

Supplemental Table 4. Upregulation and downregulation of genes from E18 to P7.

Gene/ Cluster	UCSC Known Genes Descriptions	Single-End			Paired-End 1			Paired-End 2		
		E18	P7	Fold	E18	P7	Fold	E18	P7	Fold
Upregulation of synaptic proteins, receptors, and cell signaling molecules										
Synaptic Proteins										
5976	Cplx2::complexin 2	395	1489	3.8	505	2277	4.5	746	2914	3.91
4212	Nsf::N-ethylmaleimide sensitive fusion protein	136	673	4.9	230	920	4.0	304	1754	5.77
19982	Snca::synuclein, alpha	163	1055	6.5	225	995	4.4	357	1874	5.25
5989	Sncb::synuclein, beta	92	398	4.3	135	541	4.0	208	1195	5.75
14518	Snph::syntaphilin	47	272	5.8	111	548	4.9	164	784	4.78
19122	Stx1a::syntaxin 1A (brain)	174	717	4.1	361	1542	4.3	565	1942	3.44
8347	Syngri1::synaptogyrin 1	121	591	4.9	178	974	5.5	290	1464	5.05
26386	Syp::synaptophysin	329	1706	5.2	587	3087	5.3	990	5355	5.41
2453	Syt1::synaptotagmin 1	123	646	5.3	94	679	7.2	278	1458	5.24
Receptors and Channels										
860	Adora1::adenosine A1 receptor	100	483	4.8	178	862	4.8	197	782	3.97
24083	Cacna1a::Ca2+ channel, voltage-dependent, P/Q	90	215	2.4	69	349	5.1	109	327	3.00
11942	Chrm1::cholinergic receptor, muscarinic 1, CNS	38	215	5.7	57	517	9.1	92	567	6.16
12723	Grin1::glutamate receptor, ionotropic, NMDA1 (zeta 1)	99	503	5.1	147	878	6.0	208	1249	6.00
17768	Kcnab2::potassium voltage-gated channel, shaker-related	45	144	3.2	32	306	9.6	104	600	5.77
8626	Kcnh3::potassium voltage-gated channel, subfamily H	59	228	3.9	77	484	6.3	115	650	5.65
21646	Scn1b::sodium channel, voltage-gated, type I, beta	17	181	10.6	9	289	32.1	31	442	14.26
Cell Signaling molecules										
2815	Adcy1::adenylate cyclase 1	380	2070	5.4	517	2548	4.9	719	3063	4.26
8602	Arf3::ADP-ribosylation factor 3	350	1128	3.2	421	1767	4.2	677	2633	3.89
21269	Calm3::calmodulin 3	816	2532	3.1	1093	4499	4.1	2465	7267	2.95
17549	Camk2n1::calcium/calmodulin-dependent protein kinase II	268	1457	5.4	339	1397	4.1	544	3413	6.27
26035	Camkv::CaM kinase-like vesicle-associated	373	1428	3.8	542	2506	4.6	1036	3154	3.04
23374	Igf2::insulin-like growth factor 2	61	403	6.6	101	625	6.2	169	690	4.08
21485	Pld3::phospholipase D family, member 3	135	582	4.3	217	1045	4.8	316	1515	4.79
3966	Ppp1r1b::protein phosphatase 1, regulatory (inhibitor)	82	305	3.7	112	456	4.1	198	739	3.73
23033	Prkcb1::protein kinase C, beta 1	280	1898	6.8	354	2033	5.7	405	3039	7.5
21046	Prkcc::protein kinase C, gamma	19	282	14.8	15	413	27.5	48	676	14.08
7429	Ptk2b:: protein tyrosine kinase 2 (PTK2), beta	18	290	16.1	46	403	8.8	55	527	9.58
464	Ptpn::protein tyrosine phosphatase, receptor type, N	29	370	12.8	49	649	13.2	93	856	9.2

For all genes listed in the table, p values are much smaller than 0.0001.

Supplemental Table 4 (continued). Upregulation and downregulation of genes from E18 to P7.

