetase 1F
Oasl1	231655	2'-5' oligoadenylate synthetase-like 1
Ocln	18260	occludin
Ogg1	18294	8-oxoguanine DNA-glycosylase 1
Olfm3	229759	olfactomedin 3
Olf1410	258484	olfactory receptor 1410
Olf1412	258274	olfactory receptor 1412
Olf1414	259041	olfactory receptor 1414
Olf1416	259040	olfactory receptor 1416
Olf214	258754	olfactory receptor 214
Olf283	259038	olfactory receptor 283
Olf286	629524	olfactory receptor 286
Olf287	634104	olfactory receptor 287
Olf522	258954	olfactory receptor 522
Olf62	18363	olfactory receptor 62
Olf632	259123	olfactory receptor 632
Opa3	403187	optic atrophy 3
Opn3	13603	opsin 3
Ormdl2	66844	ORM1-like 2 (<i>S. cerevisiae</i>)
Oscar	232790	osteoclast associated receptor
Oser1	66680	oxidative stress responsive serine rich 1
Otub2	68149	OTU domain, ubiquitin aldehyde binding 2
P2rx7	18439	purinergic receptor P2X, ligand-gated ion channel, 7
P2ry2	18442	purinergic receptor P2Y, G-protein coupled 2
Pacsin3	80708	protein kinase C and casein kinase substrate in neurons 3
Pafah2	100163	platelet-activating factor acetylhydrolase 2

Pak6	214230	p21 protein (Cdc42/Rac)-activated kinase 6
Palmd	114301	palmdelphin
Papolb	56522	poly (A) polymerase beta (testis specific)
Pappa2	23850	pappalysin 2
Paqr9	75552	progesterin and adipoQ receptor family member IX
Pard3	93742	par-3 family cell polarity regulator
Pars2	230577	prolyl-tRNA synthetase (mitochondrial)(putative)
Pawr	114774	PRKC, apoptosis, WT1, regulator
Pax6	18508	paired box 6
Pax6os1	402728	paired box 6 opposite strand 1
Pax6os1	.	.
Paxip1	55982	PAX interacting (with transcription-activation domain) protein 1
Pcdh9	211712	protocadherin 9
Pcdhga5	93713	protocadherin gamma subfamily A, 5
Pcp4	18546	Purkinje cell protein 4
Pcyt1b	236899	phosphate cytidyltransferase 1, choline, beta isoform
Pdcl	67466	phosducin-like
Pddc1	213350	Parkinson disease 7 domain containing 1
Pde10a	23984	phosphodiesterase 10A
Pde1b	18574	phosphodiesterase 1B, Ca ²⁺ -calmodulin dependent
Pde3a	54611	phosphodiesterase 3A, cGMP inhibited
Pde6h	78600	phosphodiesterase 6H, cGMP-specific, cone, gamma
Pdia4	12304	protein disulfide isomerase associated 4
Pdyn	18610	prodynorphin
Pes1	64934	pescadillo homolog 1, containing BRCT domain (zebrafish)
Pfdn4	109054	prefoldin 4
Pfdn6	14976	prefoldin subunit 6
Pgbd5	209966	piggyBac transposable element derived 5
Pgk1	18655	phosphoglycerate kinase 1
Phactr3	74189	phosphatase and actin regulator 3
Phb	18673	prohibitin
Phf21a	192285	PHD finger protein 21A
Phf5a	68479	PHD finger protein 5A
Phip	83946	pleckstrin homology domain interacting protein
Pianp	319352	PILR alpha associated neural protein
Pid1	98496	phosphotyrosine interaction domain containing 1
Pik3cd	18707	phosphatidylinositol 3-kinase catalytic delta polypeptide
Pin4	69713	protein (peptidyl-prolyl cis/trans isomerase) NIMA-interacting, 4 (parvulin)
Pitpnm2	19679	phosphatidylinositol transfer protein, membrane-associated 2
Piwil1	57749	piwi-like RNA-mediated gene silencing 1
Pklr	18770	pyruvate kinase liver and red blood cell
Pla2g2a	18780	phospholipase A2, group IIA (platelets, synovial fluid)
Pla2g2a	.	.

Pla2g2d	18782	phospholipase A2, group IID
Plcx1	403178	phosphatidylinositol-specific phospholipase C, X domain containing 1
Plk2	20620	polo-like kinase 2
Pls1	102502	plastin 1 (I-isoform)
Plxna1	18844	plexin A1
Pmvk	68603	phosphomevalonate kinase
Polg	18975	polymerase (DNA directed), gamma
Polh	80905	polymerase (DNA directed), eta (RAD 30 related)
Polr3gl	69870	polymerase (RNA) III (DNA directed) polypeptide G like
Pou3f1	18991	POU domain, class 3, transcription factor 1
Pou6f1	19009	POU domain, class 6, transcription factor 1
Pparg	19016	peroxisome proliferator activated receptor gamma
Ppfia4	68507	protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting protein (liprin), alpha 4
Ppfibp1	67533	PTPRF interacting protein, binding protein 1 (liprin beta 1)
Ppif	105675	peptidylprolyl isomerase F (cyclophilin F)
Ppip5k2	227399	diphosphoinositol pentakisphosphate kinase 2
Ppp1r14d	72112	protein phosphatase 1, regulatory (inhibitor) subunit 14D
Ppp4r1l-ps	.	.
Ppp4r1l-ps	100043911	protein phosphatase 4, regulatory subunit 1-like, pseudogene
Ppp4r4	74521	protein phosphatase 4, regulatory subunit 4
Pptc7	320717	PTC7 protein phosphatase homolog (S. cerevisiae)
Ppy	19064	pancreatic polypeptide
Prex1	277360	phosphatidylinositol-3,4,5-trisphosphate-dependent Rac exchange factor 1
Prickle2	243548	prickle homolog 2 (Drosophila)
Prkcb	18751	protein kinase C, beta
Prkce	18754	protein kinase C, epsilon
Prmt8	381813	protein arginine N-methyltransferase 8
Prok1	246691	prokineticin 1
Prss36	77613	protease, serine 36
Psma2	19166	proteasome (prosome, macropain) subunit, alpha type 2
Psmb6	19175	proteasome (prosome, macropain) subunit, beta type 6
Psm10	53380	proteasome (prosome, macropain) 26S subunit, non-ATPase, 10
Ptbp1	19205	polypyrimidine tract binding protein 1
Ptger3	19218	prostaglandin E receptor 3 (subtype EP3)
Pth1r	19228	parathyroid hormone 1 receptor
Ptp4a3	19245	protein tyrosine phosphatase 4a3
Ptpre	19267	protein tyrosine phosphatase, receptor type, E
Ptpn	19275	protein tyrosine phosphatase, receptor type, N
Purb	19291	purine rich element binding protein B
Pxylp1	235534	2-phosphoxylose phosphatase 1
Pycr1	209027	pyrroline-5-carboxylate reductase 1
Qrfpr	229214	pyroglutamylated RFamide peptide receptor

R74862	97423	expressed sequence R74862
R74862	.	.
Rab22a	19334	RAB22A, member RAS oncogene family
Rab7	19349	RAB7, member RAS oncogene family
Rac3	170758	RAS-related C3 botulinum substrate 3
Rad51b	19363	RAD51 homolog B
Ralgps2	78255	Ral GEF with PH domain and SH3 binding motif 2
Ranbp1	19385	RAN binding protein 1
Rapsn	19400	receptor-associated protein of the synapse
Rara	19401	retinoic acid receptor, alpha
Rarg	19411	retinoic acid receptor, gamma
Rasgrp3	240168	RAS, guanyl releasing protein 3
Rasl1a	68895	RAS-like, family 11, member A
Rassf10	78748	Ras association (RalGDS/AF-6) domain family (N-terminal) member 10
Raver2	242570	ribonucleoprotein, PTB-binding 2
Rbm12b2	77604	RNA binding motif protein 12 B2
Rbm15	229700	RNA binding motif protein 15
Rbm27	225432	RNA binding motif protein 27
Rbp1	19659	retinol binding protein 1, cellular
Rbp7	63954	retinol binding protein 7, cellular
Rcn1	19672	reticulocalbin 1
Rcsd1	226594	RCSD domain containing 1
Reep4	72549	receptor accessory protein 4
Rer1	67830	RER1 retention in endoplasmic reticulum 1 homolog (<i>S. cerevisiae</i>)
Rfx4	71137	regulatory factor X, 4 (influences HLA class II expression)
Rfxank	19727	regulatory factor X-associated ankyrin-containing protein
Rgs19	56470	regulator of G-protein signaling 19
Rgs7bp	52882	regulator of G-protein signalling 7 binding protein
Rhbdf2	217344	rhomboid 5 homolog 2 (<i>Drosophila</i>)
Rheb	19744	Ras homolog enriched in brain
Ric3	320360	resistance to inhibitors of cholinesterase 3 homolog (<i>C. elegans</i>)
Rimbp2	231760	RIMS binding protein 2
Rimk1a	194237	ribosomal modification protein rimK-like family member A
Rims3	242662	regulating synaptic membrane exocytosis 3
Ripply2	382089	rippy2 homolog (zebrafish)
Rnf152	320311	ring finger protein 152
Rnf40	233900	ring finger protein 40
Rnh1	107702	ribonuclease/angiogenin inhibitor 1
Rnmt	67897	RNA (guanine-7-) methyltransferase
Rnps1	19826	ribonucleic acid binding protein S1
Robo3	19649	roundabout homolog 3 (<i>Drosophila</i>)
Rpl35	66489	ribosomal protein L35
Rpl41	67945	ribosomal protein L41

