

Table S1 Common up-regulated genes in the striatum of drug naïve Per2 KO/WT mice

Gene_ID	Transcript_ID	Gene_Symbol	Gene title	Mean fold change
74466	NM_028955	4933427G17Rik	RIKEN cDNA 4933427G17 gene	2.65
328324	NR_046158	5930438M14Rik	RIKEN cDNA 5930438M14 gene	3.13
74400	NM_028913	Zfp819	zinc finger protein 819	2.58
15207	NM_008237	Hes3	hairy and enhancer of split 3 (Drosophila)	3.35
76633	NM_028275	1700112E06Rik	RIKEN cDNA 1700112E06 gene	7.59
381411	NM_001033452	Accsl	1-aminocyclopropane-1-carboxylate synthase (non-functional)-like	2.83
102634101	NR_110511	Gm31763	predicted gene, 31763	3.02
18770	NM_001099779,NM_013631	Pklr	pyruvate kinase liver and red blood cell	3.02
104692	NR_130637	Gm12108	predicted gene 12108	2.22
11499	NM_001272057,NM_001272058, NM_001272059,NM_007401	Adam5	a disintegrin and metallopeptidase domain 5	3.41
71908	NM_027998	Cldn23	claudin 23	2.29
233080	NM_001033316	Ffar3	free fatty acid receptor 3	2.67
211623	NM_207229,NM_207229_dup1, NM_207229_dup2	Plac9a	placenta specific 9a	2.04
17528	NM_001315499,NM_001315500,NM_008623	Mpz	myelin protein zero	2.73
100038732	NR_126070,NR_126071	Gm11681	predicted gene 11681	2.78
73234	NM_028473	3110079O15Rik	RIKEN cDNA 3110079O15 gene	2.59
228003	NM_001081087	Klhl41	kelch-like 41	2.34
75317	NM_029249	Parpbbp	PARP1 binding protein	2.34
625237	NR_136901	Gm6566	predicted gene 6566	2.01
16428	NM_001281965,NM_001281966,NM_001281967, NM_001281968,NM_010583	Itk	IL2 inducible T cell kinase	2.25
100134990	NR_004857	Gm12060	predicted gene 12060	2.13
329093	NM_001289497,NM_177834	Cpa6	carboxypeptidase A6	3.52
14659	NM_008132	Glrp1	glutamine repeat protein 1	17.57
665934	NR_028417	Gm7854	predicted gene 7854	2.68

278672	NM_183389,NM_183389_dup1	Duxbl1	double homeobox B-like 1	4.00
21830	NM_011583,NM_199226	Theg	testicular haploid expressed gene	3.10
434794	NM_001081642	Xlr4a	X-linked lymphocyte-regulated 4A	13.67
71872	NM_023631	Aox4	aldehyde oxidase 4	2.44
208084	NM_172453	Pif1	PIF1 5'-to-3' DNA helicase	2.04
100862247	NM_001270432,NM_001270432_dup1, NM_001270432_dup2	Gm21586	predicted gene, 21586	2.14
100039293	NM_001177539,NM_001177539_dup1, NM_001177539_dup2	Duxbl3	double homeobox B-like 3	4.15
170788	NM_133239	Crb1	crumbs family member 1, photoreceptor morphogenesis associated	2.16
73301	NM_183096	Ttc29	tetratricopeptide repeat domain 29	2.26
327747	NM_177793	Mettl24	methyltransferase like 24	2.07
13524	NM_010084,NR_136908	Adam18	a disintegrin and metallopeptidase domain 18	2.64
219132	NM_199015	Phf11d	PHD finger protein 11D	2.11
71313	NM_027759	Fsip1	fibrous sheath-interacting protein 1	2.01
11624	NM_001317351,NM_009644	Ahrr	aryl-hydrocarbon receptor repressor	2.30
22064	NM_001109897	Trpc2	transient receptor potential cation channel, subfamily C, member 2	2942850.37
105734727	NM_001308449	Emc8-1190005i06rik	Emc8-1190005i06Rik readthrough	2.84
69513	NR_015521	1700030C10Rik	RIKEN cDNA 1700030C10 gene	2.11
19892	NM_029987	Rpe65	retinal pigment epithelium 65	2.39
100039246	NM_001270503,NM_001270503_dup1, NM_001270503_dup2	Plac9b	placenta specific 9b	3.69
100042493	NM_011335,NM_011335_dup1, NM_011335_dup2,NM_011335_dup3	Ccl21b	chemokine (C-C motif) ligand 21B (leucine)	1488.63
56838	NM_020279	Ccl28	chemokine (C-C motif) ligand 28	2.22
230099	NM_139305	Car9	carbonic anhydrase 9	2.09
12854	NM_007745	Cort	cortistatin	2.09

12517	NM_001110320,NM_001110321, NM_001110322,NM_007654	Cd72	CD72 antigen	2.02
75512	NM_145451	Gpx6	glutathione peroxidase 6	2.53
69453	NM_027084	Prss56	protease, serine 56	3.71
100642166	NR_040366	Gm15446	predicted gene 15446	51.66
574437	NM_001081643	Xlr3b	X-linked lymphocyte-regulated 3B	3.21
100042539	NR_033506	Gm3893	predicted gene 3893	7.22
383619	NM_001013779	Aim2	absent in melanoma 2	3.29
545611	NM_001085530,NM_001085530_dup1, NM_001085530_dup2	Fam205a2	family with sequence similarity 205, member A2	2.46
105940408	NM_001309847,NM_001309848	Synj2bp-cox16	Synj2bp-cox16 readthrough	2.07
108816	NR_033123,NR_033123_dup1	4933409K07Rik	RIKEN cDNA 4933409K07 gene	2.95
15930	NM_001293690,NM_008324	Ido1	indoleamine 2,3-dioxygenase 1	3.46
71355	NM_001317733,NM_027770	Col24a1	collagen, type XXIV, alpha 1	2.01
229599	NM_001033302	Ciart	circadian associated repressor of transcription	2.44
100503605	NM_001201391	Hbb-bs	hemoglobin, beta adult s chain	401.60
51800	NM_016778	Bok	BCL2-related ovarian killer	2.04
52589	NM_001170866,NM_001170867, NM_001170868,NM_134094	Ncald	neurocalcin delta	4.51
20610	NM_001301671,NM_001301672,NM_001301673, NM_019929,NR_125903,NR_125904	Sumo3	small ubiquitin-like modifier 3	2.53

Table S2 Common down-regulated genes in the striatum of drug naïve Per2 KO/WT mice

