

Decreased expression: 63
 Increased expression: 29
 Total: 92

Table S3
Transgenerational Male Hippocampus Regulated Genes

Cell Cycle

Sample	F3-Cont	F3-Vinc	Vin/Con	Genbank	Gene Title
Gene Symbt	Raw	Raw	Ratio		
Myo1b	78	47	0.60	NM_053986	Myosin Ib
Ogn_predic	106	53	0.50	AA945955	osteoglycin (predicted)
Pcdhgc3	181	103	0.57	BE097805	Protocadherin gamma subfamily C, 3
Rdx	99	66	0.67	BE113016	Radixin
Sostdc1	237	20	0.08	AA892798	Sclerostin domain containing 1

Development

Sample	F3-Cont	F3-Vinc	Vin/Con	Genbank	Gene Title
Gene Symbt	Raw	Raw	Ratio		
Chrdl1	103	67	0.65	AA819658	Chordin-like protein 1 precursor (Neuralin-1) (Ventrop
Crim1_pre	128	221	1.72	BI289620	Cysteine-rich motor neuron 1 (predicted)
Kl	284	14	0.05	BE102060	Klotho

Golgi Apparatus

Sample	F3-Cont	F3-Vinc	Vin/Con	Genbank	Gene Title
Gene Symbt	Raw	Raw	Ratio		
Ap3m1	79	51	0.65	BF564312	Adaptor-related protein complex 3, mu 1 subunit

Growth Factors and Cytokines

Sample	F3-Cont	F3-Vinc	Vin/Con	Genbank	Gene Title
Gene Symbt	Raw	Raw	Ratio		
Mdk	356	209	0.59	NM_030859	Midkine
Tgfb2	90	54	0.60	BE117736	Transforming growth factor, beta 2

Immune Response

Sample	F3-Cont	F3-Vinc	Vin/Con	Genbank	Gene Title
Gene Symbt	Raw	Raw	Ratio		
F5	124	14	0.11	AI717113	Coagulation factor 5 (mapped)

Metabolism

Sample	F3-Cont	F3-Vinc	Vin/Con	Genbank	Gene Title
Gene Symbt	Raw	Raw	Ratio		
Abhd14b	102	67	0.66	BF409560	Abhydrolase domain containing 14b
Acaa2	115	186	1.62	NM_130433	acetyl-Coenzyme A acyltransferase 2 (mitochondrial)
Acs16	95	60	0.63	BE105421	acyl-CoA synthetase long-chain family member 6
Arg2	53	122	2.30	AI574994	Arginase 2
Bcat1	855	468	0.55	NM_017253	Branched chain aminotransferase 1, cytosolic
Ptgds	2848	1566	0.55	J04488	prostaglandin D2 synthase
Comt	324	149	0.46	NM_012531	catechol-O-methyltransferase
Clic6	117	19	0.16	BI290737	Chloride intracellular channel 6
Cbs	108	186	1.73	NM_012522	Cystathionine beta synthase
Enpp2	1261	532	0.42	NM_057104	Ectonucleotide pyrophosphatase/phosphodiesterase 2
Fntb	155	97	0.63	M69056	Farnesyltransferase, CAAX box, beta
Qpctl_predi	57	87	1.52	AW521959	Glutaminy-peptide cyclotransferase-like (predicted)
Hsd17b7	82	51	0.62	NM_017235	Hydroxysteroid (17-beta) dehydrogenase 7
Pex11b	170	257	1.52	BG377340	Peroxisomal biogenesis factor 11b
Pggt1b	169	110	0.65	AA875190	protein geranylgeranyltransferase type I, beta subunit

Slc13a4	76	30	0.40	AI013778	solute carrier family 13 (sodium/sulfate symporters), r
Slc31a1	100	61	0.61	NM_133600	Solute carrier family 31 (copper transporters), membe

Proteolysis

Sample	F3-Cont	F3-Vinc	Vin/Con	Genbank	Gene Title
Gene Synt	Raw	Raw	Ratio		
<i>Senp5_prec</i>	62	181	2.92	BE105606	<i>SUMO/sentrin specific protease 5 (predicted) /// simil</i>
Wsb2	112	203	1.80	AA956464	WD SOCS-box protein 2
<i>Rnf6_predi</i>	42	108	2.60	BI296352	Ring finger protein (C3H2C3 type) 6 (predicted)

Receptors & Binding Proteins

Sample	F3-Cont	F3-Vinc	Vin/Con	Genbank	Gene Title
Gene Synt	Raw	Raw	Ratio		
Folr1	131	40	0.31	AI233882	Folate receptor 1 (adult)
Gmeb2	131	74	0.57	AF205779	Glucocorticoid modulatory element binding protein 2
Hrh3	151	237	1.58	NM_053506	Histamine receptor H3
Igfbp2	266	118	0.44	NM_013122	Insulin-like growth factor binding protein 2
<i>lfngr2_pred</i>	94	63	0.67	AI602715	Interferon gamma receptor 2 (predicted)
Stxbp1	207	128	0.62	U06069	Syntaxin binding protein 1
Ttr	4426	103	0.02	NM_012681	Transthyretin
Leprot	76	50	0.66	NM_020099	leptin receptor overlapping transcript