Rprml	104582	reprimin-like
Rps4x	20102	ribosomal protein S4, X-linked
Rps5	20103	ribosomal protein S5
Rps6ka2	20112	ribosomal protein S6 kinase, polypeptide 2
Rps6ka4	56613	ribosomal protein S6 kinase, polypeptide 4
Rps9	76846	ribosomal protein S9
Rras	20130	Harvey rat sarcoma oncogene, subgroup R
Rsrp1	27981	arginine/serine rich protein 1
Rtfdc1	66404	replication termination factor 2 domain containing 1
Rtn4r	65079	reticulon 4 receptor
Rusc1	72296	RUN and SH3 domain containing 1
Rxfp2	140498	relaxin/insulin-like family peptide receptor 2
Rxrg	20183	retinoid X receptor gamma
Rybp	56353	RING1 and YY1 binding protein
S100a1	20193	S100 calcium binding protein A1
S100a13	20196	S100 calcium binding protein A13
S100a16	67860	S100 calcium binding protein A16
S100g	12309	S100 calcium binding protein G
Samd14	217125	sterile alpha motif domain containing 14
Samd4b	233033	sterile alpha motif domain containing 4B
Sap130	269003	Sin3A associated protein
Sarnp	66118	SAP domain containing ribonucleoprotein
Scaf1	233208	SR-related CTD-associated factor 1
Scara5	71145	scavenger receptor class A, member 5 (putative)
Scarna17	100217466	small Cajal body-specific RNA 17
Scarna17	.	.
Scd1	20249	stearoyl-Coenzyme A desaturase 1
Scgb1c1	338417	secretoglobin, family 1C, member 1
Scn10a	20264	sodium channel, voltage-gated, type X, alpha
Scn2b	72821	sodium channel, voltage-gated, type II, beta
Scnn1b	20277	sodium channel, nonvoltage-gated 1 beta
Sec1	56546	secretory blood group 1
Sec24d	69608	Sec24 related gene family, member D (S. cerevisiae)
Sec61a1	53421	Sec61 alpha 1 subunit (S. cerevisiae)
Selk	80795	selenoprotein K
Selplg	20345	selectin, platelet (p-selectin) ligand
Sema3f	20350	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3F
Sema6c	20360	sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6C
Senp8	71599	SUMO/sentrin specific peptidase 8
Sep-11	52398	septin 11
Serinc2	230779	serine incorporator 2

Serpina10	217847	serine (or cysteine) peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 10
Serpinf1	20317	serine (or cysteine) peptidase inhibitor, clade F, member 1
Serpinh1	12406	serine (or cysteine) peptidase inhibitor, clade H, member 1
Setd6	66083	SET domain containing 6
Sf3b2	319322	splicing factor 3b, subunit 2
Sfn	55948	stratifin
Sh2b3	16923	SH2B adaptor protein 3
Sh3gl2	20404	SH3-domain GRB2-like 2
Sh3kbp1	58194	SH3-domain kinase binding protein 1
Shank3	58234	SH3/ankyrin domain gene 3
Shroom2	110380	shroom family member 2
Skap1	78473	src family associated phosphoprotein 1
Slain1	105439	SLAIN motif family, member 1
Slamf8	74748	SLAM family member 8
Slc11a2	18174	solute carrier family 11 (proton-coupled divalent metal ion transporters), member 2
Slc12a5	57138	solute carrier family 12, member 5
Slc16a6	104681	solute carrier family 16 (monocarboxylic acid transporters), member 6
Slc1a3	20512	solute carrier family 1 (glial high affinity glutamate transporter), member 3
Slc25a17	20524	solute carrier family 25 (mitochondrial carrier, peroxisomal membrane protein), member 17
Slc25a32	69906	solute carrier family 25, member 32
Slc25a45	107375	solute carrier family 25, member 45
Slc26a11	268512	solute carrier family 26, member 11
Slc2a13	239606	solute carrier family 2 (facilitated glucose transporter), member 13
Slc2a3	20527	solute carrier family 2 (facilitated glucose transporter), member 3
Slc2a9	117591	solute carrier family 2 (facilitated glucose transporter), member 9
Slc30a10	226781	solute carrier family 30, member 10
Slc35g2	245020	solute carrier family 35, member G2
Slc38a2	67760	solute carrier family 38, member 2
Slc38a7	234595	solute carrier family 38, member 7
Slc39a9	328133	solute carrier family 39 (zinc transporter), member 9
Slc3a1	20532	solute carrier family 3, member 1
Slc45a1	242773	solute carrier family 45, member 1
Slc45a3	212980	solute carrier family 45, member 3
Slc48a1	67739	solute carrier family 48 (heme transporter), member 1
Slc4a1	20533	solute carrier family 4 (anion exchanger), member 1
Slc52a3	69698	solute carrier protein family 52, member 3
Slc5a3	53881	solute carrier family 5 (inositol transporters), member 3
Slc6a15	103098	solute carrier family 6 (neurotransmitter transporter), member 15
Slc6a2	20538	solute carrier family 6 (neurotransmitter transporter, noradrenalin), member 2
Slc7a1	11987	solute carrier family 7 (cationic amino acid transporter, y ⁺ system), member 1

Slc9a5	277973	solute carrier family 9 (sodium/hydrogen exchanger), member 5
Slpi	20568	secretory leukocyte peptidase inhibitor
Smad5	17129	SMAD family member 5
Smardc1	83797	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 1
Smco3	654818	single-pass membrane protein with coiled-coil domains 3
Smg5	229512	Smg-5 homolog, nonsense mediated mRNA decay factor (<i>C. elegans</i>)
Smg9	71997	smg-9 homolog, nonsense mediated mRNA decay factor (<i>C. elegans</i>)
Smpd3	58994	sphingomyelin phosphodiesterase 3, neutral
Smtnl1	68678	smoothelin-like 1
Snf8	27681	SNF8, ESCRT-II complex subunit, homolog (<i>S. cerevisiae</i>)
Snhg12	100039864	small nucleolar RNA host gene 12
Snhg12	.	.
Snhg7	72091	small nucleolar RNA host gene 7
Snhg7	.	.
Snip1	76793	Smad nuclear interacting protein 1
Snora16a	100310813	small nucleolar RNA, H/ACA box 16A
Snora16a	.	.
Snora17	.	.
Snora17	.	.
Snora17	.	.
Snora17	.	.
Snora17	.	.
Snora17	.	.
Snora17	100306954	small nucleolar RNA, H/ACA box 17
Snora43	.	.
Snora43	.	.
Snora43	.	.
Snora43	.	.
Snora43	.	.
Snora43	100306955	small nucleolar RNA, H/ACA box 43
Snora44	.	.
Snora44	100217418	small nucleolar RNA, H/ACA box 44
Snora47	100217450	small nucleolar RNA, H/ACA box 47
Snora47	.	.
Snora61	100217440	small nucleolar RNA, H/ACA box 61
Snora61	.	.
Snord99	.	.
Snord99	100217437	small nucleolar RNA, C/D box 99
Sox21	223227	SRY (sex determining region Y)-box 21
Sp2	78912	Sp2 transcription factor
Sp7	170574	Sp7 transcription factor 7
Sp8	320145	trans-acting transcription factor 8

Spn	56381	SPEN homolog, transcriptional regulator (<i>Drosophila</i>)
Spn-ps	20738	sialophorin, pseudogene
Spns2	216892	spinster homolog 2
Spo11	26972	SPO11 meiotic protein covalently bound to DSB homolog (<i>S. cerevisiae</i>)
Sppl3	74585	signal peptide peptidase 3
Spz1	79401	spermatogenic leucine zipper 1
Srcin1	56013	SRC kinase signaling inhibitor 1
Srek1ip1	67288	splicing regulatory glutamine/lysine-rich protein 1 interacting protein 1
Srrm1	51796	serine/arginine repetitive matrix 1
St6galnac3	20447	ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1,3)-N-acetylglactosaminide alpha-2,6-sialyltransferase 3
Stampb	70527	STAM binding protein
Star	20845	steroidogenic acute regulatory protein
Ston2	108800	stonin 2
Stpg1	78806	sperm tail PG rich repeat containing 1
Strip2	320609	striatin interacting protein 2
Suclg2	20917	succinate-Coenzyme A ligase, GDP-forming, beta subunit
Supt4a	20922	suppressor of Ty 4A
Susd4	96935	sushi domain containing 4
Susd5	382111	sushi domain containing 5
Svop	68666	SV2 related protein
Syce2	71846	synaptonemal complex central element protein 2
Syce3	75459	synaptonemal complex central element protein 3
Sycp1	20957	synaptonemal complex protein 1
Syne2	319565	spectrin repeat containing, nuclear envelope 2
Syne3	212073	spectrin repeat containing, nuclear envelope family member 3
Syngr1	20972	synaptogyrin 1
Syt14	329324	synaptotagmin XIV
Syt17	110058	synaptotagmin XVII
Syt9	60510	synaptotagmin IX
Sytl1	269589	synaptotagmin-like 1
Sytl2	83671	synaptotagmin-like 2
Tac4	93670	tachykinin 4
Taf10	24075	TAF10 RNA polymerase II, TATA box binding protein (TBP)-associated factor
Taf8	63856	TAF8 RNA polymerase II, TATA box binding protein (TBP)-associated factorq
Taldo1	21351	transaldolase 1
Tapbp	21356	TAP binding protein
Tbc1d22a	223754	TBC1 domain family, member 22a
Tbc1d9	71310	TBC1 domain family, member 9
Tbce	70430	tubulin-specific chaperone E
Tbkbp1	73174	TBK1 binding protein 1
Tbrg4	21379	transforming growth factor beta regulated gene 4

Tbx19	83993	T-box 19
Tbx22	245572	T-box 22
Tbx3os2	.	.
Tbx3os2	433944	T-box 3, opposite strand 2
Tceal5	331532	transcription elongation factor A (SII)-like 5
Tceal8	66684	transcription elongation factor A (SII)-like 8
Tcirg1	27060	T cell, immune regulator 1, ATPase, H ⁺ transporting, lysosomal V0 protein A3
Tcp1	21454	t-complex protein 1
Tctex1d1	67344	Tctex1 domain containing 1
Tctex1d4	242646	Tctex1 domain containing 4
Tdp2	56196	tyrosyl-DNA phosphodiesterase 2
Tead1	21676	TEA domain family member 1
Tesc	57816	tescalcin
Tet2	214133	tet methylcytosine dioxygenase 2
Tex13a	67944	testis expressed 13A
Tfb2m	15278	transcription factor B2, mitochondrial
Tfcp2l1	81879	transcription factor CP2-like 1
Tgfb1i1	21804	transforming growth factor beta 1 induced transcript 1
Tgif1	21815	TGFB-induced factor homeobox 1
Tgoln1	22134	trans-golgi network protein
Tgoln2	22135	trans-golgi network protein 2
Tgtp1	21822	T cell specific GTPase 1
Tgtp2	100039796	T cell specific GTPase 2
Thbs2	21826	thrombospondin 2
Ticam1	106759	toll-like receptor adaptor molecule 1
Timm10	30059	translocase of inner mitochondrial membrane 10
Timp3	21859	tissue inhibitor of metalloproteinase 3
Tmed1	17083	transmembrane emp24 domain containing 1
Tmem100	67888	transmembrane protein 100
Tmem116	77462	transmembrane protein 116
Tmem120a	215210	transmembrane protein 120A
Tmem121	69195	transmembrane protein 121
Tmem132a	98170	transmembrane protein 132A
Tmem132cos	67351	transmembrane protein 132C, opposite strand
Tmem132cos	.	.
Tmem132d	243274	transmembrane protein 132D
Tmem138	72982	transmembrane protein 138
Tmem177	66343	transmembrane protein 177
Tmem179	104885	transmembrane protein 179
Tmem258	69038	transmembrane protein 258
Tmem259	216157	transmembrane protein 259
Tmem51	214359	transmembrane protein 51

