

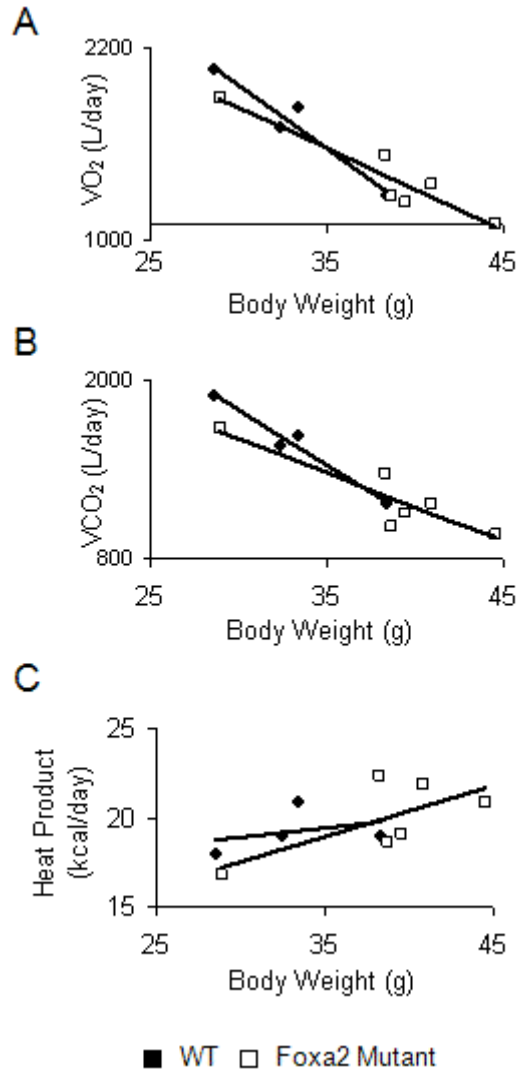
Supplementary Information

**Bile acid-induced inflammatory signaling in Foxa2-deficient mice
leads to activation of mTOR and age-onset obesity.**

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Supplementary Data

Supplementary Figure 1, Related to Figure 4. ANCOVA regression analysis of energy expenditure parameters in old *Foxa2* mutant mice. (A) Logistic regression analysis of VO_2 consumption and (B) CO_2 production shows that the changes are dependent on the genotype adjusted for body weight (ANCOVA $p < 0.001$ for both). (C) Changes in heat production adjusted for body weight were not statistically significant (ANCOVA, $p < 0.15$).



Supplementary Table 1, Related to Figure 1. Transcription factor targets from inflammatory network. Lists of Stat3, Nf-kb, and Irf3 targets, as well as genes co-regulated by two or more of these factors (with fold changes in young *Foxa2* mutants) determined by Ingenuity Pathway Analysis.

Gene Name	Fold Change	Co-regulators
BCL2	1.40	Stat3, Nf-kb
CCL5	1.54	Nf-kb, Irf3
CXCL10	1.60	Stat3, Nf-kb, Irf3
CCND1	2.84	Stat3, Nf-kb
CXCL2	1.74	Stat3, Nf-kb
EGR1	2.70	Stat3, Nf-kb
GBP2	1.33	Stat3, Nf-kb
ICAM1	1.67	Stat3, Nf-kb
IFIT1B	1.90	Stat3, Irf3
IRF1	1.33	Stat3, Nf-kb
JUNB	1.79	Stat3, Nf-kb
MMP2	1.31	Stat3, Nf-kb
MMP3	2.74	Nf-kb, Irf3
RSAD2	1.85	Nf-kb, Irf3
SOCS3	1.39	Stat3, Nf-kb

Supplementary Table 2, Related to Figure 2. A list of genes differentially expressed in both Foxa2 and Stat5b liver-specific mutants used to generate the heatmap in Figure 2A.