Gene_ID	Transcript_ID	Gene_Symbol	Gene title	Mean fold change
109959	NM_001042711,NM_001042711_dup1,NM_001042711_dup2, NM_001042711_dup3	Amy2a5	amylase 2a5	-129.85
667705	NR_033499	Gm8773	predicted gene 8773	-2.99
723862	NR_029913	Mir409	microRNA 409	-2.31
78252	NM_030069	Nxpe2	neurexophilin and PC-esterase domain family, member 2	-2.44
230718	NM_001085502	Nt5c1a	5'-nucleotidase, cytosolic IA	-2.06
21419	NM_001025305,NM_001286340,NM_009334	Tfap2b	transcription factor AP-2 beta	-2.24
100041678	NM_001256886,NM_001256886_dup1	Gm3500	predicted gene 3500	-1983616.81
18390	NM_001039652,NM_001302793,NM_001302794,NM_001302795, NM_001302796,NM_001304937,NM_001304938,NM_001304948, NM_001304950,NM_001304955	Oprm1	opioid receptor, mu 1	-3.33
100503044	NR_036456,NR_036457,NR_036458	A730020M07Rik	RIKEN cDNA A730020M07 gene	-2.29
14613	NM_001271628,NM_008121	Gja5	gap junction protein, alpha 5	-2.23
100041546	NM_001099217	Ly6c2	lymphocyte antigen 6 complex, locus C2	-2910325.28
12409	NM_007621	Cbr2	carbonyl reductase 2	-2.20
20715	NM_009251	Serpina3g	serine (or cysteine) peptidase inhibitor, clade A, member 3G	-3.21
791299	NR_028592,NR_028593	Gm10069	predicted gene 10069	-2.02
209743	NM_153509	AF529169	cDNA sequence AF529169	-2.62
19217	NM_008964	Ptger2	prostaglandin E receptor 2 (subtype EP2)	-2.45
16371	NM_010573	Irx1	Iroquois related homeobox 1 (Drosophila)	-2.23
243764	NM_203491	Chrm2	cholinergic receptor, muscarinic 2, cardiac	-2.26
96875	NM_001110146,NM_021400	Prg4	proteoglycan 4 (megakaryocyte stimulating factor, articular superficial zone protein)	-6.09
434784	NM_001018087	Ldoc1	leucine zipper, down-regulated in cancer 1	-2.18
77057	NM_029858	Ston1	stonin 1	-2.00
15564	NM_010483	Htr5b	5-hydroxytryptamine (serotonin) receptor 5B	-2.32
107585	NM_172119	Dio3	deiodinase, iodothyronine type III	-2.37

171531	NM_053015	Mlph	melanophilin	-2.34
76905	NM_029796	Lrg1	leucine-rich alpha-2-glycoprotein 1	-4.82
94284	NM_145079	Ugt1a6a	UDP glucuronosyltransferase 1 family, polypeptide A6A	-4.02
620292	NM_001081653	Cntnap5c	contactin associated protein-like 5C	-2.30
268958	NM_001013767	Capn11	calpain 11	-7.38
330953	NM_001081192	Hcn4	hyperpolarization-activated, cyclic nucleotide-gated K ⁺ 4	-2.45
223604	NM_001033876	Kcnk9	potassium channel, subfamily K, member 9	-2.23
381884	NM_001324535	Slc6a16	solute carrier family 6, member 16	-2.00
224224	NM_174876	Impg2	interphotoreceptor matrix proteoglycan 2	-2.12
110834	NM_145129	Chrna3	cholinergic receptor, nicotinic, alpha polypeptide 3	-2.67
12224	NM_009769	Klf5	Kruppel-like factor 5	-2.07
243385	NM_183183	Gprin3	GPRIN family member 3	-2.09
12895	NM_009948	Cpt1b	carnitine palmitoyltransferase 1b, muscle	-2.04
636808	NM_001077425	Cntnap5a	contactin associated protein-like 5A	-2.12
15551	NM_010482	Htr1b	5-hydroxytryptamine (serotonin) receptor 1B	-2.65
16819	NM_008491	Lcn2	lipocalin 2	-34.51
102466257	NR_106194	Mir8114	microRNA 8114	-15.04
242662	NM_182929	Rims3	regulating synaptic membrane exocytosis 3	-2.04
17219	NM_001313695,NM_008567	Mcm6	minichromosome maintenance complex component 6	-3.76
13654	NM_001347458,NM_010118	Egr2	early growth response 2	-2.30
20508	NM_021712	Slc18a3	solute carrier family 18 (vesicular monoamine), member 3	-2.06
98314	NM_001310767,NM_178882	D2hgdh	D-2-hydroxyglutarate dehydrogenase	-3.42
15122	NM_008218,NM_008218_dup1	Hba-a1	hemoglobin alpha, adult chain 1	-9.69
13844	NM_001290753,NM_010142	Ephb2	Eph receptor B2	-2.10
63993	NM_022025	Slc5a7	solute carrier family 5 (choline transporter), member 7	-2.06

12398	NM_001109873,NM_009824,NM_177289	Cbfa2t3	core-binding factor, runt domain, alpha subunit 2, translocated to, 3 (human)	-2.18
241915	NM_001165954,NM_001165955,NM_001165956,NM_153421	Phc3	polyhomeotic-like 3 (Drosophila)	-7.46
14395	NM_008066	Gabra2	gamma-aminobutyric acid (GABA) A receptor, subunit alpha 2	-2.11
69368	NM_001111279,NM_027057	Wdfy1	WD repeat and FYVE domain containing 1	-2.09
18708	NM_001024955,NM_001077495	Pik3r1	phosphatidylinositol 3-kinase, regulatory subunit, polypeptide 1 (p85 alpha)	-5.27
56216	NM_024414	Stx1b	syntaxin 1B	-2.01
21888	NM_001302947,NM_001302950,NM_001302951,NM_011600	Tle4	transducin-like enhancer of split 4	-3.10
67886	NM_001081360,NM_001347109,NM_001347110	Camsap2	calmodulin regulated spectrin-associated protein family, member 2	-3.33
100039636	NR_037854	Atp6v0c-ps2	ATPase, H ⁺ transporting, lysosomal V0 subunit C, pseudogene 2	-4117.93
547127	NR_033520	Tmem181b-ps	transmembrane protein 181B, pseudogene	-2.01

Table S3 Common up-regulated genes in the striatum of Per2 KO mice before/after METH treatment

Gene_ID	Transcript_ID	Gene_Symbol	Gene title	Mean fold change
21419	NM_001025305,NM_001286340,NM_009334	Tfap2b	transcription factor AP-2 beta	3.53
380755	NM_001033437	Lsmem1	leucine-rich single-pass membrane protein 1	3.51
15442	NM_152803	Hpse	heparanase	2.69
27356	NM_013754	Insl6	insulin-like 6	2.43
668257	NM_001114084	Dgat2l6	diacylglycerol O-acyltransferase 2-like 6	2.95
14234	NM_013519	Foxc2	forkhead box C2	4.28
27047	NM_012050	Omd	osteomodulin	2.85
12642	NM_009890	Ch25h	cholesterol 25-hydroxylase	3.35
66991	NM_001311106,NM_025890	Khdc3	KH domain containing 3, subcortical maternal complex member	2.92
223272	NM_145467	Itgbl1	integrin, beta-like 1	2.72
14181	NM_001271616,NM_008009	Egfbp1	fibroblast growth factor binding protein 1	2.57
14012	NM_007962	Mpzl2	myelin protein zero-like 2	3.20
10004154 6	NM_001099217	Ly6c2	lymphocyte antigen 6 complex, locus C2	2021261.6 1
12409	NM_007621	Cbr2	carbonyl reductase 2	2.18
10050385 9	NR_045272	1110015O18Ri k	RIKEN cDNA 1110015O18 gene	2.42
74165	NM_175206	Fbxl22	F-box and leucine-rich repeat protein 22	2.56
22420	NM_009526	Wnt6	wingless-type MMTV integration site family, member 6	3.54
14962	NM_001142706,NM_008198	Cfb	complement factor B	3.18
208164	NM_173375	Fam180a	family with sequence similarity 180, member A	2.87
11498	NM_009620	Adam4	a disintegrin and metallopeptidase domain 4	2.12
78906	NM_030218	Misp	mitotic spindle positioning	2.15
67356	NM_026104	Tmco5	transmembrane and coiled-coil domains 5	2.24
231162	NM_001081106	Cyt11	cytokine-like 1	3.14
96875	NM_001110146,NM_021400	Prg4	proteoglycan 4 (megakaryocyte stimulating factor, articular superficial zone protein)	7.19