Tmem51os1	100038693	Tmem51 opposite strand 1
Tmem51os1	.	.
Tmem54	66260	transmembrane protein 54
Tmem67	329795	transmembrane protein 67
Tmem87a	211499	transmembrane protein 87A
Tmem88b	320587	transmembrane protein 88B
Tmprss12	75002	transmembrane (C-terminal) protease, serine 12
Tmsb4x	19241	thymosin, beta 4, X chromosome
Tmtc2	278279	transmembrane and tetratricopeptide repeat containing 2
Tmx2	66958	thioredoxin-related transmembrane protein 2
Tnfrsf9	21942	tumor necrosis factor receptor superfamily, member 9
Tnnc1	21924	troponin C, cardiac/slow skeletal
Tpcn2	233979	two pore segment channel 2
Tpp1	12751	tripeptidyl peptidase I
Tppp3	67971	tubulin polymerization-promoting protein family member 3
Tpra1	24100	transmembrane protein, adipocyte associated 1
Traf7	224619	TNF receptor-associated factor 7
Traip	22036	TRAF-interacting protein
Tram111	229801	translocation associated membrane protein 1-like 1
Trap1a	22037	tumor rejection antigen P1A
Trappc8	75964	trafficking protein particle complex 8
Trib3	228775	tribbles homolog 3 (Drosophila)
Trim46	360213	tripartite motif-containing 46
Trim52	212085	tripartite motif-containing 52
Trim67	330863	tripartite motif-containing 67
Trnp1	69539	TMF1-regulated nuclear protein 1
Troap	78733	trophinin associated protein
Tsc22d4	78829	TSC22 domain family, member 4
Tspan11	68498	tetraspanin 11
Tspan18	241556	tetraspanin 18
Tspan31	67125	tetraspanin 31
Tsr1	104662	TSR1 20S rRNA accumulation
Tssk3	58864	testis-specific serine kinase 3
Tsx	22127	testis specific X-linked gene
Ttc25	74407	tetratricopeptide repeat domain 25
Ttl9	74711	tubulin tyrosine ligase-like family, member 9
Tuba8	53857	tubulin, alpha 8
Tut1	70044	terminal uridylyl transferase 1, U6 snRNA-specific
Txlng	353170	taxilin gamma
Tyw1	100929	tRNA-yW synthesizing protein 1 homolog (S. cerevisiae)
Ubap2l	74383	ubiquitin-associated protein 2-like
Ubox5	140629	U box domain containing 5
Ucp2	22228	uncoupling protein 2 (mitochondrial, proton carrier)

Ufc1	66155	ubiquitin-fold modifier conjugating enzyme 1
Unc5c	22253	unc-5 homolog C (<i>C. elegans</i>)
Upp2	76654	uridine phosphorylase 2
Urad	231903	ureidoimidazoline (2-oxo-4-hydroxy-4-carboxy-5) decarboxylase
Urb1	207932	URB1 ribosome biogenesis 1 homolog (<i>S. cerevisiae</i>)
Usp12	22217	ubiquitin specific peptidase 12
Usp19	71472	ubiquitin specific peptidase 19
Usp35	244144	ubiquitin specific peptidase 35
Usp5	22225	ubiquitin specific peptidase 5 (isopeptidase T)
Utp3	65961	UTP3, small subunit (SSU) processome component, homolog (<i>S. cerevisiae</i>)
Vac14	234729	Vac14 homolog (<i>S. cerevisiae</i>)
Vash1	238328	vasohibin 1
Vdr	22337	vitamin D receptor
Vmn2r9	435864	vomer nasal 2, receptor 9
Vrk1	22367	vaccinia related kinase 1
Vsig1	78789	V-set and immunoglobulin domain containing 1
Vsig8	240916	V-set and immunoglobulin domain containing 8
Vstm2l	277432	V-set and transmembrane domain containing 2-like
Vwa1	246228	von Willebrand factor A domain containing 1
Vwf	22371	Von Willebrand factor homolog
Wbscr17	212996	Williams-Beuren syndrome chromosome region 17 homolog (human)
Wbscr28	76629	Williams-Beuren syndrome chromosome region 28 (human)
Wdr34	71820	WD repeat domain 34
Wdr46	57315	WD repeat domain 46
Wdr55	67936	WD repeat domain 55
Wdr81	192652	WD repeat domain 81
Wfdc11	629761	WAP four-disulfide core domain 11
Wfikkn2	278507	WAP, follistatin/kazal, immunoglobulin, kunitz and netrin domain containing 2
Wipfl	215280	WAS/WASL interacting protein family, member 1
Wnt4	22417	wingless-type MMTV integration site family, member 4
Wnt7a	22421	wingless-type MMTV integration site family, member 7A
Wscd2	320916	WSC domain containing 2
Xbp1	22433	X-box binding protein 1
Xpo5	72322	exportin 5
Zbtb22	81630	zinc finger and BTB domain containing 22
Zbtb40	230848	zinc finger and BTB domain containing 40
Zbtb46	72147	zinc finger and BTB domain containing 46
Zbtb8a	73680	zinc finger and BTB domain containing 8a
Zc3h10	103284	zinc finger CCCH type containing 10
Zc3hc1	232679	zinc finger, C3HC type 1
Zcwpw1	381678	zinc finger, CW type with PWWP domain 1
Zdhhc4	72881	zinc finger, DHHC domain containing 4

Zfp128	243833	zinc finger protein 128
Zfp219	69890	zinc finger protein 219
Zfp286	192651	zinc finger protein 286
Zfp318	57908	zinc finger protein 318
Zfp384	269800	zinc finger protein 384
Zfp420	233058	zinc finger protein 420
Zfp455	218311	zinc finger protein 455
Zfp456	408065	zinc finger protein 456
Zfp51	22709	zinc finger protein 51
Zfp536	243937	zinc finger protein 536
Zfp54	22712	zinc finger protein 54
Zfp58	238693	zinc finger protein 58
Zfp593	68040	zinc finger protein 593
Zfp608	269023	zinc finger protein 608
Zfp612	234725	zinc finger protein 612
Zfp641	239652	zinc finger protein 641
Zfp646	233905	zinc finger protein 646
Zfp653	319601	zinc finger protein 653
Zfp668	244219	zinc finger protein 668
Zfp740	68744	zinc finger protein 740
Zfp759	268670	zinc finger protein 759
Zfp760	240034	zinc finger protein 760
Zfp78	330463	zinc finger protein 78
Zfp874b	408067	zinc finger protein 874b
Zfp935	71508	zinc finger protein 935
Zfp940	233057	zinc finger protein 940
Zfp945	240041	zinc finger protein 945
Zfp949	71640	zinc finger protein 949
Zfp11	81909	zinc finger like protein 1
Zfyve26	211978	zinc finger, FYVE domain containing 26
Zic1	22771	zinc finger protein of the cerebellum 1
Zic4	22774	zinc finger protein of the cerebellum 4
Zmynd8	228880	zinc finger, MYND-type containing 8
Znhit1	70103	zinc finger, HIT domain containing 1
Zscan22	232878	zinc finger and SCAN domain containing 22
Zxda	.	.
Zxda	668171	zinc finger, X-linked, duplicated A
Zyg11a	230590	zyg-11 family member A, cell cycle regulator

Table S4: Summary table reporting fold changes and p-values of RCF vs. CT contrasts for SAGE and all ChIP-seq experiments. Table reports only genes that could be analyzed at transcriptome and for least one histone mark.