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		E18	P7	Fold	E18	P7	Fold	E18	P7	Fold
<u>Upregulated transporter genes and some downregulated genes including unknown genes</u>										
<u>Up-regulated</u>										
Transporters										
15754	Atp1a1::Na+/K+ -ATPase alpha 1 subunit	105	352	3.4	112	534	4.8	199	976	4.90
1181	Atp1a2::Na+/K+ -ATPase alpha 2 subunit	176	1318	7.5	247	1533	6.2	286	2179	7.62
21415	Atp1a3::Na+/K+ -ATPase alpha 3 subunit	681	3016	4.4	1027	5265	5.1	1586	6941	4.38
1082	Atp1b1::Na+/K+ -ATPase beta 1 subunit	138	1163	8.4	205	1282	6.3	406	3375	8.31
3393	Atp1b2::Na+/K+ -ATPase beta 2 subunit	135	633	4.7	159	1053	6.6	354	1936	5.47
20412	Atp2b2::plasma membrane calcium ATPase 2	113	463	4.1	171	716	4.2	276	1126	4.08
14774	Slc12a5::solute carrier family 12 (potassium-chloride transporter), member 5,KCC2	109	548	5.0	166	801	4.8	319	1127	3.53
14228	Slc24a3::solute carrier family 24	36	253	7.0	65	376	5.8	123	547	4.45
478	Slc4a3::solute carrier family 4 (anion exchanger), member 3	107	232	2.2	118	511	4.3	247	503	2.04
20413	Slc6a11::solute carrier family 6 (neurotransmitter transporter, GABA), member 11	64	386	6.0	101	711	7.0	162	734	4.53
15836	Slc6a17::solute carrier family 6 (neurotransmitter transporter), member 17	142	433	3.0	158	808	5.1	406	1084	2.67
11395	Slc6a7::solute carrier family 6 (neurotransmitter transporter, L-proline), member 7	21	165	7.9	61	290	4.8	52	392	7.54
21245	Slc8a2::solute carrier family 8 (sodium/calcium exchanger), member 2	60	339	5.7	89	608	6.8	112	806	7.20
18050	solute carrier family 30 (zinc transporter), member 3	1	138	138.0	10	280	28.0	16	493	30.81
Unknown Genes										
23098	1500031119Rik::hypothetical protein LOC69017	105	589	5.6	202	1052	5.2	246	1046	4.25
17439	2300002D11Rik::hypothetical protein LOC69539	48	229	4.8	75	424	5.7	119	618	5.19
8990	2900046G09Rik::hypothetical protein LOC78408	71	354	5.0	128	768	6.0	211	1071	5.08
11817	Tmem151::hypothetical protein LOC381199	31	274	8.8	63	471	7.5	103	915	8.88
<u>Down-regulated</u>										
18453	Ccng2::cyclin G2	330	98	0.3	348	81	0.2	561	159	0.28
1658	Cd24a::CD24a antigen	1261	507	0.4	791	175	0.2	1485	357	0.24
5393	Kif26a::kinesin family member 26A	167	45	0.3	283	53	0.2	174	23	0.13
6037	Smad5::MAD homolog 5	236	90	0.4	364	69	0.2	439	186	0.42
4679	Sox11::SRY (sex determining region Y)-box containing gene 11	5850	524	0.1	7331	510	0.1	7819	501	0.06

5724	Sox4::SRY (sex determining region Y)-box containing gene 4	2415	435	0.2	4047	778	0.2	2718	485	0.18
Unknown genes										
6468	4833420G17Rik::hypothetical protein LOC67392	175	78	0.4	211	47	0.2	297	104	0.35
25069	AK011865::RIKEN full-length enriched library, clone:2610203C20, product:unclassifiable	767	144	0.2	1100	80	0.1	1283	217	0.17
17963	Klh17::SBBI26 protein	364	176	0.5	256	45	0.2	305	190	0.62
3844	Mbtd1::hypothetical mbt repeat containing protein	398	116	0.3	401	91	0.2	364	102	0.28

For all genes listed in the table, p values are much smaller than 0.0001.