Gene Symbol	Fold Change in Foxa2 mutants	Fold Change in Stat5b mutants
2310040A07Rik	-9.71	-2.26
Asns	-9.62	-1.88
Hsd3b4	-8.85	-6.69
Hsd3b5	-6.25	-27.59
Elovl3	-4.08	-3.9
Aox3	-3.66	-5.21
Ces1	-3.27	-1.77
C6	-2.83	-1.67
Serpina9	-2.63	-7.37
2310031A18Rik	-2.58	1.51
Dpy19l3	-2.57	-1.96
Bmf	-2.45	-5.63
Aox1	-2.27	-1.37
F11	-2.26	-2.04
Ccl9	-2.18	2.27
Alas2	-2.11	-3.53
Ghr	-1.95	-1.5
Ugdh	-1.92	-1.38
Susd4	-1.89	-8.78
Meig1	-1.86	-2.79
Aqp8	-1.8	1.83
Gstm6	-1.75	-1.58
Sdf2l1	-1.75	-1.69
Ces2	-1.75	-2.32
Clec2h	-1.74	-2.75
Mtnr1a	-1.74	-1.33
Aatk	-1.7	-3.39
Hsd3b2	-1.69	-3.08
Abcc4	-1.68	2.38
Sucnr1	-1.66	-3.74
Ugt2b35	-1.65	-1.83
Fkbp11	-1.65	-2.26
Tpst1	-1.63	-1.6
Pfn2	-1.62	-1.67
Abcg2	-1.61	-2.2
Hao1	-1.6	-1.67
Omd	-1.58	-3.67
Gsta4	-1.58	-4.88
Odz3	-1.56	2.18
2010305C02Rik	-1.55	1.32
Dscr1l1	-1.55	1.71
Tspan33	-1.55	-2.06
Adh4	-1.54	-1.35

Slc1a4	-1.53	1.52
Rnf125	-1.52	1.57
C730048C13Rik	-1.51	-2.13
Col27a1	-1.51	-2.44
Agxt2l1	-1.5	-1.81
Lama3	-1.49	-4.65
Bmp7	-1.48	-1.38
Ugt2b38	-1.48	-8.89
Anubl1	-1.47	-1.57
Ugt2b1	-1.46	-1.76
Slco1a4	-1.45	5.05
Gldc	-1.44	1.68
1700007B13Rik	-1.44	-2.34
Mmd2	-1.43	2.26
Lactb2	-1.41	-1.68
2810439F02Rik	-1.41	-2.77
Ugt2b37	-1.4	-2.37
Rgs12	-1.39	-2.62
Ugt2b5	-1.39	-2.63
Sort1	-1.39	-2.77
Slc35d1	-1.39	-1.45
Cyp4a12b	-1.38	-6.09
Scamp1	-1.38	-1.49
Serpina3a	-1.38	-2.61
Afp	-1.38	-1.35
Clpx	-1.37	2.09
Klhdc7a	-1.37	-1.68
Keg1	-1.36	-4.9
Dnase2a	-1.36	-3.82
Prlr	-1.36	1.84
Fbxo21	-1.35	-1.39
Uck1	-1.34	1.35
1810054D07Rik	-1.34	-1.31
Slco1a1	-1.33	-13.32
Nhlrc1	-1.32	-1.96
Tbcel	-1.31	-2.2
AW544981	-1.31	1.87
Il2rb	1.3	-1.57
Mup3	1.3	-3.03
Psmb10	1.3	1.67
Gpr56	1.3	1.65
Klhl13	1.31	1.64
Rbp1	1.31	1.58
Isg15	1.32	1.57
Ggt6	1.32	1.84
Ubt2	1.32	1.65
As3mt	1.32	1.6
Tgfbr2	1.32	2.26
Fgd5	1.33	-2.71
Plscr2	1.33	1.76
Plekha4	1.33	1.33