Gene Symbol	FC SAGE	FC H3K4me3	FC H3Ac	FC H3K27me3	p.value SAGE	p.value H3K4me3	p.value H3AC	p.value H3K27me3
Scaf1	6.10E-01	1.79E+00	.	.	4.88E-01	3.39E-13	.	.
Pcp4	-5.86E-01	.	.	1.26E+00	2.66E-01	.	.	5.47E-05
Clptm1	1.36E-01	.	1.48E+00	.	6.93E-01	.	7.59E-08	.
Ano2	-1.16E+00	.	.	1.01E+00	1.62E-01	.	.	1.77E-07
Pcyt1b	-4.72E-01	.	.	2.41E+00	3.32E-01	.	.	1.49E-19
Cpeb1	5.80E-02	.	.	-1.02E+00	9.67E-01	.	.	3.20E-10
Cbln1	-1.36E+00	.	.	2.87E+00	4.60E-02	.	.	1.37E-08
Ngdn	9.95E-01	.	1.22E+00	.	1.91E-01	.	1.96E-09	.
Efnal	2.82E-01	.	.	-1.02E+00	5.50E-01	.	.	4.14E-07
Clec16a	1.31E-01	.	1.36E+00	.	6.70E-01	.	1.78E-07	.
Med20	9.22E-01	.	1.62E+00	.	1.33E-01	.	5.61E-12	.
Maf	1.73E-01	.	.	-1.19E+00	6.46E-01	.	.	7.07E-15
Clstn3	3.03E-01	2.21E+00	1.66E+00	.	4.32E-01	3.38E-21	3.07E-14	.
Dhx8	8.52E-01	1.07E+00	.	.	1.15E-01	1.84E-07	.	.
Shank3	2.93E-01	.	.	-1.88E+00	5.28E-01	.	.	1.04E-06
Mospd3	7.52E-01	.	1.32E+00	.	3.20E-01	.	1.88E-07	.
B4galnt1	5.19E-01	.	.	-1.43E+00	3.39E-01	.	.	5.98E-10
Slc25a45	4.09E-01	.	1.75E+00	.	5.69E-01	.	5.47E-10	.
Arsg	3.43E-01	.	.	-1.29E+00	4.47E-01	.	.	6.61E-03
Ptp4a3	4.01E-01	.	1.01E+00	.	5.24E-01	.	2.42E-04	.
Sox21	-3.95E-01	.	.	3.02E+00	3.88E-01	.	.	1.84E-15
1700011A15Rik	-5.50E-02	.	.	3.01E+00	9.31E-01	.	.	3.11E-08
Zfp384	8.15E-01	.	1.04E+00	.	1.58E-01	.	8.15E-07	.
Zfp935	7.35E-01	.	3.13E+00	.	3.39E-01	.	4.92E-05	.
Fzd7	6.40E-02	.	.	-1.02E+00	8.80E-01	.	.	2.45E-16
Gpsm1	4.00E-02	.	1.24E+00	.	9.53E-01	.	1.72E-06	.
Ucp2	-3.09E-01	.	.	2.47E+00	6.22E-01	.	.	2.58E-03
Rad51b	3.03E+00	.	1.56E+00	.	4.14E-03	.	2.46E-03	.
Msrb1	3.32E-01	.	1.72E+00	.	6.15E-01	.	4.97E-06	.
Smg9	1.04E+00	.	1.97E+00	.	8.45E-02	.	7.53E-04	.
Nt5e	7.40E-02	.	.	-1.01E+00	9.45E-01	.	.	2.93E-04
Dnajc6	4.30E-02	.	.	-1.12E+00	9.23E-01	.	.	1.47E-03
Dctn2	1.24E-01	.	.	-1.39E+00	7.00E-01	.	.	2.79E-06
Ccdc174	-4.80E-02	.	.	1.15E+00	8.83E-01	.	.	3.90E-07

Cd164	1.03E+00	1.36E+00	.	.	8.30E-02	1.56E-12	.	.
2410124H12Rik	-2.10E-02	.	.	1.43E+00	9.82E-01	.	.	8.16E-10
Ech1	1.76E-01	.	1.11E+00	.	7.32E-01	.	4.04E-08	.
Lmtk2	-3.80E-02	.	.	2.29E+00	9.05E-01	.	.	4.08E-10
Pafah2	1.40E-01	.	1.12E+00	.	7.75E-01	.	7.25E-06	.
Vrk1	-2.09E-01	.	.	1.23E+00	7.32E-01	.	.	4.79E-09
Lrig2	5.30E-01	.	1.76E+00	.	4.36E-01	.	4.06E-08	.
P2rx7	8.43E-01	.	1.34E+00	.	5.53E-01	.	1.84E-03	.
E130006D01Rik	2.18E+00	.	1.92E+00	1.02E+00	2.52E-02	.	3.05E-07	4.71E-12
Frmf6	5.24E-01	1.01E+00	.	.	2.05E-01	8.09E-06	.	.
Cecr2	9.09E-01	.	.	-1.56E+00	1.24E-01	.	.	3.56E-04
Mdm1	-1.31E+00	.	.	7.33E+00	6.59E-02	.	.	3.64E-12
Tceal5	-3.77E-01	.	.	3.57E+00	2.23E-01	.	.	2.60E-13
Ergic2	6.90E-02	.	2.15E+00	.	8.33E-01	.	6.93E-07	.
Pde3a	1.34E+00	.	.	-1.10E+00	1.16E-01	.	.	8.50E-10
Map3k1	9.70E-01	.	.	-1.46E+00	1.62E-01	.	.	2.46E-03
Snora17	1.54E+00	1.21E+00	.	.	1.12E-01	2.60E-09	.	.
Elavl4	2.94E-01	.	.	-1.05E+00	3.94E-01	.	.	3.26E-04
Slc7a1	1.99E-01	.	.	-1.32E+00	6.33E-01	.	.	1.84E-03
Msrb3	-1.60E-02	.	.	3.42E+00	9.72E-01	.	.	1.42E-13
Pacsin3	2.28E-01	.	.	-1.06E+00	6.75E-01	.	.	6.45E-06
Cenpu	1.52E+00	2.52E+00	.	.	1.18E-01	3.14E-19	.	.
Pdia4	3.19E-01	.	1.40E+00	.	6.11E-01	.	6.43E-03	.
Nlrp6	-2.52E-01	.	.	1.31E+00	7.01E-01	.	.	4.89E-07
Arhgap26	7.00E-02	1.26E+00	1.03E+00	.	8.65E-01	4.23E-07	1.85E-03	.
Zfp760	7.00E-02	2.27E+00	1.46E+00	.	8.61E-01	1.39E-20	1.61E-11	.
Eif4e3	2.16E-01	.	.	-1.15E+00	6.87E-01	.	.	2.63E-03
Gm7538	-5.32E-01	.	.	1.04E+00	4.58E-01	.	.	2.75E-06
Gmfg	2.55E-01	2.44E+00	.	.	6.69E-01	6.35E-22	.	.
Pls1	3.90E-02	.	.	-1.48E+00	9.26E-01	.	.	2.64E-04
Zfp455	1.22E+00	.	4.41E+00	.	2.73E-01	.	1.52E-11	.
Mmd	3.34E-01	.	.	-1.05E+00	4.24E-01	.	.	7.15E-03
Ezh1	-3.71E-01	.	.	1.74E+00	7.24E-01	.	.	1.34E-08
Emb	3.86E-01	.	.	-1.13E+00	4.50E-01	.	.	8.90E-09
Negr1	1.79E-01	.	.	-1.15E+00	5.90E-01	.	.	1.02E-04
Tbkbp1	5.39E-01	.	2.37E+00	-1.36E+00	2.38E-01	.	5.54E-06	6.47E-05
Brip1	1.51E-01	.	1.69E+00	.	7.03E-01	.	2.93E-05	.
Zfp420	4.45E-01	1.00E+00	.	.	4.70E-01	5.70E-06	.	.
Aco2	1.76E-01	.	1.00E+00	.	6.24E-01	.	8.56E-07	.
Litaf	-2.56E-01	.	- 1.65E+00	.	5.48E-01	.	6.10E-10	.
Stpg1	2.54E-01	.	1.38E+00	.	7.15E-01	.	7.22E-07	.

Xbp1	2.20E-01	1.03E+00	.	.	5.89E-01	1.33E-04	.	.
Atg4a	-1.13E-01	.	.	1.11E+00	7.78E-01	.	.	1.77E-06
A330070 K13Rik	2.70E-02	.	1.18E+00	.	9.55E-01	.	2.19E-03	.
Psm10	-5.55E-01	.	.	1.11E+00	2.69E-01	.	.	1.77E-06
Cdv3	4.69E-01	.	.	-1.49E+00	2.54E-01	.	.	7.71E-08
Rnps1	7.86E-01	.	1.17E+00	.	1.09E-01	.	1.05E-03	.
Spns2	5.00E-01	.	1.90E+00	.	5.36E-01	.	1.29E-06	.
Pycr1	6.85E-01	.	.	-1.12E+00	3.77E-01	.	.	1.75E-07
Zic4	-1.21E+00	.	.	1.93E+00	1.06E-01	.	.	1.25E-18
Gabrd	-1.02E+00	.	- 1.26E+00	.	1.62E-01	.	1.41E-05	.
Pptc7	2.10E-02	.	1.85E+00	.	9.59E-01	.	4.36E-09	.
Abhd4	1.38E+00	1.23E+00	.	.	1.06E-01	1.68E-12	.	.
Mxd4	3.21E-01	.	1.10E+00	.	4.49E-01	.	1.61E-03	.
Daam2	1.68E-01	.	1.47E+00	.	6.52E-01	.	1.81E-08	.
Cldn15	3.78E-01	.	2.65E+00	.	7.11E-01	.	5.67E-12	.
Slc48a1	1.88E-01	.	1.38E+00	.	6.49E-01	.	1.12E-05	.
Slc2a9	1.62E-01	1.57E+00	.	.	8.61E-01	2.91E-09	.	.
8430408G 22Rik	6.85E-01	.	.	-1.23E+00	3.77E-01	.	.	5.07E-06
Drg2	5.47E-01	1.11E+00	.	.	2.41E-01	4.17E-11	.	.
D430020J 02Rik	6.56E-01	.	1.05E+00	.	4.30E-01	.	2.04E-04	.
Rbm15	1.80E+00	.	.	-1.82E+00	6.56E-02	.	.	3.88E-04
Akr1b10	4.86E-01	1.68E+00	.	.	3.59E-01	9.34E-12	.	.
Pgbd5	1.89E-01	.	.	-1.39E+00	5.96E-01	.	.	4.97E-04
Scnn1b	-1.07E+00	.	.	2.34E+00	3.30E-01	.	.	3.39E-08
Usp19	3.52E-01	.	.	-1.07E+00	4.70E-01	.	.	8.44E-10
Bmpr1b	-1.44E+00	.	.	1.26E+00	4.95E-02	.	.	6.48E-05
Cox6b1	7.22E-01	.	1.07E+00	.	3.88E-01	.	1.54E-05	.
Cldn2	-6.00E-02	.	.	3.14E+00	9.21E-01	.	.	1.64E-12
Tspan11	-2.63E-01	.	.	1.00E+00	7.23E-01	.	.	3.11E-16
Lin28a	-5.58E-01	.	.	1.52E+00	5.05E-01	.	.	2.53E-06
943003810 1Rik	1.02E+00	1.22E+00	.	.	1.03E-01	8.29E-06	.	.
Mgat3	1.81E-01	.	1.87E+00	.	7.22E-01	.	2.08E-08	.
Faim2	7.73E-01	.	.	-1.29E+00	7.92E-02	.	.	4.41E-04
Nr5a2	-5.32E-01	.	.	3.69E+00	4.58E-01	.	.	1.63E-06
Gpr3	1.19E+00	.	.	-1.06E+00	5.40E-01	.	.	5.28E-07
Frdm8	1.35E+00	.	1.75E+00	.	2.63E-01	.	5.47E-10	.
Dyrk3	8.87E-01	.	.	-1.28E+00	1.35E-01	.	.	4.60E-03
Auts2	5.21E-01	.	.	-1.14E+00	5.89E-01	.	.	3.06E-04
Ccdc60	-6.42E-01	.	.	1.10E+00	5.04E-01	.	.	3.23E-13
Fis1	5.75E-01	.	2.65E+00	.	3.46E-01	.	5.67E-12	.