50501	NM_001037539,NM_001170419,NM_015768	Prok2	prokineticin 2	4.85
12797	NM_009922	Cnn1	calponin 1	2.82
14190	NM_008013	Fgl2	fibrinogen-like protein 2	2.48
112418	NM_053216	1700102P08Ri k	RIKEN cDNA 1700102P08 gene	2.12
10000960 0	NM_001103168	Zglp1	zinc finger, GATA-like protein 1	2.53
246728	NM_001347448,NM_145227	Oas2	2'-5' oligoadenylate synthetase 2	2.47
78772	NM_001308052,NM_030175	Hhipl2	hedgehog interacting protein-like 2	2.27
17116	NM_010750	Mab21l1	mab-21-like 1 (C. elegans)	2.19
107585	NM_172119	Dio3	deiodinase, iodothyronine type III	2.74
76905	NM_029796	Lrg1	leucine-rich alpha-2-glycoprotein 1	10.03
17133	NM_001304830,NM_001304831,NM_001304832,NM_010755	Maff	v-maf musculoaponeurotic fibrosarcoma oncogene family, protein F (avian)	2.36
268958	NM_001013767	Capn11	calpain 11	12.12
11705	NM_007445	Amh	anti-Mullerian hormone	2.18
71275	NM_027744	Noxred1	NADP+ dependent oxidoreductase domain containing 1	2.12
224224	NM_174876	Impg2	interphotoreceptor matrix proteoglycan 2	2.70
71712	NM_027878	Dram1	DNA-damage regulated autophagy modulator 1	2.12
23850	NM_001085376	Pappa2	pappalysin 2	3.05
229214	NM_198192	Qrfpr	pyroglutamylated RFamide peptide receptor	4.09
213393	NM_001166580,NM_145980	8430408G22Ri k	RIKEN cDNA 8430408G22 gene	3.51
18399	NM_008766	Slc22a6	solute carrier family 22 (organic anion transporter), member 6	2.37
12224	NM_009769	Klf5	Kruppel-like factor 5	2.03
14573	NM_001301332,NM_001301333,NM_001301357,NM_010275	Gdnf	glial cell line derived neurotrophic factor	2.01
22445	NM_001110784	Xlr3a	X-linked lymphocyte-regulated 3A	2.08
226040	NM_183160	Tmem252	transmembrane protein 252	5.52
15562	NM_008313	Htr4	5 hydroxytryptamine (serotonin) receptor 4	3.02
93705	NM_033580	Pcdhgb8	protocadherin gamma subfamily B, 8	3.73

107770	NM_001293795,NM_181540	Tm6sf2	transmembrane 6 superfamily member 2	2.79
16819	NM_008491	Lcn2	lipocalin 2	56.14
10050442 5	NR_130128	Gm20219	predicted gene, 20219	2.28
10246625 7	NR_106194	Mir8114	microRNA 8114	11.36
18295	NM_008760	Ogn	osteoglycin	2.17
85030	NM_001291010,NM_033042	Tnfrsf25	tumor necrosis factor receptor superfamily, member 25	2.34
12918	NM_205769	Crh	corticotropin releasing hormone	2.31
18768	NM_001039050,NM_001039051,NM_001039052,NM_001039053,NM_001190402,NM_008863	Pkib	protein kinase inhibitor beta, cAMP dependent, testis specific	2.02
229357	NM_177346	Gpr149	G protein-coupled receptor 149	2.87
13654	NM_001347458,NM_010118	Egr2	early growth response 2	6.45
22413	NM_023653	Wnt2	wingless-type MMTV integration site family, member 2	2.18
66705	NM_025718	Dnase1l2	deoxyribonuclease 1-like 2	2.10
14264	NM_021355	Fmod	fibromodulin	2.96
15511	NM_010478	Hspa1b	heat shock protein 1B	2.04
230162	NM_001289901,NM_145547	Zfp189	zinc finger protein 189	2.18
14282	NM_001347586,NM_008036	Fosb	FBJ osteosarcoma oncogene B	2.49
15122	NM_008218,NM_008218_dup1	Hba-a1	hemoglobin alpha, adult chain 1	16.46
16598	NM_008452	Klf2	Kruppel-like factor 2 (lung)	2.60
27220	NM_001081493,NM_013732	Cartpt	CART prepropeptide	2.67
14281	NM_010234	Fos	FBJ osteosarcoma oncogene	4.26
16493	NM_145983	Kcna5	potassium voltage-gated channel, shaker-related subfamily, member 5	2.25
18124	NM_001307989,NM_015743	Nr4a3	nuclear receptor subfamily 4, group A, member 3	2.37
241915	NM_001165954,NM_001165955,NM_001165956,NM_153421	Phc3	polyhomeotic-like 3 (Drosophila)	12.62
14284	NM_008037	Fosl2	fos-like antigen 2	3.19
13656	NM_020596	Egr4	early growth response 4	2.00
268354	NM_001252387,NM_182807,NR_045514	Fam19a2	family with sequence similarity 19, member A2	2.49
21888	NM_001302947,NM_001302950,NM_001302951,NM_011600	Tle4	transducin-like enhancer of split 4	3.09

18627	NM_011066	Per2	period circadian clock 2	2.01
16477	NM_008416	Junb	jun B proto-oncogene	2.67
67886	NM_001081360,NM_001347109,NM_001347110	Camsap2	calmodulin regulated spectrin-associated protein family, member 2	3.21
15370	NM_010444	Nr4a1	nuclear receptor subfamily 4, group A, member 1	2.45
83762	NM_001100395,NM_001286421,NM_001313767,NM_031875	Otof	otoferlin	3.23
18610	NM_001286502,NM_018863	Pdyn	prodynorphin	2.24
20393	NM_001161845,NM_001161847,NM_001161848,NM_001161849,NM_001161850,NM_011361	Sgk1	serum/glucocorticoid regulated kinase 1	2.47
11838	NM_001276684,NM_018790	Arc	activity regulated cytoskeletal-associated protein	2.11
21333	NM_001311060,NM_009311	Tac1	tachykinin 1	2.16
22393	NM_011716	Wfs1	Wolfram syndrome 1 homolog (human)	2.40
241638	NM_001291027,NM_001291028,NM_197945	Lzts3	leucine zipper, putative tumor suppressor family member 3	2.57
13653	NM_007913	Egr1	early growth response 1	2.30
22631	NM_001253805,NM_001253806,NM_001253807,NM_011740	Ywhaz	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide	2.48

Table S4 Common down-regulated genes in the striatum of Per2 KO mice before/after METH treatment