Gbp2	1.33	3.71
Fbxo10	1.34	1.53
Slc25a27	1.34	1.59
Mfge8	1.35	1.57
Map3k1	1.35	1.6
1700112E06Rik	1.35	1.88
Insl6	1.35	2.75
9030611O19Rik	1.35	1.42
Tmem159	1.35	1.58
S100a10	1.37	1.62
Dhrs7	1.37	2.15
Thrb	1.37	-1.78
Ckap4	1.38	-1.92
Csrp3	1.38	1.53
C330008K14Rik	1.38	1.73
Slc39a14	1.38	1.52
Mtmr11	1.39	2.73
Ifit3	1.39	1.45
Sdc1	1.39	1.46
Wipf1	1.4	1.6
Papss2	1.41	2.48
Reln	1.42	-1.34
Pmm1	1.43	2.51
4931408A02Rik	1.43	1.52
Slc22a5	1.43	1.94
Lysmd2	1.43	1.53
Ppp1r9a	1.44	4.47
Fhod3	1.45	1.59
Jam3	1.46	-1.64
Anxa2	1.46	1.34
2010002N04Rik	1.46	1.56
Saa2	1.47	3.22
D430019H16Rik	1.47	-1.51
Ier5	1.47	1.68
Irf5	1.48	-2.9
Card10	1.48	1.62
Fmo2	1.48	2.48
Itpr3	1.48	1.33
Slc41a2	1.49	1.74
Birc5	1.49	1.65
Stk39	1.49	2.03
Slc5a6	1.49	1.69
2810043G22Rik	1.49	1.89
Cbfa2t3h	1.51	1.42
1700055N04Rik	1.51	5.37
Tacc2	1.51	2.38
Lgals6	1.53	1.68
Ccl5	1.54	-1.4
Pigr	1.54	1.85
Saa1	1.56	14.21
4631416L12Rik	1.56	1.51

Farp1	1.57	-1.57
AA986860	1.58	-1.42
Klf6	1.58	2.14
Nab2	1.61	1.71
Ppp1r14a	1.62	-1.98
Mical1	1.62	-1.51
Glis2	1.63	-1.52
Crym	1.63	1.6
Slc17a1	1.64	2.36
Lpin1	1.65	-2.39
Por	1.65	1.4
Ppargc1a	1.65	1.62
Icosl	1.66	1.36
Serpinh1	1.69	1.37
Usp18	1.7	2.04
Vwf	1.71	1.35
Slc25a22	1.71	1.51
Sdpr	1.75	1.72
Mmp14	1.77	1.73
Btg2	1.78	1.79
Fmo3	1.78	61.99
Evc	1.78	1.53
2310076L09Rik	1.79	1.56
Ak7	1.79	-1.92
Ly6e	1.8	1.54
Igfbp1	1.81	4.17
Celsr1	1.82	1.98
Acot3	1.82	7.88
Rsad2	1.85	1.5
Fndc1	1.85	-1.96
Ctse	1.89	2.16
Ifit1	1.9	1.64
Gypc	1.91	2.29
Col1a1	1.92	1.46
Lass6	2	1.63
Nfkbiz	2.02	1.69
2210021J22Rik	2.02	1.53
6430514L14Rik	2.04	1.7
Ptp4a1	2.05	1.56
Defb1	2.09	4.31
Tff1	2.1	1.73
Dll1	2.11	2.07
Il1r1	2.11	1.71
Nrp2	2.14	1.81
Gbp3	2.14	3.39
Sparcl1	2.15	2.01
Htra3	2.18	1.68
Cyp2a12	2.21	20.68
Sult1d1	2.22	2.21
Pcp4l1	2.22	1.53
Cyp2c38	2.29	1.9

Sult1a1	2.36	2.89
Pdk4	2.38	3.28
Tox	2.42	3.32
Cidec	2.46	1.7
BC089597	2.47	2.73
Lcn2	2.47	3.38
Slc10a2	2.48	-1.4
Wfdc2	2.49	1.66
Il1rn	2.57	1.64
Plxnb1	2.61	1.86
Gstt3	2.63	4.81
Vldlr	2.67	4.57
Cml4	2.69	-6.88
Egr1	2.7	1.87
Abcd2	2.79	12.79
Ccnd1	2.84	3.15
Dmbt1	2.87	2.4
Apoa4	2.88	2.21
G0s2	2.97	4.05
Cyp2b10	3.04	4.08
S3-12	3.08	2.3
Dct	3.13	-15.98
C730036D15Rik	3.24	7.46
Cyp39a1	3.25	7.29
Mt1	3.45	4.02
Cyp2b13	3.51	79.62
Cyp2b13	3.51	2.19
Cyp2b9	3.63	58.77
Krt23	3.81	4.28
Ppl	3.94	3.76
Nnmt	4.16	7.89
BC014805	5.07	41.85
Mt2	5.2	18.08

Supplementary Table 3, Related to Figure 5. Biochemical pathways overrepresented in *Foxa2* targets in 10-12 month-old livers. The DAVID 6.7 suite of software and Ingenuity Pathway Analysis were used to determine enriched biological functional categories in the set of differentially expressed genes in Table S1. A collection of pathways regulated by TOR signaling, including “Cellular Growth”, “Ribosome Biogenesis” and “Protein Synthesis/Translation” were upregulated in livers of aged *Foxa2* mutant mice.