Mpv17	4.76E-01	1.02E+00	.	.	3.01E-01	1.43E-06	.	.
Lrrn1	4.00E-01	.	.	-1.75E+00	5.05E-01	.	.	4.18E-09
Taf8	3.70E-01	1.50E+00	.	.	6.85E-01	1.23E-21	.	.
Traip	1.12E+00	.	.	-1.20E+00	2.11E-01	.	.	2.75E-08
P2ry2	-1.59E-01	.	.	2.16E+00	8.09E-01	.	.	8.60E-09
Maged1	-2.06E-01	.	.	3.40E+00	5.60E-01	.	.	1.62E-14
Ubp2l	7.57E-01	.	1.54E+00	.	3.70E-01	.	3.73E-08	.
Tmsb4x	-6.10E-02	.	.	1.38E+00	8.98E-01	.	.	6.73E-06
Cnn3	5.56E-01	.	.	-2.25E+00	2.36E-01	.	.	9.26E-05
Tsc22d4	2.40E+00	.	.	-1.28E+00	7.80E-04	.	.	9.28E-05
Kcnd3os	1.40E+00	.	.	-1.24E+00	8.76E-02	.	.	2.92E-04
Iqsec1	3.13E-01	.	1.93E+00	.	3.71E-01	.	1.42E-04	.
Slc26a11	2.80E-01	.	.	-1.76E+00	4.47E-01	.	.	2.19E-06
Mapkapk3	8.41E-01	.	.	-1.99E+00	3.01E-01	.	.	3.30E-09
Fbln5	-6.49E-01	.	.	5.80E+00	4.27E-01	.	.	5.44E-20
Irgm1	2.25E-01	.	1.92E+00	.	5.70E-01	.	5.50E-09	.
Aqp2	1.12E+00	.	.	-1.21E+00	2.67E-01	.	.	1.01E-04
Gm17296	9.05E-01	.	.	-1.18E+00	2.63E-01	.	.	5.35E-07
Junb	2.33E-01	.	.	-2.12E+00	8.80E-01	.	.	4.59E-17
B3glct	2.15E-01	.	.	-1.51E+00	6.34E-01	.	.	3.86E-04
Plk2	1.37E-01	.	.	-1.57E+00	8.05E-01	.	.	2.93E-04
Ifitm10	1.24E+00	.	.	-1.22E+00	1.31E-01	.	.	2.00E-09
Mtmr4	1.08E+00	.	1.66E+00	.	1.90E-01	.	9.94E-10	.
Wdr55	1.29E-01	1.73E+00	.	.	7.92E-01	2.13E-20	.	.
Ntm	4.43E-01	1.53E+00	.	.	2.67E-01	6.11E-15	.	.
Chml	4.34E-01	.	.	-1.52E+00	2.95E-01	.	.	9.04E-03
Pparg	1.27E+00	.	.	-1.03E+00	3.81E-01	.	.	6.03E-10
Epb4.1	1.50E-01	.	.	-2.23E+00	8.78E-01	.	.	1.92E-04
Rfxank	9.00E-02	2.58E+00	1.31E+00	.	9.36E-01	3.44E-25	3.62E-10	.
Gnai3	2.53E-01	.	.	-1.21E+00	6.55E-01	.	.	1.31E-05
Fam19a5	1.52E-01	.	.	-1.20E+00	7.97E-01	.	.	6.43E-04
Rsrp1	3.46E-01	.	1.00E+00	.	4.63E-01	.	1.39E-03	.
Pars2	1.66E-01	1.03E+00	.	2.60E+00	7.65E-01	5.94E-08	.	1.94E-21
Nuak2	8.61E-01	.	.	-2.59E+00	4.02E-01	.	.	3.40E-05
Setd6	2.10E+00	.	.	-1.00E+00	1.08E-01	.	.	5.77E-07
AU040320	1.80E-02	.	1.05E+00	.	9.80E-01	.	3.91E-06	.
Brd8	1.80E-02	1.26E+00	.	.	9.63E-01	2.59E-08	.	.
Banp	1.30E+00	.	1.08E+00	.	6.70E-02	.	4.50E-05	.
Srcin1	1.94E-01	.	.	-1.13E+00	6.22E-01	.	.	2.56E-04
Elavl2	-6.80E-02	.	.	1.33E+00	8.34E-01	.	.	1.01E-07
Cap1	1.68E-01	.	2.66E+00	.	6.85E-01	.	5.67E-11	.
Fjx1	1.35E-01	.	.	-1.19E+00	9.44E-01	.	.	4.16E-06

Amn	2.75E-01	.	.	-1.14E+00	6.48E-01	.	.	2.94E-10
Rps6ka2	4.85E-01	1.53E+00	.	.	3.93E-01	3.14E-14	.	.
Ccdc93	9.40E-01	.	.	-1.06E+00	1.14E-01	.	.	2.19E-03
Bach1	1.60E-02	.	1.60E+00	.	9.67E-01	.	3.80E-06	.
Zfp456	2.76E-01	.	1.49E+00	.	6.79E-01	.	2.87E-04	.
Hook1	2.58E-01	.	.	-1.25E+00	7.00E-01	.	.	2.09E-06
Scd1	3.23E-01	.	1.54E+00	.	3.46E-01	.	8.44E-07	.
Btbd19	1.04E+00	.	1.40E+00	.	3.71E-01	.	1.02E-07	.
Car5a	3.80E-02	.	1.08E+00	.	9.65E-01	.	4.50E-05	.
Samd4b	3.84E-01	2.44E+00	.	.	5.47E-01	6.35E-22	.	.
Rtn4r	-2.05E-01	.	- 1.22E+00	.	5.84E-01	.	2.24E-04	.
Ier2	1.90E-01	2.57E+00	1.04E+00	-1.05E+00	6.44E-01	1.82E-26	3.69E-08	8.51E-10
Itpripl2	-1.25E-01	.	.	2.65E+00	8.05E-01	.	.	1.71E-09
Magi3	1.50E-01	.	.	-1.38E+00	7.31E-01	.	.	1.26E-04
Mfsd5	4.35E-01	.	1.48E+00	.	2.69E-01	.	4.32E-06	.
Mc3r	-8.40E-01	.	.	1.16E+00	4.27E-01	.	.	6.46E-05
Rnf40	2.10E-01	.	1.12E+00	.	6.90E-01	.	1.16E-04	.
Gjb5	9.95E-01	.	.	-1.19E+00	1.91E-01	.	.	1.09E-03
Awat2	-1.69E+00	.	.	2.99E+00	6.16E-02	.	.	1.08E-15
Disp2	4.60E-01	1.12E+00	.	.	3.08E-01	4.42E-05	.	.
Tmem258	9.95E-01	1.89E+00	1.01E+00	.	1.91E-01	1.89E-14	2.91E-04	.
Iqsec2	-1.29E+00	.	.	1.12E+00	8.25E-02	.	.	1.80E-07
Smad5	8.73E-01	.	1.22E+00	.	5.33E-02	.	3.13E-04	.
Kif20a	6.34E-01	1.26E+00	.	.	4.22E-01	2.59E-08	.	.
Sppl3	3.90E-02	.	.	-1.04E+00	9.05E-01	.	.	5.92E-03
Smg5	1.44E-01	.	.	-1.51E+00	7.95E-01	.	.	1.27E-05
Ppp4r1l-ps	4.58E-01	1.03E+00	.	.	3.79E-01	1.98E-05	.	.
Tmem177	1.71E-01	.	.	-1.53E+00	6.92E-01	.	.	3.89E-05
Zfp759	4.59E-01	.	2.52E+00	.	6.01E-01	.	8.97E-06	.
Nfib	5.31E-01	.	1.18E+00	.	2.53E-01	.	7.79E-03	.
Fam171a1	-4.62E-01	.	- 1.04E+00	.	4.23E-01	.	4.07E-03	.
S100a16	6.20E-02	.	1.62E+00	.	9.06E-01	.	4.34E-07	.
Vwa1	7.80E-01	.	.	-2.96E+00	1.88E-01	.	.	4.03E-04
Gpc6	1.47E-01	.	.	-1.08E+00	8.25E-01	.	.	6.42E-09
Rbm27	1.40E-02	.	1.35E+00	.	9.67E-01	.	3.81E-05	.
Slc11a2	5.72E-01	1.23E+00	.	.	6.96E-01	1.20E-16	.	.
1700025G04Rik	2.13E-01	.	.	-1.33E+00	5.68E-01	.	.	7.92E-03
Clec4a1	4.62E-01	.	.	-1.12E+00	7.46E-01	.	.	1.25E-04
Zfp653	3.64E-01	.	1.42E+00	.	2.74E-01	.	9.67E-07	.
Oasl1	1.61E+00	.	.	-1.64E+00	2.51E-01	.	.	5.78E-05
Igfals	7.16E-01	.	1.19E+00	.	4.66E-01	.	1.07E-03	.