Gene_ID	Transcript_ID	Gene_Symbol	Gene title	Mean fold change
100038732	NR_126070,NR_126071	Gm11681	predicted gene 11681	-3.66
19696	NM_009044	Rel	reticuloendotheliosis oncogene	-2.32
546886	NM_001195094	Cfap73	cilia and flagella associated protein 73	-2.91
13394	NM_007867	Dlx4	distal-less homeobox 4	-3.82
102634678	NR_110445	Haglr	Hoxd antisense growth associated long non-coding RNA	-3.27
16665	NM_008469	Krt15	keratin 15	-9.01
72609	NR_046019	2700070H01Rik	RIKEN cDNA 2700070H01 gene	-2.95
16621	NM_008455	Klkb1	kallikrein B, plasma 1	-2.89
20299	NM_009137	Ccl22	chemokine (C-C motif) ligand 22	-3.40
381229	NM_001163267	Cfap58	cilia and flagella associated protein 58	-2.41
625237	NR_136901	Gm6566	predicted gene 6566	-3.63
56226	NM_019585,NM_207687,NM_207688,NM_207689,NM_207690,NM_207691	Espn	espin	-3.07
71236	NM_001163533,NM_001163534,NM_001163535,NM_027730	Rsph14	radial spoke head homolog 14 (Chlamydomonas)	-3.90
74629	NR_024323	4930426L09Rik	RIKEN cDNA 4930426L09 gene	-2.09
76571	NM_001289554,NM_001289555,NM_001289556,NM_001289557,NM_029659	Styx11	serine/threonine/tyrosine interacting-like 1	-4.89
100042948	NR_030670	Gm15760	predicted gene 15760	-3.47
69987	NM_027283	Spaca9	sperm acrosome associated 9	-5.07
329093	NM_001289497,NM_177834	Cpa6	carboxypeptidase A6	-3.82
100045792	NM_001195036	Ect2l	epithelial cell transforming sequence 2 oncogene-like	-2.78
654796	NR_015562	9530036O11Rik	RIKEN cDNA 9530036O11Rik	-2.18
434756	NM_001033785	Akap14	A kinase (PRKA) anchor protein 14	-4.34
67747	NM_026357	Ribc2	RIB43A domain with coiled-coils 2	-2.95
16373	NM_001253822,NM_008393	Irx3	Iroquois related homeobox 3	-3.26
74597	NR_015506	4833418N02Rik	RIKEN cDNA 4833418N02 gene	-2.55
192212	NM_138750,NM_178047	Prom2	prominin 2	-4.29
15439	NM_001329965,NM_017370	Hp	haptoglobin	-3.07

74107	NM_001164362,NM_028293,NM_028760	Cep55	centrosomal protein 55	-2.93
66611	NM_025660	Ribc1	RIB43A domain with coiled-coils 1	-2.89
14842	NM_008178	Gsx1	GS homeobox 1	-2.28
75951	NR_045991	4930578M01Rik	RIKEN cDNA 4930578M01 gene	-2.31
60594	NM_001110807	Capn12	calpain 12	-2.28
12869	NM_007751	Cox8b	cytochrome c oxidase subunit VIIIb	-2.72
380660	NM_001142804,NM_198636	Acss3	acyl-CoA synthetase short-chain family member 3	-5.39
109212	NM_144526	Fam64a	family with sequence similarity 64, member A	-2.24
110895	NM_177084	Slc9a4	solute carrier family 9 (sodium/hydrogen exchanger), member 4	-8.54
108153	NM_001003911,NM_001311115,NM_001326294,NM_001326351	Adamts7	a disintegrin-like and metallopeptidase (reprolysin type) with thrombospondin type 1 motif, 7	-3.10
114654	NM_033478	Ly6g6d	lymphocyte antigen 6 complex, locus G6D	-2.25
67968	NM_026480	Ooep	oocyte expressed protein	-2.73
71200	NM_027717	Dydc2	DPY30 domain containing 2	-2.29
100502734	NR_040441	Gm16023	predicted gene 16023	-2.06
213234	NM_001310529,NM_172515	Zbbx	zinc finger, B-box domain containing	-2.76
76937	NR_015522	2810429I04Rik	RIKEN cDNA 2810429I04 gene	-2.04
242484	NM_178727	D630039A03Rik	RIKEN cDNA D630039A03 gene	-3.00
18491	NM_021362	Pappa	pregnancy-associated plasma protein A	-2.53
217356	NM_001195088,NM_001195089,NM_001195090,NM_181856	Tmc8	transmembrane channel-like gene family 8	-3.26
75573	NM_029345	Prr29	proline rich 29	-4.20
20521	NM_009203	Slc22a12	solute carrier family 22 (organic anion/cation transporter), member 12	-3.52
329375	NM_001166705	Cfap77	cilia and flagella associated protein 77	-2.62
80910	NM_030720	Gpr84	G protein-coupled receptor 84	-2.47
104158	NM_053200	Ces1d	carboxylesterase 1D	-2.96
22423	NM_011720	Wnt8b	wingless-type MMTV integration site family, member 8B	-3.43
74890	NM_001347456,NM_029112	Morn3	MORN repeat containing 3	-4.02
216799	NM_145827	Nlrp3	NLR family, pyrin domain containing 3	-2.02
629750	NR_033523	Gm11517	predicted gene 11517	-2.08

67085	NM_001034037	1700024G13Rik	RIKEN cDNA 1700024G13 gene	-3.52
13611	NM_010102	S1pr4	sphingosine-1-phosphate receptor 4	-2.13
623534	NM_001165957	Nme9	NME/NM23 family member 9	-4.14
433099	NM_001163192	Ly6g6f	lymphocyte antigen 6 complex, locus G6F	-2.92
100504191	NR_045069	Gm16576	predicted gene 16576	-2.74
56622	NM_020330	Adam21	a disintegrin and metallopeptidase domain 21	-2.34
67344	NM_001163767,NM_001163768,NM_026100	Tctex1d1	Tctex1 domain containing 1	-2.26
71827	NM_027941	Lrrc34	leucine rich repeat containing 34	-2.83
57355	NM_001040700	BC051019	cDNA sequence BC051019	-3.17
171209	NM_001310474,NM_183000	Asic3	acid-sensing (proton-gated) ion channel 3	-2.18
73472	NM_178387	Spata18	spermatogenesis associated 18	-4.20
237362	NM_001177511	Npffr1	neuropeptide FF receptor 1	-2.94
67430	NM_026150	4921536K21Rik	RIKEN cDNA 4921536K21 gene	-2.38
414066	NR_028266	BC037032	cDNA Sequence BC037032	-2.09
11752	NM_001281845,NM_013473	Anxa8	annexin A8	-3.74
211482	NM_172497	Efhb	EF hand domain family, member B	-5.01
73301	NM_183096	Ttc29	tetratricopeptide repeat domain 29	-3.51
433481	NR_136884	Gm5535	predicted gene 5535	-2.26
72813	NR_029441	2810454H06Rik	RIKEN cDNA 2810454H06 gene	-3.58
13524	NM_010084,NR_136908	Adam18	a disintegrin and metallopeptidase domain 18	-2.31
229277	NM_153156	Stoml3	stomatin (Epb7.2)-like 3	-4.50
105500046	NR_131335	Gm30731	predicted gene, 30731	-2.15
69797	NR_028123	1600029I14Rik	RIKEN cDNA 1600029I14 gene	-3.25
64654	NM_022657	Fgf23	fibroblast growth factor 23	-2.08
68527	NM_001113558,NM_001165932,NM_001311208,NM_026754	Ucma	upper zone of growth plate and cartilage matrix associated	-3.85
235345	NM_177702	4833427G06Rik	RIKEN cDNA 4833427G06 gene	-4.30
68612	NM_026785	Ube2c	ubiquitin-conjugating enzyme E2C	-2.51
67483	NM_026188	1700028P14Rik	RIKEN cDNA 1700028P14 gene	-2.93
100038374	NR_040530	Gm10714	predicted gene 10714	-3.15
21401	NM_011542	Tcea3	transcription elongation factor A (SII), 3	-2.79