Signaling

Sample	F3-Cont	F3-Vinc	Vin/Con	Genbank	Gene Title
Gene Synt	Raw	Raw	Ratio		
Agtpbp1_p	199	125	0.63	BF553179	ATP/GTP binding protein 1 (predicted)
<i>Akap5</i>	113	59	0.52	NM_133515	<i>A kinase (PRKA) anchor protein 5</i>
Camk2a	300	865	2.88	BM384558	calcium/calmodulin-dependent protein kinase II al
Cib2	127	78	0.62	BF403998	Calcium and integrin binding family member 2
Cit	106	171	1.61	AA957183	Citron;citron kinase
<i>Hspa12a_p</i>	490	765	1.56	BG670210	Heat shock 70kDa protein 12A (predicted)
<i>Nek1_predi</i>	98	49	0.50	AI406369	NIMA (never in mitosis gene a)-related expressed kin.
<i>Pde9a</i>	80	157	1.97	BF399743	Phosphodiesterase 9A
<i>Pfkm</i>	472	312	0.66	BI291434	Phosphofructokinase, muscle
Plek2_prec	190	72	0.38	AI102821	pleckstrin 2 (predicted)
Plekhh1_pi	90	34	0.38	BI275435	pleckstrin homology domain containing, family H
<i>Rab3b</i>	131	197	1.51	NM_031091	RAB3B, member RAS oncogene family
RGD15616:	117	68	0.58	AA859909	Similar to TBC1 domain family, member 5 (predicted)

Transcription

Sample	F3-Cont	F3-Vinc	Vin/Con	Genbank	Gene Title
Gene Synt	Raw	Raw	Ratio		
Dnaja4	97	65	0.67	BF565278	DnaJ (Hsp40) homolog, subfamily A, member 4
<i>Fos</i>	97	58	0.60	BF415939	FBJ murine osteosarcoma viral oncogene homolog
<i>Ndr1_prec</i>	86	55	0.64	BE120446	N-myc downstream regulated gene 1
Nfix	2495	1610	0.65	AI555855	Nuclear Factor I/X
Nrip3_pred	342	209	0.61	BI288541	Nuclear receptor interacting protein 3 (predicted)
Rnf187_pre	131	85	0.65	AI502527	Ring finger protein 187 (predicted)
LOC685374	156	101	0.64	BG671371	Similar to ankyrin repeat domain 13c
<i>Smc5l1_pre</i>	77	46	0.60	BF419367	SMC5 structural maintenance of chromosomes 5-like

Translation

Sample	F3-Cont	F3-Vinc	Vin/Con	Genbank	Gene Title
Gene Symbt	Raw	Raw	Ratio		
Rae1	78	44	0.56	BF419215	mRNA-associated protein mrnp 41 (Rae1 protein hom
LOC498425	190	111	0.58	AW527413	Similar to U2 small nuclear ribonucleoprotein auxiliary

Miscellaneous & Unknown

Sample	F3-Cont	F3-Vinc	Vin/Con	Genbank	Gene Title
Gene Symbt	Raw	Raw	Ratio		
LOC68137	61	224	3.66	AA944136	hypothetical protein LOC681371
Sema3c_pr	200	130	0.65	BM390322	sema domain, immunoglobulin domain (Ig), short bas
RGD13119	277	530	1.92	BF563206	Similar to 6430514L14Rik protein (predicted)
LOC500670	93	56	0.60	BM384427	Similar to B0511.12
RGD15596	104	244	2.36	BE101933	similar to hypothetical protein FLJ25477 isoform :
LOC309912	76	47	0.62	BM385683	Similar to NOGO-interacting mitochondrial protein (pr
Tmem24	332	512	1.54	BG378195	Transmembrane protein 24
Tmem38a_	105	65	0.62	BF410357	Transmembrane protein 38a (predicted)
Vps4a	89	55	0.61	BF388609	Vacuolar protein sorting 4a (yeast)

EST's

Sample	F3-Cont	F3-Vinc	Vin/Con	Genbank	Gene Title
Gene Symbt	Raw	Raw	Ratio		
---	574	366	0.64	AI028809	Similar to cDNA sequence BC006662 (predicted)
LOC36262	211	127	0.60	BE096504	Similar to chromosome 1 open reading frame 63
RGD13102	262	175	0.67	AI137602	similar to chromosome 7 open reading frame 19; CAF
RGD13084	349	556	1.59	AW521378	Similar to RIKEN cDNA B130016O10 gene (predicted)
---	632	295	0.47	AI179665	Transcribed locus
---	82	54	0.66	AI044117	Transcribed locus
---	300	460	1.53	AA858791	Transcribed locus
---	96	56	0.59	BF403869	Transcribed locus
---	691	1326	1.92	AW142765	<i>Transcribed locus</i>
RGD13100	7	135	19.42	AI172311	Transcribed locus
---	79	133	1.69	AI146055	Transcribed locus
---	323	603	1.87	AI112113	Transcribed locus
---	89	138	1.56	BM385137	Transcribed locus
---	145	360	2.49	AI103530	Transcribed locus
---	112	60	0.54	BF386949	Transcribed locus
---	138	217	1.58	AA925807	Transcribed locus
---	76	114	1.51	AA926072	<i>Transcribed locus</i>
---	87	57	0.65	BE117189	Transcribed locus
---	139	68	0.49	BF403401	Transcribed locus, moderately similar to XP_580018.
RGD13098	125	75	0.60	BI288367	Transcribed locus, strongly similar to XP_001065048.

Note - The bolded genes are similar between male and female gene sets.

The italic genes are similar within the same sex between amygdala and hippocampus.