Zfp51	6.40E-01	1.11E+00	.	.	2.90E-01	1.05E-12	.	.
Eif4b	-1.74E-01	.	.	3.59E+00	7.55E-01	.	.	1.97E-11
Rasgrp3	7.40E-02	.	2.07E+00	.	8.83E-01	.	1.24E-08	.
Cdh4	-1.20E-01	.	.	1.38E+00	7.88E-01	.	.	8.57E-10
Ap5z1	3.20E-01	.	1.35E+00	.	5.94E-01	.	5.52E-03	.
Lpin3	4.15E-01	.	.	-1.01E+00	5.78E-01	.	.	3.51E-04
Arhgdia	6.86E-01	1.13E+00	.	.	3.93E-01	3.02E-17	.	.
Samd14	1.32E+00	.	.	-1.58E+00	6.06E-02	.	.	3.77E-07
Gsg1l	-3.43E-01	.	- 1.02E+00	.	6.84E-01	.	6.42E-04	.
Tmem100	-2.10E-01	.	.	2.79E+00	7.45E-01	.	.	5.82E-13
Gtf2a2	-1.70E-02	.	- 1.06E+00	.	9.84E-01	.	4.91E-03	.
Ephb2	8.00E-02	.	.	-1.06E+00	9.19E-01	.	.	2.05E-07
Arl5c	1.44E+00	.	.	-1.01E+00	1.00E-01	.	.	2.38E-07
Gpr143	-1.07E+00	.	.	2.62E+00	2.34E-01	.	.	6.17E-06
Tmem88b	2.57E-01	.	1.39E+00	.	4.57E-01	.	1.05E-08	.
Serinc2	-1.82E+00	.	.	2.68E+00	2.05E-01	.	.	4.44E-07
Rbp1	-4.88E-01	.	.	3.09E+00	2.81E-01	.	.	6.98E-16
Calcb	-1.68E-01	.	.	1.14E+00	7.73E-01	.	.	6.27E-16
Edf1	5.47E-01	1.28E+00	.	.	3.51E-01	4.40E-11	.	.
Gcnt4	-3.60E-02	.	.	3.46E+00	9.26E-01	.	.	3.18E-12
Clec1b	1.45E+00	.	.	-1.92E+00	2.02E-01	.	.	2.10E-03
Klhl42	4.10E-01	.	.	-1.39E+00	3.87E-01	.	.	5.60E-06
Zscan22	6.50E-02	1.20E+00	.	.	8.65E-01	3.82E-07	.	.
Fabp3	1.08E-01	.	.	-1.06E+00	9.39E-01	.	.	2.34E-10
Dmtn	3.78E-01	.	1.21E+00	.	2.89E-01	.	9.57E-08	.
Mroh1	8.96E-01	.	1.31E+00	.	2.66E-01	.	6.43E-04	.
Tmem116	-7.33E-01	.	.	2.91E+00	3.94E-01	.	.	5.69E-10
Dnali1	7.20E-02	.	1.31E+00	.	8.78E-01	.	2.22E-04	.
Gm4013	9.14E-01	.	1.35E+00	.	2.35E-01	.	3.81E-05	.
Marveld3	-5.93E-01	.	.	1.02E+00	2.83E-01	.	.	8.75E-04
BC039966	-8.21E-01	.	.	2.16E+00	4.13E-01	.	.	6.71E-37
Tmem259	9.95E-01	.	1.64E+00	.	1.91E-01	.	1.13E-05	.
Strip2	7.56E-01	.	1.70E+00	.	3.96E-01	.	7.18E-04	.
Sreklip1	5.80E-02	1.75E+00	1.10E+00	.	8.88E-01	2.33E-23	5.58E-03	.
Agbl2	1.99E-01	.	.	-1.10E+00	8.60E-01	.	.	5.89E-04
Aanat	-1.40E+00	.	.	1.61E+00	1.26E-01	.	.	2.38E-06
Tsr1	1.50E-02	.	1.21E+00	.	9.76E-01	.	1.55E-03	.
Ppfia4	1.75E-01	.	.	-1.21E+00	7.09E-01	.	.	4.31E-05
Chn1	6.19E-01	.	3.19E+00	.	2.34E-01	.	7.85E-07	.
Cdk8	1.63E-01	.	.	-1.42E+00	7.52E-01	.	.	3.37E-04
4921504E06Rik	-5.32E-01	.	- 1.13E+00	.	4.58E-01	.	2.63E-03	.

Prickle2	1.41E-01	.	2.60E+00	.	6.95E-01	.	1.44E-10	.
Cmas	-1.13E+00	.	.	2.16E+00	6.19E-01	.	.	5.54E-06
Malat1	4.58E-01	1.97E+00	.	.	1.87E-01	1.95E-24	.	.
Ldoc1l	1.48E-01	.	.	-1.38E+00	8.70E-01	.	.	7.45E-07
Gpr133	-3.47E-01	.	.	1.41E+00	5.09E-01	.	.	4.68E-22
Rheb	-1.97E-01	.	- 1.12E+00	.	6.42E-01	.	7.79E-03	.
Tmem138	1.51E-01	1.16E+00	.	.	8.78E-01	2.48E-10	.	.
Cenpl	1.99E+00	1.30E+00	.	.	7.94E-02	8.93E-12	.	.
Sec61a1	4.08E-01	.	.	-1.11E+00	5.18E-01	.	.	8.73E-05
A630075F 10Rik	-2.37E-01	.	.	2.66E+00	7.90E-01	.	.	1.70E-11
Prkce	1.05E+00	.	.	-1.85E+00	5.89E-02	.	.	4.14E-11
Tbx3os2	-1.07E+00	.	.	1.41E+00	2.46E-01	.	.	3.30E-07
Sema3f	1.51E+00	.	.	-1.01E+00	2.31E-01	.	.	4.98E-03
Taldo1	1.62E-01	.	1.24E+00	.	6.15E-01	.	4.68E-07	.
Mcm2	3.89E-01	.	1.88E+00	.	3.62E-01	.	2.70E-09	.
Iffo2	-8.76E-01	.	.	1.21E+00	2.52E-01	.	.	4.65E-06
Cstf1	7.31E-01	.	.	-1.15E+00	3.60E-01	.	.	2.12E-03
Tppp3	3.70E-01	.	.	-1.58E+00	6.55E-01	.	.	1.35E-04
Zfp949	9.45E-01	3.93E+00	2.18E+00	.	3.51E-01	9.91E-31	3.60E-18	.
Slc4a1	1.79E+00	.	.	-1.09E+00	2.15E-01	.	.	3.00E-06
Cbfa2t3	7.32E-01	.	.	-1.03E+00	3.07E-01	.	.	8.43E-09
Scgb1c1	-4.23E-01	.	.	1.01E+00	7.01E-01	.	.	1.18E-07
Ckap2l	1.45E+00	.	1.94E+00	.	9.47E-02	.	8.51E-06	.
Zfp668	1.01E+00	1.40E+00	.	.	1.68E-01	1.75E-11	.	.
Fndc5	1.42E-01	.	1.14E+00	.	6.46E-01	.	8.42E-05	.
Lrp1	4.21E-01	.	.	-1.38E+00	2.82E-01	.	.	3.28E-06
Pfdn4	-3.70E-01	.	.	3.28E+00	3.10E-01	.	.	1.40E-36
Fgf3	-2.84E-01	.	.	3.69E+00	6.31E-01	.	.	2.38E-21
Cnn2	1.67E+00	.	1.64E+00	.	6.17E-02	.	1.13E-05	.
Rtfdc1	-2.60E-01	.	.	1.35E+00	7.15E-01	.	.	4.25E-04
Trnp1	-3.63E-01	.	.	2.11E+00	6.14E-01	.	.	3.26E-12
Gopc	4.38E-01	1.33E+00	.	.	2.85E-01	1.18E-04	.	.
Maneal	1.09E+00	.	.	-1.13E+00	1.30E-01	.	.	2.14E-07
Cdkn1c	-2.54E-01	-1.17E+00	.	.	6.59E-01	3.28E-16	.	.
Vash1	-2.37E-01	.	- 1.74E+00	.	5.70E-01	.	8.18E-05	.
Cyth1	1.21E+00	.	1.60E+00	.	6.30E-02	.	2.87E-06	.
Shroom2	-2.31E-01	.	.	5.21E+00	5.31E-01	.	.	1.69E-11
Kcnj12	-2.17E-01	.	- 1.04E+00	.	6.81E-01	.	8.11E-04	.
Fancl	3.65E-01	1.13E+00	.	.	8.32E-01	2.51E-06	.	.
Alg8	1.84E+00	.	1.51E+00	.	4.38E-02	.	4.60E-04	.
Mpdu1	1.09E+00	.	1.98E+00	.	8.90E-02	.	6.68E-13	.

Brinp2	2.49E-01	.	.	-1.20E+00	8.31E-01	.	.	1.95E-04
Tmtc2	7.62E-01	.	.	-1.55E+00	1.82E-01	.	.	1.91E-03
Ric3	1.20E-01	.	.	-1.79E+00	7.49E-01	.	.	2.22E-04
Cdc34	3.37E-01	.	1.68E+00	.	7.09E-01	.	6.33E-13	.
Slc30a10	1.83E+00	.	.	-1.08E+00	5.26E-02	.	.	1.49E-09
Zic1	-3.48E-01	.	.	1.93E+00	5.75E-01	.	.	1.25E-18
Slc39a9	2.69E-01	.	1.65E+00	.	7.56E-01	.	5.78E-05	.
Arl8a	3.83E-01	.	.	-1.18E+00	3.32E-01	.	.	1.86E-03
Mid1	-9.32E-01	.	.	2.20E+00	4.85E-01	.	.	3.14E-09
Tbc1d22a	1.90E-02	.	1.57E+00	.	9.54E-01	.	9.91E-09	.
Zfp608	1.48E-01	.	1.58E+00	.	7.42E-01	.	5.84E-06	.
Grpr	-1.45E+00	.	.	3.74E+00	4.32E-02	.	.	5.30E-23
Asic1	9.04E-01	.	.	-1.44E+00	4.74E-02	.	.	8.05E-07
Zbtb22	1.49E-01	.	1.91E+00	.	7.28E-01	.	1.94E-06	.
Timm10	1.69E+00	.	3.03E+00	.	7.85E-02	.	1.14E-30	.
Pid1	1.53E-01	.	.	-1.23E+00	7.33E-01	.	.	2.11E-03
Zfp940	2.13E+00	.	1.74E+00	.	1.93E-01	.	1.25E-05	.
Ccnd3	7.60E-02	1.50E+00	.	.	9.30E-01	1.23E-21	.	.
Pianp	-2.44E-01	.	.	2.47E+00	6.32E-01	.	.	7.43E-06
Cel	9.95E-01	.	1.17E+00	.	1.91E-01	.	8.21E-07	.
Cwc25	5.27E-01	1.16E+00	.	.	5.10E-01	4.79E-13	.	.
Cacng5	-5.25E-01	.	.	3.83E+00	4.56E-01	.	.	3.02E-22
2610306M 01Rik	6.60E-01	1.37E+00	.	.	3.04E-01	9.59E-15	.	.
Itga3	1.52E-01	.	.	-1.66E+00	8.75E-01	.	.	5.05E-06
A130010J 15Rik	4.90E-02	.	.	-1.65E+00	9.01E-01	.	.	4.70E-04
Bysl	3.80E-02	.	1.62E+00	.	9.30E-01	.	5.61E-12	.
4933439K 11Rik	-2.10E-01	.	.	1.52E+00	7.45E-01	.	.	1.95E-15
Naa35	4.90E-02	.	2.07E+00	.	9.10E-01	.	3.17E-14	.
Cdk9	3.84E-01	.	2.44E+00	.	3.28E-01	.	7.08E-13	.
Pitpnm2	1.28E-01	.	.	-1.08E+00	7.76E-01	.	.	3.43E-06
Marcks	-8.00E-03	.	- 1.34E+00	.	9.85E-01	.	1.48E-05	.
Gm1564	6.66E-01	-1.38E+00	.	-1.30E+00	5.60E-01	1.75E-10	.	5.52E-03
Sfn	1.46E-01	.	.	-1.08E+00	8.76E-01	.	.	2.87E-06
Eci3	8.02E-01	1.33E+00	1.44E+00	.	4.05E-01	1.33E-08	1.08E-05	.
Dusp15	4.68E-01	.	.	-1.21E+00	7.08E-01	.	.	3.72E-06
Myadm	1.09E+00	.	1.20E+00	.	3.81E-02	.	5.36E-03	.
Paqr9	2.80E-01	.	.	-1.11E+00	5.18E-01	.	.	1.38E-11
320001D 21Rik	1.60E+00	.	1.59E+00	.	1.14E-01	.	3.79E-07	.
Suclg2	5.10E-02	.	.	-1.79E+00	8.80E-01	.	.	8.18E-05
Alkbh6	9.60E-02	.	2.14E+00	.	8.05E-01	.	1.30E-08	.