Molecular Function	p -value
Cellular Growth	7.3e-4
Cellular Morphology	1.1e-4
Ribosome Biogenesis	6.5e-8
Protein Synthesis/Translation	5.4e-3

Biological Pathway	p -value
Inflammatory Response	8.6e-4
Lipid Metabolism	7.2e-5
Protein Folding	4.5e-4
Xenobiotic Metabolism	6.6e-7

Supplementary Table 4, Related to Figure 5. Gene expression profile in livers of 10-12 month old *Foxa2*^{loxP/loxP}*Alfp.Cre* mice. Four sets of biological replicates were used in each direct comparison experiment and hybridized to Agilent 4x44k Whole Mouse Genome Oligo Microarray. Statistical analysis of the microarray data was performed using the significance of microarrays (SAM) package with a false discovery rate (FDR) of 10% and |Fold Change| >=1.5.

Gene expression profile of Foxa2loxP/loxPALfp.Cre mice (10-12 months old)
FDR=10% and |FC| >=1.5

ProbeName	GeneName	TranscriptID	Description	FC	AbsFC	FDR
A_51_P222773	Foxa2	NM_010446	forkhead box A2	-200	200	0
A_51_P222773	Foxa2	NM_010446	forkhead box A2	-166.667	166.667	0
A_51_P222773	Foxa2	NM_010446	forkhead box A2	-166.667	166.667	0
A_51_P222773	Foxa2	NM_010446	forkhead box A2	-166.667	166.667	0
A_51_P222773	Foxa2	NM_010446	forkhead box A2	-166.667	166.667	0
A_51_P222773	Foxa2	NM_010446	forkhead box A2	-166.667	166.667	0
A_51_P222773	Foxa2	NM_010446	forkhead box A2	-166.667	166.667	0
A_51_P222773	Foxa2	NM_010446	forkhead box A2	-166.667	166.667	0
A_51_P222773	Foxa2	NM_010446	forkhead box A2	-142.857	142.857	0
A_51_P222773	Foxa2	NM_010446	forkhead box A2	-142.857	142.857	0
A_51_P352005	Hsd3b4	NM_008294	hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 4	-22.727	22.727	0
A_51_P125745	Asns	NM_012055	asparagine synthetase	-20.833	20.833	0
A_51_P497090	Enho	NM_027147	RIKEN cDNA 2310040A07 gene	-20.408	20.408	0
A_52_P192265	Ren2	NM_031193	renin 2 tandem duplication of Ren1	-13.699	13.699	0
A_51_P496162	Hsd3b5	NM_008295	hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 5	-13.333	13.333	0
A_51_P316661	Ren1	NM_031192	renin 1 structural	-10.526	10.526	0
A_52_P414464	Rcan2	NM_207649	Down syndrome critical region gene 1-like 1	-9.901	9.901	0
A_51_P324633	Elov13	NM_007703	elongation of very long chain fatty acids (FEN1/Elo2, SUR4/Elo3, yeast)-like 3	-9.524	9.524	0