22262	NM_009474	Uox	urate oxidase	-3.35
14652	NM_021332	Glp1r	glucagon-like peptide 1 receptor	-5.28
268697	NM_172301	Ccnb1	cyclin B1	-2.98
19348	NM_001166406,NM_001166407,NM_009004	Kif20a	kinesin family member 20A	-2.03
381693	NM_029440	Wdr95	WD40 repeat domain 95	-2.90
68270	NM_026648	Dnaaf1	dynein, axonemal assembly factor 1	-2.61
12534	NM_007659	Cdk1	cyclin-dependent kinase 1	-2.97
100313531	NR_030769	Nkx2-2os	NK2 homeobox 2, opposite strand	-2.92
70054	NM_027298	Ccdc89	coiled-coil domain containing 89	-2.48
242653	NM_001038590,NM_153105	Cldn19	claudin 19	-3.15
632687	NM_001039242,NM_172568	March10	membrane-associated ring finger (C3HC4) 10	-2.21
100271841	NR_027289,NR_027290	Uck1os	uridine-cytidine kinase 1-like 1, opposite strand	-4.38
74453	NM_028948,NR_029424	Cfap53	cilia and flagella associated protein 53	-3.76
214301	NM_153076	Crygn	crystallin, gamma N	-5.21
80986	NM_001004140	Ckap2	cytoskeleton associated protein 2	-2.22
17285	NM_010791	Meox1	mesenchyme homeobox 1	-2.90
13590	NM_010094	Lefty1	left right determination factor 1	-2.53
21463	NM_001085555,NM_013687	Tcp11	t-complex protein 11	-2.15
621239	NM_001039038	Nhlrc4	NHL repeat containing 4	-2.32
18094	NM_008701	Nkx2-9	NK2 homeobox 9	-2.47
75784	NM_001024614	1700007G11Rik	RIKEN cDNA 1700007G11 gene	-2.50
99542	NR_040386	AI115009	expressed sequence AI115009	-2.20
74978	NM_001163559,NM_029134	Lrriq1	leucine-rich repeats and IQ motif containing 1	-3.34
404710	NM_001033484	Iqgap3	IQ motif containing GTPase activating protein 3	-2.02
237891	NM_001013759	Gas2l2	growth arrest-specific 2 like 2	-4.52
66968	NM_001077348,NM_025874	Plin5	perilipin 5	-2.94
70466	NM_181589	Ckap2l	cytoskeleton associated protein 2-like	-2.32
93721	NM_030703	Cpn1	carboxypeptidase N, polypeptide 1	-2.45
54204	NM_017461	Sept1	septin 1	-2.04
75495	NM_029309	Morn5	MORN repeat containing 5	-2.66

338369	NM_001291042,NM_001291043,NM_177392	Tmem220	transmembrane protein 220	-2.43
74934	NM_001081393	Armc4	armadillo repeat containing 4	-5.78
626359	NM_001037927	Wdr93	WD repeat domain 93	-2.38
12372	NM_009813	Casq1	calsequestrin 1	-2.26
320118	NM_001199632,NM_177076	Fbxl13	F-box and leucine-rich repeat protein 13	-3.13
629016	NM_001038651	Zfp953	zinc finger protein 953	-2.04
53419	NM_001122756,NM_016869	Corin	corin	-4.16
14038	NM_007969	Wfdc18	WAP four-disulfide core domain 18	-2.10
69387	NM_153527	Dnajb13	DnaJ heat shock protein family (Hsp40) member B13	-3.41
170738	NM_133207	Kcnh7	potassium voltage-gated channel, subfamily H (eag-related), member 7	-2.18
71149	NM_027697	4933413G19Rik	RIKEN cDNA 4933413G19 gene	-2.35
80903	NM_030614	Fgf16	fibroblast growth factor 16	-2.05
13799	NM_010134	En2	engrailed 2	-2.83
100043332	NM_001254953	Ankrd66	ankyrin repeat domain 66	-2.45
227736	NM_025619	Cfap157	cilia and flagella associated protein 157	-2.61
75434	NM_029285	1700001C02Rik	RIKEN cDNA 1700001C02 gene	-4.70
17279	NM_010790	Melk	maternal embryonic leucine zipper kinase	-2.13
72027	NM_028064	Slc39a4	solute carrier family 39 (zinc transporter), member 4	-3.90
234684	NM_177449	Lrrc29	leucine rich repeat containing 29	-2.05
667742	NM_001039485	Piezo2	piezo-type mechanosensitive ion channel component 2	-2.47
14725	NM_001081088	Lrp2	low density lipoprotein receptor-related protein 2	-2.08
627872	NM_001252070	Dnah7a	dynein, axonemal, heavy chain 7A	-2.04
14266	NM_008032	Aff2	AF4/FMR2 family, member 2	-2.27
74387	NM_001163695,NM_028905	4932438H23Rik	RIKEN cDNA 4932438H23 gene	-2.09
94284	NM_145079	Ugt1a6a	UDP glucuronosyltransferase 1 family, polypeptide A6A	-3.13
242646	NM_175030	Tctex1d4	Tctex1 domain containing 4	-3.33
328957	NR_045400	9330117O12Rik	RIKEN cDNA 9330117O12 gene	-2.39
66758	NM_025749	Zfp474	zinc finger protein 474	-3.13
403180	NM_207280	Ccdc121	coiled-coil domain containing 121	-3.13

17079	NM_008533	Cd180	CD180 antigen	-2.22
27375	NM_001282095,NM_001282096,NM_013769	Tjp3	tight junction protein 3	-3.21
74354	NM_028886	Lrguk	leucine-rich repeats and guanylate kinase domain containing	-3.66
74362	NM_028892	Spag17	sperm associated antigen 17	-5.35
381741	NM_001033461,NM_001289821,NM_001289822	Lrrc43	leucine rich repeat containing 43	-2.61
217946	NM_146040	Cdca7l	cell division cycle associated 7 like	-2.01
65100	NM_022987	Zic5	zinc finger protein of the cerebellum 5	-3.31
58207	NM_021398	Slc43a3	solute carrier family 43, member 3	-2.68
12266	NM_009778	C3	complement component 3	-2.41
16854	NM_001145953,NM_010705	Lgals3	lectin, galactose binding, soluble 3	-3.24
330721	NM_001347318,NM_177898	Nek5	NIMA (never in mitosis gene a)-related expressed kinase 5	-2.98
218739	NM_177624	Sntn	sentan, cilia apical structure protein	-4.69
69325	NM_029306	1700012B09Rik	RIKEN cDNA 1700012B09 gene	-3.44
433698	NM_001277167	Fam205a1	family with sequence similarity 205, member A1	-888.86
75060	NR_073374	4930506C21Rik	RIKEN cDNA 4930506C21 gene	-2.75
12767	NM_009911	Cxcr4	chemokine (C-X-C motif) receptor 4	-2.25
223650	NM_144848	Eppk1	epiplakin 1	-2.29
74023	NM_001177900,NM_001303132,NM_023727	Rd3	retinal degeneration 3	-3.13
66748	NM_025744	Erich2	glutamate rich 2	-2.62
69297	NM_027026	Lrrc46	leucine rich repeat containing 46	-2.12
72614	NM_028300	Pih1d2	PIH1 domain containing 2	-2.34
14709	NM_010320	Gng8	guanine nucleotide binding protein (G protein), gamma 8	-2.16
242253	NM_172864	Wdr63	WD repeat domain 63	-3.70
381077	NM_001165929	Ccdc78	coiled-coil domain containing 78	-3.49
626870	NM_001037928	Gm11992	predicted gene 11992	-2.97
72236	NM_024445	Tsnaxip1	translin-associated factor X (Tsnax) interacting protein 1	-3.98
320152	NR_030693	4930412C18Rik	RIKEN cDNA 4930412C18 gene	-2.01
56296	NM_019872	Dmrtb1	DMRT-like family B with proline-rich C-terminal, 1	-2.34
320662	NM_177222	Casc1	cancer susceptibility candidate 1	-2.33
70882	NM_001081083,NM_001271563,NM_001271564,NM_001271565	Armc3	armadillo repeat containing 3	-2.91