Tmprss12	5.65E-01	.	.	-1.45E+00	3.61E-01	.	.	6.86E-04
Slc25a17	7.20E-02	1.09E+00	.	.	8.45E-01	1.29E-09	.	.
Oser1	1.54E-01	1.01E+00	.	.	7.88E-01	2.29E-06	.	.
Calca	-1.40E-01	.	.	1.17E+00	6.98E-01	.	.	2.34E-11
Ipmk	2.74E-01	.	1.05E+00	.	5.20E-01	.	5.19E-05	.
Tbrg4	1.74E-01	.	1.19E+00	.	8.74E-01	.	2.85E-06	.
9530080O11Rik	5.38E-01	.	.	-1.25E+00	4.46E-01	.	.	2.09E-06
Mrgpre	-1.01E-01	.	.	1.90E+00	9.15E-01	.	.	1.78E-06
Tcp1	9.20E-01	1.02E+00	.	.	3.89E-01	1.67E-10	.	.
Ddx17	1.07E+00	.	1.22E+00	.	1.65E-01	.	9.40E-03	.
Bhlha15	8.87E-01	.	.	-1.30E+00	2.72E-01	.	.	6.48E-08
Phb	-2.25E-01	.	.	2.52E+00	5.24E-01	.	.	5.96E-10
S100a1	5.60E-02	1.22E+00	.	.	9.34E-01	8.69E-13	.	.
Lrrc4c	2.19E-01	.	.	-1.37E+00	7.48E-01	.	.	2.45E-04
Scn2b	1.21E-01	1.20E+00	.	.	7.92E-01	2.99E-09	.	.
Lepr	1.79E-01	.	.	-1.04E+00	6.46E-01	.	.	1.07E-03
Gpx7	4.41E-01	.	.	-1.22E+00	7.10E-01	.	.	1.12E-03
Ctxn2	-4.36E-01	.	.	2.21E+00	2.38E-01	.	.	3.75E-08
Fscn1	-1.21E-01	.	.	1.17E+00	7.26E-01	.	.	1.10E-04
Evi5l	7.50E-02	.	1.80E+00	.	9.24E-01	.	1.41E-05	.
Tmem87a	5.14E-01	2.34E+00	.	.	1.80E-01	5.43E-19	.	.
Akt2	1.22E+00	.	1.17E+00	.	6.28E-02	.	6.69E-06	.
Cdca3	3.80E-01	.	2.72E+00	.	7.88E-01	.	2.37E-09	.
Mon2	-3.37E-01	.	- 1.25E+00	.	3.42E-01	.	2.67E-03	.
Irf9	6.84E-01	.	1.49E+00	.	1.56E-01	.	2.96E-06	.
Slc38a2	2.53E-01	1.02E+00	.	.	5.67E-01	2.17E-09	.	.
Dclre1c	1.71E+00	2.03E+00	.	.	1.89E-01	3.31E-17	.	.
Tfb2m	2.86E-01	.	1.97E+00	.	5.41E-01	.	6.95E-09	.
Esrra	2.55E-01	.	1.27E+00	.	4.24E-01	.	3.52E-06	.
Cdh26	-2.09E+00	.	.	1.30E+00	4.40E-02	.	.	1.35E-08
Lpin2	1.09E-01	1.00E+00	.	.	7.91E-01	6.41E-04	.	.
Ormdl2	-8.85E-01	.	- 1.25E+00	.	3.33E-01	.	2.70E-03	.
Ptpre	4.22E-01	.	.	-1.13E+00	2.71E-01	.	.	1.45E-04
Ccrl2	7.86E-01	1.13E+00	.	.	4.28E-01	1.27E-10	.	.
Thbs2	1.62E-01	.	1.11E+00	.	7.32E-01	.	4.90E-04	.
Rimk1a	2.35E-01	.	.	-1.78E+00	6.65E-01	.	.	6.47E-06
Nr1h3	2.37E-01	.	.	-1.18E+00	6.62E-01	.	.	1.91E-04
Grik3	5.59E-01	.	1.06E+00	.	3.42E-01	.	1.52E-03	.
D430041D05Rik	5.38E-01	.	.	-1.27E+00	1.84E-01	.	.	1.12E-07
Ddb2	2.24E+00	.	2.40E+00	.	7.65E-02	.	3.31E-06	.
Rgs19	2.20E-01	.	.	-1.05E+00	7.94E-01	.	.	3.12E-06

Serpinh1	7.71E-01	.	1.02E+00	.	3.86E-01	.	1.87E-05	.
Mmp24	6.24E-01	.	.	-1.05E+00	3.22E-01	.	.	4.48E-07
Eme1	4.20E-02	1.35E+00	.	.	9.59E-01	1.74E-07	.	.
Vac14	1.66E-01	.	1.88E+00	.	7.48E-01	.	1.15E-12	.
Clic4	-9.00E-02	.	1.47E+00	1.06E+00	7.90E-01	.	5.98E-09	2.45E-03
Spn	1.37E-01	.	1.08E+00	.	7.73E-01	.	9.04E-06	.
Sp7	2.03E+00	.	1.11E+00	.	4.18E-02	.	1.98E-04	.
Cxxc4	8.30E-02	.	.	-2.82E+00	8.37E-01	.	.	7.43E-06
Ankrd34a	9.28E-01	.	.	-1.29E+00	1.58E-01	.	.	3.45E-08
Slc12a5	4.10E-02	.	.	-1.07E+00	9.20E-01	.	.	5.63E-04
Tet2	3.30E-02	1.92E+00	1.25E+00	.	9.51E-01	6.17E-14	2.13E-08	.
Prmt8	-1.11E+00	.	.	2.54E+00	2.52E-01	.	.	2.58E-07
Nalcn	6.09E-01	.	.	-1.43E+00	2.46E-01	.	.	1.18E-05
Crip1	9.53E-01	.	.	-1.22E+00	4.84E-01	.	.	1.56E-03
Hunk	-4.40E-02	.	.	3.56E+00	9.39E-01	.	.	1.32E-17
Ptbp1	6.59E-01	.	1.39E+00	.	4.61E-01	.	9.33E-09	.
Fbxl5	-4.34E-01	-1.05E+00	.	.	4.43E-01	1.61E-03	.	.
Adrbk2	1.23E+00	.	.	-1.04E+00	8.23E-02	.	.	5.22E-04
Zc3hc1	3.00E-02	1.91E+00	.	.	9.59E-01	8.85E-14	.	.
Myo9a	1.30E-02	.	1.69E+00	.	9.74E-01	.	4.77E-07	.
Raver2	-4.93E-01	.	.	1.80E+00	5.84E-01	.	.	2.72E-04
Asprv1	2.66E-01	.	.	-1.37E+00	8.63E-01	.	.	1.42E-04
Ak4	4.48E-01	.	.	-1.80E+00	3.28E-01	.	.	1.34E-08
Wdr81	2.11E+00	.	2.49E+00	.	2.35E-02	.	5.05E-09	.
Figl2	-1.03E-01	.	.	1.15E+00	8.09E-01	.	.	3.20E-11
Btbd2	2.37E-01	.	1.41E+00	.	6.49E-01	.	1.04E-06	.
Mrpl27	8.96E-01	1.35E+00	.	.	3.08E-01	1.74E-07	.	.
Fastkd5	6.73E-01	.	.	-1.28E+00	4.32E-01	.	.	1.41E-21
Nyap1	1.35E+00	.	.	-1.28E+00	8.68E-02	.	.	9.28E-05
Wscd2	4.23E-01	.	.	-1.09E+00	4.21E-01	.	.	1.21E-04
Kifc3	6.67E-01	.	.	-1.29E+00	4.09E-01	.	.	6.61E-03
Adap1	3.75E-01	.	.	-1.94E+00	6.04E-01	.	.	2.49E-03
Gm166	6.86E-01	.	1.12E+00	.	3.82E-01	.	1.16E-04	.
C330006A 16Rik	1.70E-01	.	1.49E+00	.	8.12E-01	.	2.77E-05	.
Ahdc1	8.90E-02	.	.	-1.37E+00	8.57E-01	.	.	2.17E-04
Stampb	7.70E-02	.	1.51E+00	.	8.32E-01	.	4.70E-07	.
Dner	3.97E-01	.	.	-1.18E+00	4.26E-01	.	.	8.45E-09
Mrpl32	8.29E-01	2.04E+00	.	.	4.38E-01	3.81E-09	.	.
Alkbh4	4.30E-01	.	1.22E+00	.	4.17E-01	.	1.86E-03	.
Med18	8.60E-01	1.20E+00	.	.	5.68E-01	7.26E-10	.	.
Ppif	8.10E-02	.	1.58E+00	.	8.43E-01	.	2.49E-06	.
Rbm12b2	1.75E-01	1.82E+00	.	.	6.63E-01	3.05E-15	.	.