A_51_P361448	Scara5	NM_028903	scavenger receptor class A, member 5 (putative)	-6.452	6.452	0
A_51_P441798	Glul	X16314	glutamate-ammonia ligase (glutamine synthetase)	-6.329	6.329	0
A_51_P137452	Cyp2g1	NM_013809	cytochrome P450, family 2, subfamily g, polypeptide 1	-6.024	6.024	0
A_51_P329370	Snmp25	NM_030093	RIKEN cDNA 3300001G02 gene	-5.319	5.319	2.27
A_52_P471259	Snmp25	NM_030093	RIKEN cDNA 3300001G02 gene	-5.319	5.319	3.45
A_51_P502119	F11	NM_028066	coagulation factor XI	-5.155	5.155	0
A_51_P284486	Gstm2	NM_008183	glutathione S-transferase, mu 2	-5	5	0
A_52_P237102	Dpy19l3	NM_178704	dpy-19-like 3 (C. elegans)	-4.95	4.95	0
A_51_P516085	Dntt	NM_009345	deoxynucleotidyltransferase, terminal	-4.878	4.878	0
A_51_P239236	Acacb	NM_133904	acetyl-Coenzyme A carboxylase beta	-4.785	4.785	2.27
A_51_P305138	A_51_P305138	A_51_P305138		-4.739	4.739	0
A_51_P370700	Got1	NM_010324	glutamate oxaloacetate transaminase 1, soluble	-4.739	4.739	0
A_52_P246252	Cyp2a5	NM_007812	cytochrome P450, family 2, subfamily a, polypeptide 5	-4.484	4.484	4.2
A_52_P458682	Gsta2	NM_008182	glutathione S-transferase, alpha 2 (Yc2)	-4.484	4.484	0
A_52_P531610	Agxt2l1	AK030395	alanine-glyoxylate aminotransferase 2-like 1	-4.405	4.405	9.3
A_52_P99807	Dpy19l3	NM_178704	dpy-19-like 3 (C. elegans)	-4.098	4.098	2.27
A_51_P377154	Cyp2a4	NM_009997	cytochrome P450, family 2, subfamily a, polypeptide 4	-4.049	4.049	3.43
A_51_P397783	ENSMUST00000036503	ENSMUST00000036503	AN1, ubiquitin-like, homolog (Xenopus laevis)	-4.032	4.032	1.29
A_51_P391616	Agxt2l1	NM_027907	alanine-glyoxylate aminotransferase 2-like 1	-4	4	0
A_52_P246255	Cyp2a4	NM_009997	cytochrome P450, family 2, subfamily a, polypeptide 5	-3.984	3.984	3.45
A_51_P238576	Cyp4a14	NM_007822	cytochrome P450, family 4, subfamily a, polypeptide 14	-3.953	3.953	6.58
A_52_P1092823	Irx1	NM_010573	Iroquois related homeobox 1 (Drosophila)	-3.831	3.831	0
A_52_P981179	A_52_P981179	A_52_P981179		-3.817	3.817	0
A_51_P359586	Pfkfb1	NM_008824	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 1	-3.731	3.731	1.29
A_52_P245962	Ces1	NM_021456	carboxylesterase 1	-3.731	3.731	2.27