320784	NR_131127,NR_131128	C230072F16Rik	RIKEN cDNA C230072F16 gene	-3.26
626596	NM_001195748	Rgs22	regulator of G-protein signalling 22	-2.60
23985	NM_011867	Slc26a4	solute carrier family 26, member 4	-2.57
66402	NM_025540	Sln	sarcolipin	-3.27
56173	NM_001165925,NM_001165926,NM_019500	Cldn14	claudin 14	-2.89
21331	NM_001161832	T2	brachyury 2	-2.28
13592	NM_001276387,NM_010095	Ebf2	early B cell factor 2	-2.57
100503311	NM_001200028,NM_029604	Pifo	primary cilia formation	-2.53
27411	NM_001110273,NM_001110274,NM_030683,NM_207651	Slc14a2	solute carrier family 14 (urea transporter), member 2	-3.85
20850	NM_001164062,NM_011488	Stat5a	signal transducer and activator of transcription 5A	-2.08
242037	NM_001033349	Ankub1	ankrin repeat and ubiquitin domain containing 1	-2.10
215772	NM_001127353	Adgb	androglobin	-2.31
21645	NM_013688	Tcte1	t-complex-associated testis expressed 1	-2.49
71227	NM_027725,NR_027636	Daw1	dynein assembly factor with WDR repeat domains 1	-2.82
230099	NM_139305	Car9	carbonic anhydrase 9	-3.16
235505	NM_153098	Cd109	CD109 antigen	-3.17
239591	NM_172818	Ttll8	tubulin tyrosine ligase-like family, member 8	-2.14
333670	NM_001277132	Gm867	predicted gene 867	-2.83
210762	NM_001163103	Ppp1r36	protein phosphatase 1, regulatory subunit 36	-3.45
74230	NM_198637	1700016K19Rik	RIKEN cDNA 1700016K19 gene	-2.26
329831	NM_001162381,NM_177377	Fam166b	family with sequence similarity 166, member B	-3.05
68625	NM_026789	Cfap57	cilia and flagella associated protein 57	-2.06
16840	NM_001310655,NM_010701	Lect1	leukocyte cell derived chemotaxin 1	-2.71
75732	NM_029408	lqcd	IQ motif containing D	-2.34
66722	NM_001271533,NM_025728,NM_029160	Spag16	sperm associated antigen 16	-3.12
74918	NM_029122	lqca	IQ motif containing with AAA domain	-2.38
75172	NM_029195	Ccdc146	coiled-coil domain containing 146	-2.74
71877	NM_027974	Efhc1	EF-hand domain (C-terminal) containing 1	-2.31
72962	NM_138302	Tymp	thymidine phosphorylase	-2.48
382077	NM_001166282,NM_001311085,NM_029212	Ccdc33	coiled-coil domain containing 33	-2.12

319750	NR_077237, NR_077238, NR_077239	A230009B12Rik	RIKEN cDNA A230009B12 gene	-2.18
170442	NM_130452	Bbox1	butyrobetaine (gamma), 2-oxoglutarate dioxygenase 1 (gamma-butyrobetaine hydroxylase)	-2.05
29862	NM_001347432, NM_016718	Ninj2	ninjurin 2	-2.13
75973	NM_001303469	Ccdc162	coiled-coil domain containing 162	-3.22
12839	NM_001290691, NM_007740	Col9a1	collagen, type IX, alpha 1	-2.85
338348	NM_001290563, NM_001290564, NM_001290566, NM_001290567, NM_177384	Ttc16	tetratricopeptide repeat domain 16	-2.87
12587	NM_019394	Mia	melanoma inhibitory activity	-2.57
102635561	NR_131197, NR_131201	Ggnbp2os	gametogenetin binding protein 2, opposite strand	-2.00
76670	NM_001163638, NM_001163639, NM_029698	Cfap70	cilia and flagella associated protein 70	-2.63
75568	NM_029341	Capsl	calcyphosine-like	-2.30
234878	NM_145608	BC021891	cDNA sequence BC021891	-2.02
328035	NM_178035	Fads6	fatty acid desaturase domain family, member 6	-2.21
80893	NM_030709	Tmprss5	transmembrane protease, serine 5 (spinesin)	-2.41
16533	NM_031169	Kcnmb1	potassium large conductance calcium-activated channel, subfamily M, beta member 1	-2.19
270091	NM_001033371, NM_001170788, NM_001170789	Lrrc36	leucine rich repeat containing 36	-3.24
243937	NM_172385	Zfp536	zinc finger protein 536	-2.57
74685	NM_001145435, NM_029053	Lrrc74b	leucine rich repeat containing 74B	-3.18
71860	NM_027963	Cfap52	cilia and flagella associated protein 52	-3.33
100503147	NR_040369	Gm13293	predicted gene 13293	-3.09
381522	NM_198660	Ccdc180	coiled-coil domain containing 180	-2.67
319767	NM_176999	Atp10b	ATPase, class V, type 10B	-2.09
73075	NM_028430	Ppil6	peptidylprolyl isomerase (cyclophilin)-like 6	-2.01
17349	NM_001039543, NM_010801	Mlf1	myeloid leukemia factor 1	-3.14
170935	NM_001159321, NM_001347529, NM_133355	Grid2ip	glutamate receptor, ionotropic, delta 2 (Grid2) interacting protein 1	-3.14
219170	NM_177629	Fam216b	family with sequence similarity 216, member B	-3.21
381546	NM_001034876	Ccdc24	coiled-coil domain containing 24	-2.65
436022	NM_001033548	Dnaaf3	dynein, axonemal assembly factor 3	-2.41

13813	NM_001164789,NM_010136	Eomes	eomesodermin	-3.78
320277	NM_001305042,NM_001305044,NM_177123	Spef2	sperm flagellar 2	-2.78
75556	NM_029335	Cfap161	cilia and flagella associated protein 161	-3.03
75465	NM_029297	Dynlrb2	dynein light chain roadblock-type 2	-2.89
71870	NM_027972	Cfap45	cilia and flagella associated protein 45	-2.04
320214	NM_001081025	Maats1	MYCBP-associated, testis expressed 1	-2.01
212190	NM_001285928,NM_001285929,NM_001285930,NM_178671,NR_104373	Ubxn10	UBX domain protein 10	-2.35
192650	NM_138948	Cabp7	calcium binding protein 7	-3.01
319951	NR_040391	A230001M10Rik	RIKEN cDNA A230001M10 gene	-2.69
67752	NM_133689	Ppp1r32	protein phosphatase 1, regulatory subunit 32	-2.32
102635783	NR_137202	Gm11266	predicted gene 11266	-2.08
70113	NM_001013022	Odf3b	outer dense fiber of sperm tails 3B	-2.74
15186	NM_008230	Hdc	histidine decarboxylase	-2.88
68764	NM_001024478	Cdhr3	cadherin-related family member 3	-2.48
74485	NM_028971	Lrrc71	leucine rich repeat containing 71	-2.38
75563	NM_175223	Dnali1	dynein, axonemal, light intermediate polypeptide 1	-3.80
244653	NM_172916	Hydin	HYDIN, axonemal central pair apparatus protein	-2.56
13411	NM_010060	Dnah11	dynein, axonemal, heavy chain 11	-3.38
433700	NM_001007463,NM_001290462	Spag8	sperm associated antigen 8	-2.03
74199	NM_001197028,NM_028813	Vit	vitrin	-2.08
53374	NM_016803	Chst3	carbohydrate (chondroitin 6/keratan) sulfotransferase 3	-2.04
75600	NM_001102468,NM_138304	Calml4	calmodulin-like 4	-4.78
17295	NM_008591	Met	met proto-oncogene	-2.25
208613	NM_001164437	Tmem212	transmembrane protein 212	-3.32
74052	NM_028735	Ttc21a	tetratricopeptide repeat domain 21A	-2.72
21689	NM_001282006,NM_001282007,NM_011569	Tekt1	tektin 1	-2.31
71233	NM_027728	Enkur	enkurin, TRPC channel interacting protein	-2.04
243277	NM_001081342,NM_001347486	Adgrd1	adhesion G protein-coupled receptor D1	-2.21
18025	NM_010903	Nfe2l3	nuclear factor, erythroid derived 2, like 3	-2.62
19130	NM_008937	Prox1	prospero homeobox 1	-2.10