Foxp1	3.42E-01	.	1.67E+00	.	4.83E-01	.	1.30E-05	.
Cntd1	1.47E-01	.	.	-1.17E+00	7.91E-01	.	.	3.18E-05
Robo3	1.02E-01	.	1.21E+00	.	9.02E-01	.	2.77E-03	.
Trim67	2.81E-01	.	.	-1.12E+00	5.23E-01	.	.	5.07E-19
Gm16701	1.42E+00	.	.	-1.25E+00	1.02E-01	.	.	6.99E-06
Rnf152	2.73E-01	.	.	-1.27E+00	4.68E-01	.	.	1.88E-07
Fam83d	1.32E+00	.	1.13E+00	.	1.37E-01	.	1.03E-05	.
Il4ra	-8.52E-01	.	.	1.30E+00	3.36E-01	.	.	9.20E-10
6530411M01Rik	1.79E-01	.	2.26E+00	.	8.17E-01	.	6.23E-08	.
Bcl6b	1.52E-01	1.00E+00	.	.	8.40E-01	1.06E-08	.	.
Zfp58	4.58E-01	1.45E+00	.	.	6.77E-01	1.34E-16	.	.
Ddx10	4.31E-01	.	1.62E+00	.	4.98E-01	.	1.02E-04	.
Sp2	2.63E+00	.	.	-1.42E+00	1.37E-02	.	.	5.58E-05
Lrp8	3.49E-01	.	.	-1.14E+00	4.48E-01	.	.	1.45E-06
Gltp	7.18E-01	2.12E+00	.	.	3.94E-01	1.42E-29	.	.
Zfp286	6.70E-02	1.18E+00	.	.	9.20E-01	2.55E-12	.	.
Sarnp	-2.61E-01	.	- 1.25E+00	.	4.47E-01	.	2.70E-03	.
Star	1.20E+00	.	1.51E+00	.	1.07E-01	.	1.86E-06	.
Phf21a	1.45E+00	1.07E+00	.	.	6.38E-02	1.13E-05	.	.
Scara5	1.02E+00	.	1.39E+00	.	2.21E-01	.	2.34E-04	.
Ncapg2	4.75E-01	.	1.05E+00	.	4.24E-01	.	2.04E-04	.
Prex1	-3.38E-01	.	.	1.44E+00	5.16E-01	.	.	6.38E-08
Ppfibp1	6.04E-01	.	.	-1.13E+00	5.54E-01	.	.	7.02E-03
Pde1b	2.78E-01	.	.	-1.10E+00	8.36E-01	.	.	4.44E-09

Table S5: Gene Ontology enrichments for 145 genes in the active circuit after network analysis.

GO terms are scored by EnrichR combined score.

Category	Term	Overlap	Combined Score	Genes	
GO Biological Process	regulation of dendritic spine morphogenesis (GO:0061001)	4/21	1.133703336	EFNA1 SRCIN1 SHANK3 LRP8	
	negative regulation of cellular component organization (GO:0051129)	21/474	1.097462581	RTN4R PSMD10 PID1 DMTN ITGA3 SHROOM2 NR1H3 SEMA3F MID1 CNN2 EFNA1 RPS6KA2 TMSB4X ARHGDIS MYADM PPIF PACSIN3 GOPC EVI5L EPHB2 SHANK3	
	actin cytoskeleton organization (GO:0030036)	14/253	1.02254391	CAP1 MON2 DMTN IQSEC2 IQSEC1 ARHGAP26 CNN3 FOXP1 CNN2 ALKBH4 NUA2 DAAM2 TMSB4X FSCN1	
	calcium-mediated signaling using intracellular calcium source (GO:0035584)	3/13	1.020641134	FIS1 GPR143 DMTN	
	cell-cell junction maintenance (GO:0045217)	3/9	1.007143753	SHROOM2 MYADM KIFC3	
	terpenoid metabolic process (GO:0006721)	8/97	0.992727145	AKR1B10 LRP1 STAR AWAT2 RBP1 PDE3A LRP8 GPC6	
	diterpenoid metabolic process (GO:0016101)	8/87	0.986640404	AKR1B10 LRP1 STAR AWAT2 RBP1 PDE3A LRP8 GPC6	
	cellular response to metal ion (GO:0071248)	8/99	0.979017033	CLIC4 DMTN STAR SLC11A2 PPIF PPARG AQP2 JUNB	
	cellular response to antibiotic (GO:0071236)	3/13	0.970089779	XBP1 STAR CRIP1	
	cell junction maintenance (GO:0034331)	3/11	0.938976983	SHROOM2 MYADM KIFC3	
	regulation of cell morphogenesis involved in differentiation (GO:0010769)	13/248	0.892376823	RTN4R DMTN SEMA3F LRP8 SRCIN1 EFNA1 PREX1 ARHGDIS CHN1 MYADM LRRC4C EPHB2 SHANK3	
	GO Molecular Function	ARF guanyl-nucleotide exchange factor activity (GO:0005086)	4/19	4.979041721	MON2 IQSEC2 IQSEC1 CYTH1
		actin binding (GO:0003779)	19/386	4.623746741	CAP1 DMTN GMFG PRKCE SHROOM2 SLC4A1 AQP2 MYO9A CNN3 CNN2 MARCKS ALKBH4 DAAM2 HOOK1 TMSB4X FSCN1 SHANK3 MSRB1 PLS1
sodium channel activity (GO:0005272)		5/37	4.281021029	SCNN1B SHROOM2 NALCN SCN2B ASIC1	
ligand-gated sodium channel activity (GO:0015280)		3/10	3.904128246	SCNN1B SHROOM2 ASIC1	
ligand-activated sequence-specific DNA binding RNA polymerase II transcription factor activity (GO:0004879)		5/50	2.509575238	ESRRA NR5A2 NR1H3 PPARG BRD8	
direct ligand regulated sequence-specific DNA binding transcription factor activity (GO:0098531)		5/50	2.49141456	ESRRA NR5A2 NR1H3 PPARG BRD8	
mRNA 3'-UTR binding (GO:0003730)		4/35	1.82862356	CPEB1 ELAVL4 RNPS1 ELAVL2	
RNA helicase activity (GO:0003724)		3/29	1.447110189	DDX17 DHX8 DDX10	

	GTPase regulator activity (GO:0030695)	13/310	1.397224764	GPSM1 RGS19 ARHGAP26 ADAP1 MYO9A RASGRP3 PREX1 ARHGDIS CHN1 GOPC CHML EVI5L TBC1D22A
	nucleoside-triphosphatase regulator activity (GO:0060589)	13/330	1.385629816	GPSM1 RGS19 ARHGAP26 ADAP1 MYO9A RASGRP3 PREX1 ARHGDIS CHN1 GOPC CHML EVI5L TBC1D22A
	small GTPase regulator activity (GO:0005083)	9/195	1.358239818	GPSM1 PREX1 ARHGDIS GOPC EVI5L ARHGAP26 ADAP1 TBC1D22A RASGRP3
GO Cellular Component	cortical actin cytoskeleton (GO:0030864)	3/24	0.900972322	CAP1 SHROOM2 MYADM
	synapse part (GO:0044456)	15/395	0.829575204	CALCA CLSTN3 GRIK3 FAIM2 LRP8 SRCIN1 CPEB1 PPFIBP1 GOPC LRRC4C PPFIA4 GABRD SHANK3 CBLN1 CACNG5
	postsynaptic membrane (GO:0045211)	11/195	0.826774805	CPEB1 CLSTN3 GRIK3 GOPC FAIM2 LRRC4C GABRD SRCIN1 SHANK3 CBLN1 CACNG5
	synaptic membrane (GO:0097060)	11/228	0.820510025	CPEB1 CLSTN3 GRIK3 GOPC FAIM2 LRRC4C GABRD SRCIN1 SHANK3 CBLN1 CACNG5
	cortical cytoskeleton (GO:0030863)	5/50	0.810816311	CAP1 DMTN MYADM SHROOM2 SLC4A1
	nucleoplasm (GO:0005654)	30/1051	0.739154106	PSMD10 GTF2A2 NCAPG2 PHB PHF21A PTBP1 RPS6KA2 CSTF1 BRD8 JUNB ESRRA CENPU XBP1 FANCL IPMK NR1H3 VRK1 SMAD5 DDB2 CDK9 RAD51B CDK8 NR5A2 MAPKAPK3 MED20 RNPS1 PPARG KIF20A IRF9 MCM2
	occluding junction (GO:0070160)	6/108	0.736582186	CLDN15 MAGI3 MARVELD3 SHROOM2 CLDN2 CYTH1
	apical part of cell (GO:0045177)	5/87	0.729870135	CLIC4 FZD7 SLC11A2 VASH1 BYSL
	tight junction (GO:0005923)	6/108	0.729224892	CLDN15 MAGI3 MARVELD3 SHROOM2 CLDN2 CYTH1
	neuronal cell body (GO:0043025)	10/270	0.711029059	CALCA SLC12A5 STAR LRP1 RHEB PDE1B DNER SHROOM2 EPHB2 LRP8
	clathrin-coated vesicle (GO:0030136)	4/57	0.699084763	RGS19 LRP1 GOPC AQP2

Table S6: Summary statistics of SAGE sequencing. For each sample we report the number of mapped tags, the number of total sequencing tags and the percentage of aligned tags

Samples	Mapped Tags	Total Sequences	Mapping %
1CT	10,204,508	53,290,259	19.15
2CT	4,170,458	31,517,774	13.23
3CT	7,035,817	50,823,964	13.84
4CT	4,446,023	32,505,049	13.68
5CT	5,753,513	34,003,519	16.92
1RCF	1,379,561	31,147,342	4.43
2RCF	6,945,345	40,705,489	17.06
3RCF	1,581,025	35,345,749	4.47
4RCF	5,168,060	37,911,879	13.63
5RCF	5,218,794	45,043,440	11.59
Total	51,903,104	392,294,464	13.23