A_51_P451574	Acot1	NM_012006	acyl-CoA thioesterase 1	-3.717	3.717	9.3
A_52_P251623	BC057022	NM_001004180	cDNA sequence BC057022	-3.623	3.623	0
A_52_P661412	Adora1	NM_001008533	adenosine A1 receptor	-3.521	3.521	0
A_51_P462708	Wfdc15b	NM_138685	WAP four-disulfide core domain 15B	-3.509	3.509	0
A_51_P253481	Ces1	NM_021456	carboxylesterase 1	-3.413	3.413	2.27
A_52_P172272	Adora1	NM_001008533	adenosine A1 receptor	-3.344	3.344	0
A_51_P238183	Etnk2	NM_175443	ethanolamine kinase 2	-3.205	3.205	0
A_51_P520718	Ptger3	NM_011196	prostaglandin E receptor 3 (subtype EP3)	-3.175	3.175	3.45
A_51_P267933	Snhg11	NM_175692	RIKEN cDNA A930034L06 gene	-3.135	3.135	2.32
A_51_P103222	Slc39a4	NM_028064	solute carrier family 39 (zinc transporter), member 4	-3.115	3.115	3.45
A_51_P431737	Cth	NM_145953	cystathionase (cystathionine gamma-lyase)	-3.106	3.106	1.29
A_51_P369998	Sntg2	NM_172951	syntrophin, gamma 2	-3.086	3.086	4.44
A_52_P410334	NAP124154-1	NAP124154-1		-3.086	3.086	7.92
A_52_P460584	Tnfrsf25	NM_033042	tumor necrosis factor receptor superfamily, member 25	-3.021	3.021	3.43
A_52_P804224	AK141415	AK141415		-3.003	3.003	4.44
A_52_P356343	Fam13a	NM_153574	RIKEN cDNA D430015B01 gene	-2.985	2.985	4.2
A_52_P544060	Ren1	NM_031192	renin 1 structural	-2.985	2.985	4.2
A_52_P466648	D00925	D00925		-2.941	2.941	3.43
A_51_P410703	Prss8	NM_133351	protease, serine, 8 (prostasin)	-2.933	2.933	2.27
A_51_P335569	Slco1a4	NM_030687	solute carrier organic anion transporter family, member 1a4	-2.933	2.933	7.92
A_51_P185660	Ccl9	NM_011338	chemokine (C-C motif) ligand 9	-2.899	2.899	2.32
A_52_P9703	Cyp2a4	NM_009997	cytochrome P450, family 2, subfamily a, polypeptide 4	-2.89	2.89	3.45
A_52_P376502	Camk1d	NM_177343	calcium/calmodulin-dependent protein kinase ID	-2.874	2.874	3.43
A_51_P409985	Arl13b	NM_026577	ADP-ribosylation factor-like 13B	-2.857	2.857	1.71
A_51_P254895	Cyp4a10	NM_010011	cDNA sequence BC013476	-2.857	2.857	3.45
A_52_P530620	Capn8	NM_001145806	calpain 8	-2.825	2.825	2.32
A_51_P420415	Srd5a1	NM_175283	steroid 5 alpha-reductase 1	-2.809	2.809	3.43
A_51_P342926	Omd	NM_012050	osteomodulin	-2.809	2.809	0
A_51_P279841	Blnk	NM_008528	B-cell linker	-2.762	2.762	3.43
A_52_P70888	Snhg11	NM_175692	RIKEN cDNA A930034L06 gene	-2.755	2.755	3.43
A_51_P499369	Tmem184c	NM_145599	transmembrane protein 34	-2.74	2.74	0
A_51_P161946	E130012A19Rik	NM_175332	RIKEN cDNA E130012A19 gene	-2.732	2.732	0
A_52_P223646	Cabyr	NM_027687	calcium-binding tyrosine-(Y)-phosphorylation regulated (fibrousheatin 2)	-2.725	2.725	4.96
A_52_P16752	Aox3	NM_023617	aldehyde oxidase 3	-2.725	2.725	1.71
A_52_P658945	Nlrp12	NM_001033431	NLR family, pyrin domain containing 12	-2.681	2.681	7.92
A_51_P420037	Nup210	NM_018815	nucleoporin 210	-2.681	2.681	1.71
A_51_P461429	Cyp7b1	NM_007825	cytochrome P450, family 7, subfamily b, polypeptide 1	-2.674	2.674	4.2
A_52_P327156	0610008F07Rik	NR_027970	RIKEN cDNA 0610008F07 gene	-2.646	2.646	0
A_52_P384394	Bmf	NM_138313	Bcl2 modifying factor	-2.604	2.604	9.3
A_51_P224164	Slc26a4	NM_011867	solute carrier family 26, member 4	-2.584	2.584	2.27
A_51_P386899	Mfsd7c	NM_145447	cDNA sequence BC011209	-2.551	2.551	2.56
A_52_P614777	Sucnr1	NM_032400	succinate receptor 1	-2.545	2.545	4.96
A_51_P279038	Ppargc1a	NM_008904	peroxisome proliferative activated receptor, gamma, coactivator 1 alpha	-2.532	2.532	3.43
A_51_P409988	Arl13b	NM_026577	ADP-ribosylation factor-like 13B	-2.532	2.532	1.71
A_52_P259817	Upp2	NM_029692	uridine phosphorylase 2	-2.513	2.513	4.2
A_51_P180891	Ttc39c	NM_028341	RIKEN cDNA 2810439F02 gene	-2.494	2.494	4.2
A_52_P361673	Myo1b	NM_010863	myosin IB	-2.494	2.494	1.29
A_51_P268641	A1cf	NM_001081074	RIKEN cDNA 1810073H04 gene	-2.494	2.494	4.2