320145	NM_177082	Sp8	trans-acting transcription factor 8	-2.10
241112	NM_001033345	Catip	ciliogenesis associated TTC17 interacting protein	-2.61
330554	NM_177893	Fan1	FANCD2/FANCI-associated nuclease 1	-2.01
246707	NM_145158	Emilin2	elastin microfibril interfacier 2	-2.15
75426	NM_018741	Igfbp1	insulin-like growth factor binding protein-like 1	-2.25
21952	NM_001112702,NM_021467	Tnni1	troponin I, skeletal, slow 1	-2.60
73667	NM_001201332,NM_001201333	2410004P03Rik	RIKEN cDNA 2410004P03 gene	-2.50
97440	NM_001271915,NM_178879	B3gnt9	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 9	-2.09
320078	NM_177068	Olfml2b	olfactomedin-like 2B	-3.21
381284	NM_001310428	Crocc2	ciliary rootlet coiled-coil, rootletin family member 2	-3.60
104601	NM_170671	Mycbpap	MYCBP associated protein	-2.02
211535	NM_001033243	Ccdc114	coiled-coil domain containing 114	-2.03
243538	NM_173775	Cfap100	cilia and flagella associated protein 100	-2.12
242546	NM_001100182	Cyp2j12	cytochrome P450, family 2, subfamily j, polypeptide 12	-2.55
329782	NR_040398,NR_040399,NR_040400	4930570G19Rik	RIKEN cDNA 4930570G19 gene	-3.04
30938	NM_015759	Fgd3	FYVE, RhoGEF and PH domain containing 3	-2.05
320871	NR_033532	B230206H07Rik	RIKEN cDNA B230206H07 gene	-3.15
629147	NM_001134697	Ctxn3	cortexin 3	-2.66
78801	NM_030187	Ak7	adenylate kinase 7	-2.93
231991	NM_001327821,NM_172728	Creb5	cAMP responsive element binding protein 5	-2.86
16977	NM_001302555	Lrrc23	leucine rich repeat containing 23	-2.57
237806	NM_001099633	Dnah9	dynein, axonemal, heavy chain 9	-2.09
330355	NM_001164669	Dnah6	dynein, axonemal, heavy chain 6	-2.86
239827	NM_172822	Pigz	phosphatidylinositol glycan anchor biosynthesis, class Z	-2.17
56087	NM_019536	Dnah10	dynein, axonemal, heavy chain 10	-2.42
227485	NM_001081386	Cdh19	cadherin 19, type 2	-2.03
19144	NM_001164696,NM_001164697,NM_001164698,NM_011177	Klk6	kallikrein related-peptidase 6	-2.14
214112	NM_172524	Nipal4	NIPA-like domain containing 4	-2.10
22092	NM_025290	Rsph1	radial spoke head 1 homolog (Chlamydomonas)	-2.21

68817	NM_001017966	Ddi2	DNA-damage inducible protein 2	-2.04
104681	NM_001029842,NM_134038	Slc16a6	solute carrier family 16 (monocarboxylic acid transporters), member 6	-2.02
101488	NM_001252530,NM_001252531,NM_175316	Slco2b1	solute carrier organic anion transporter family, member 2b1	-2.71
214944	NM_178061	Mob3b	MOB kinase activator 3B	-2.42
270150	NM_001081369	Ccdc153	coiled-coil domain containing 153	-3.58
26558	NM_001146153,NM_011984	Homer3	homer scaffolding protein 3	-2.16
244198	NM_172907	Olfml1	olfactomedin-like 1	-2.11
22774	NM_009576	Zic4	zinc finger protein of the cerebellum 4	-2.46
240690	NM_001244692,NM_001244693,NM_173868,NR_045188,NR_045189	St18	suppression of tumorigenicity 18	-2.16
230678	NM_172383	Tmem125	transmembrane protein 125	-2.62
21828	NM_011582	Thbs4	thrombospondin 4	-4.14
223838	NM_001164785,NM_001164786,NM_177431	Adamts20	a disintegrin-like and metallopeptidase (reprolysin type) with thrombospondin type 1 motif, 20	-2.53
12819	NM_009928	Col15a1	collagen, type XV, alpha 1	-2.32
22066	NM_001253682,NM_001253683,NM_016984,NR_046161	Trpc4	transient receptor potential cation channel, subfamily C, member 4	-2.38
71660	NM_001347167,NM_001347168,NM_027852	Rarres2	retinoic acid receptor responder (tazarotene induced) 2	-2.28
229595	NM_001301705,NM_144899	Adamtsl4	ADAMTS-like 4	-2.07
436090	NM_001159652	Gpr62	G protein-coupled receptor 62	-2.07
320981	NM_177304	Enpp6	ectonucleotide pyrophosphatase/phosphodiesterase 6	-2.39
66222	NM_025429	Serpib1a	serine (or cysteine) peptidase inhibitor, clade B, member 1a	-2.18
18553	NM_001291184,NM_011048	Pcsk6	proprotein convertase subtilisin/kexin type 6	-2.11
15223	NM_008240	Foxj1	forkhead box J1	-2.43
380702	NM_001034874	Shisa6	shisa family member 6	-2.28
30930	NM_001113355,NM_133672	Vps26a	VPS26 retromer complex component A	-2.52
72446	NM_001083810,NM_001110849,NM_175181	Prr5l	proline rich 5 like	-2.19
241116	NM_001039495	Ccdc108	coiled-coil domain containing 108	-2.68
14618	NM_001302496,NM_001302497,NM_001302498,NM_008124	Gjb1	gap junction protein, beta 1	-2.48
12835	NM_001243008,NM_001243009	Col6a3	collagen, type VI, alpha 3	-3.66
94226	NM_053190	S1pr5	sphingosine-1-phosphate receptor 5	-2.31

338367	NM_177390	Myo1d	myosin ID	-2.08
22772	NM_009574	Zic2	zinc finger protein of the cerebellum 2	-2.03
74318	NM_001159900,NM_001159901,NM_175606	Hopx	HOP homeobox	-2.21
118454	NM_080454,NM_175452	Gjc2	gap junction protein, gamma 2	-2.19
11484	NM_023113	Aspa	aspartoacylase	-2.22
18720	NM_001293707,NM_008847	Pip5k1a	phosphatidylinositol-4-phosphate 5-kinase, type 1 alpha	-2.61
12521	NM_001136055,NM_001271430,NM_001271431,NM_001271432, NM_001271461,NM_001271462,NM_007656	Cd82	CD82 antigen	-2.11
66949	NM_025863	Trim59	tripartite motif-containing 59	-2.07
74008	NM_001166177,NM_028710	Arsg	arylsulfatase G	-2.12
56722	NM_019980	Litaf	LPS-induced TN factor	-2.15
20562	NM_015748	Slit1	slit homolog 1 (Drosophila)	-2.01
22771	NM_009573	Zic1	zinc finger protein of the cerebellum 1	-2.04
107449	NM_029770	Unc5b	unc-5 netrin receptor B	-2.47
14017	NM_001033711,NM_010161	Evi2a	ecotropic viral integration site 2a	-2.06
226115	NM_153520	Opalin	oligodendrocytic myelin paranodal and inner loop protein	-2.38
18753	NM_001310682,NM_011103	Prkcd	protein kinase C, delta	-2.25
211945	NM_181073	Plekhh1	pleckstrin homology domain containing, family H (with MyTH4 domain) member 1	-2.14
117160	NM_053273	Ttyh2	tweety family member 2	-2.03
14763	NM_010338	Gpr37	G protein-coupled receptor 37	-2.34
225908	NM_001033481	Myrf	myelin regulatory factor	-2.03
52589	NM_001170866,NM_001170867,NM_001170868,NM_134094	Ncald	neurocalcin delta	-4.92
67801	NM_026385	Plip	plasma membrane proteolipid	-2.16
17441	NM_010814	Mog	myelin oligodendrocyte glycoprotein	-2.20
320587	NM_001033394	Tmem88b	transmembrane protein 88B	-2.22
20602	NM_001253904,NM_001253905,NM_011424	Ncor2	nuclear receptor co-repressor 2	-2.02
14580	NM_001131020,NM_010277	Gfap	glial fibrillary acidic protein	-2.17
17136	NM_001346084,NM_001346085,NM_001346086, NM_001346087,NM_001346088,NM_001346089,NM_010758	Mag	myelin-associated glycoprotein	-2.07
22041	NM_133977	Trf	transferrin	-2.24

12799	NM_001146318,NM_009923	Cnp	2',3'-cyclic nucleotide 3' phosphodiesterase	-2.10
18770	NM_001099779,NM_013631	Pklr	pyruvate kinase liver and red blood cell	-4.63

Table S5 Common up-regulated genes in the striatum of WT mice before/after METH treatment

Gene_ID	Transcript_ID	Gene_Symbol	Gene title	Mean fold change
30054	NM_001033043	Rnf17	ring finger protein 17	2.42
30930	NM_001113355,NM_133672	Vps26a	VPS26 retromer complex component A	2.76
52588	NM_001316748,NM_145928	Tspan14	tetraspanin 14	2.07
69513	NR_015521	1700030C10Rik	RIKEN cDNA 1700030C10 gene	2.15
72046	NM_001077661,NM_178623	Urgcp	upregulator of cell proliferation	2.10
72215	NM_028156	1700001P01Rik	RIKEN cDNA 1700001P01 gene	2.23
93705	NM_033580	Pcdhgb8	protocadherin gamma subfamily B, 8	2.64
213393	NM_001166580,NM_145980	8430408G22Rik	RIKEN cDNA 8430408G22 gene	2.69
213945	NM_001037865	Col28a1	collagen, type XXVIII, alpha 1	2.27
229599	NM_001033302	Ciart	circadian associated repressor of transcription	3.06
241636	NM_001289747,NM_001289748,NM_001289749,NM_177726	Tgm6	transglutaminase 6	2.71
241638	NM_001291027,NM_001291028,NM_197945	Lzts3	leucine zipper, putative tumor suppressor family member 3	3.41
381823	NM_001109914	Apold1	apolipoprotein L domain containing 1	2.81
664987	NM_001085546	Gm14393	predicted gene 14393	2.22
100039796	NM_001145164	Tgtp2	T cell specific GTPase 2	2.58
100379145	NR_033336	Snora23	small nucleolar RNA, H/ACA box 23	4.39
100417829	NR_040453,NR_040453_dup1	Gm17757	predicted gene, 17757	2.59
100502959	NR_040442	AV051173	expressed sequence AV051173	2.71
102465593	NR_105948	Mir6982	microRNA 6982	2.58
102465599	NR_105958	Mir6992	microRNA 6992	2.29

Table S6 Common down-regulated genes in the striatum of WT mice before/after METH treatment

Gene_ID	Transcript_ID	Gene_Symbol	Gene title	Mean fold change
21350	NM_009317	Tal2	T cell acute lymphocytic leukemia 2	-3.17
24047	NM_011888	Ccl19	chemokine (C-C motif) ligand 19	-2.28
29863	NM_001347366,NM_013875	Pde7b	phosphodiesterase 7B	-2.78
50789	NM_001347600,NM_001347601,NM_015822	Fbxl3	F-box and leucine-rich repeat protein 3	-2.71
64817	NM_022814	Svep1	sushi, von Willebrand factor type A, EGF and pentraxin domain containing 1	-2.32
67886	NM_001081360,NM_001347109,NM_001347110	Camsap2	calmodulin regulated spectrin-associated protein family, member 2	-2.09
69303	NR_038077	1700001G11Rik	RIKEN cDNA 1700001G11 gene	-3.06
70086	NM_001162412,NM_133720	Cysltr2	cysteinyl leukotriene receptor 2	-3.29
71724	NM_023617	Aox3	aldehyde oxidase 3	-2.07
72813	NR_029441	2810454H06Rik	RIKEN cDNA 2810454H06 gene	-2.35
72962	NM_138302	Tymp	thymidine phosphorylase	-2.28
74846	NR_040505	4930405A21Rik	RIKEN cDNA 4930405A21 gene	-2.24
75084	NR_015494,NR_027944,NR_027945	4930511M06Rik	RIKEN cDNA 4930511M06 gene	-3.69
75958	NR_131019	5033403F01Rik	RIKEN cDNA 5033403F01 gene	-3.42
78552	NR_024324	E130201H02Rik	RIKEN cDNA E130201H02 gene	-3.72
78977	NM_024286	Popdc3	popeye domain containing 3	-2.11
101118	NM_001347059,NM_028990	Tmem168	transmembrane protein 168	-4.26
109620	NM_023842	Dsp	desmoplakin	-8.51
117167	NM_054098	Steap4	STEAP family member 4	-3.21
171209	NM_001310474,NM_183000	Asic3	acid-sensing (proton-gated) ion channel 3	-2.05
192650	NM_138948	Cabp7	calcium binding protein 7	-2.16
213208	NM_001033543	Il20rb	interleukin 20 receptor beta	-2.35
216799	NM_145827	Nlrp3	NLR family, pyrin domain containing 3	-2.00
230718	NM_001085502	Nt5c1a	5'-nucleotidase, cytosolic IA	-2.04
235320	NM_001033324	Zbtb16	zinc finger and BTB domain containing 16	-2.07
243270	NM_175520	Hcar1	hydrocarboxylic acid receptor 1	-2.09

245683	NM_001081667	Klhl34	kelch-like 34	-3.82
257871	NR_034155	Olf1372-ps1	olfactory receptor 1372, pseudogene 1	-2.92
319859	NR_015511	E030011O05Rik	RIKEN cDNA E030011O05 gene	-3.11
320563	NM_001161535,NM_001161536,NM_001161537, NM_001161538,NM_001161539,NM_001161540, NM_001161541,NM_177193	Islr2	immunoglobulin superfamily containing leucine-rich repeat 2	-2.47
353235	NM_201243	Pcdha8	protocadherin alpha 8	-6.97
735277	NR_030479	Mir697	microRNA 697	-3.16
100127433	NR_133649	Gm11532	predicted gene 11532	-2.20