A_52_P571290	Ptms	NM_026988	parathyrosin	-2.451	2.451	3.43
A_51_P250217	A_51_P250217	A_51_P250217		-2.421	2.421	4.2
A_51_P288916	Tmtc2	NM_177368	transmembrane and tetratricopeptide repeat containing 2	-2.415	2.415	2.32
A_52_P318361	Ces2	NM_145603	carboxylesterase 2	-2.358	2.358	9.3
A_51_P309307	Bcl2l15	NM_001142959		-2.353	2.353	0
A_52_P539161	Rdh11	NM_021557	retinol dehydrogenase 11	-2.347	2.347	3.45
A_51_P272106	Cirbp	NM_007705	cold inducible RNA binding protein	-2.336	2.336	4.44
A_51_P189777	Ccrn4l	NM_009834	CCR4 carbon catabolite repression 4-like (S. cerevisiae)	-2.336	2.336	3.43
A_51_P396198	C4bp-ps1	NR_028304		-2.331	2.331	3.43
A_52_P201106	4930473A06Rik	NM_001081012	RIKEN cDNA 4930473A06 gene	-2.32	2.32	2.32
A_51_P488399	Acss2	NM_019811	acyl-CoA synthetase short-chain family member 2	-2.32	2.32	5.56
A_52_P370274	Pde4b	AK171700	phosphodiesterase 4B, cAMP specific	-2.315	2.315	4.2
A_52_P577084	Srd5a1	AK019597		-2.304	2.304	6.58
A_51_P349912	Fmn1	NM_010230	formin 1	-2.299	2.299	1.29
A_51_P381618	Pla1a	NM_134102	phospholipase A1 member A	-2.299	2.299	1.71
A_52_P236207	2410089E03Rik	NM_001162906	RIKEN cDNA 2410089E03 gene	-2.278	2.278	3.43
A_52_P624969	NAP123621-1	NAP123621-1		-2.273	2.273	7.92
A_51_P223396	Ttc39b	NM_027238	RIKEN cDNA 1810054D07 gene	-2.268	2.268	1.71
A_51_P400366	Rhbg	NM_021375	Rhesus blood group-associated B glycoprotein	-2.262	2.262	4.44
A_51_P510418	Aldh1b1	NM_028270	aldehyde dehydrogenase 1 family, member B1	-2.257	2.257	2.56
A_52_P14456	Srrm4	NM_026886	RIKEN cDNA 1500001A10 gene	-2.252	2.252	2.56
A_52_P499499	4833422F24Rik	NM_029021	RIKEN cDNA 4833422F24 gene	-2.247	2.247	2.32
A_52_P374997	E2f7	NM_178609	E2F transcription factor 7	-2.237	2.237	4.2
A_52_P627269	BC015286	NM_198171	cDNA sequence BC015286	-2.232	2.232	9.3
A_51_P200610	Zbtb12	NM_198886	zinc finger and BTB domain containing 12	-2.227	2.227	4.44
A_51_P421538	Nhedc2	NM_178877	expressed sequence C80638	-2.222	2.222	1.71
A_51_P469160	Rdh11	AY039032	retinol dehydrogenase 11	-2.222	2.222	4.96
A_52_P284495	Ankrd33b	NM_026153	RIKEN cDNA 5730557B15 gene	-2.222	2.222	5.56
A_51_P339540	Cdkn1c	NM_009876	cyclin-dependent kinase inhibitor 1C (P57)	-2.222	2.222	2.32
A_52_P103929	Syt1	NM_009306	synaptotagmin I	-2.217	2.217	2.27
A_52_P411205	Gm10055	XM_001476525	predicted gene, ENSMUSG00000058934	-2.212	2.212	4.2
A_52_P405090	Polr3g	NM_001081176	polymerase (RNA) III (DNA directed) polypeptide G	-2.198	2.198	0
A_52_P293222	Ppargc1b	AK042378	peroxisome proliferative activated receptor, gamma, coactivator 1 beta	-2.198	2.198	6.58
A_51_P335480	1810055G02Rik	NM_028077	RIKEN cDNA 1810055G02 gene	-2.193	2.193	4.2
A_52_P481302	NAP026914-1	NAP026914-1		-2.193	2.193	9.3
A_51_P305140	Gsta1	NM_008181	glutathione S-transferase, alpha 1 (Ya)	-2.183	2.183	4.2
A_52_P643359	Prpf4b	NM_013830	PRP4 pre-mRNA processing factor 4 homolog B (yeast)	-2.183	2.183	2.56
A_52_P10041	Akr1b3	NM_009658	aldo-keto reductase family 1, member B3 (aldose reductase)	-2.179	2.179	2.27
A_51_P384436	Ctrc	NM_001033875	chymotrypsin C (caldecrin)	-2.179	2.179	3.43
A_51_P463791	Srrm3	NM_021403	RIKEN cDNA 2900083111 gene	-2.165	2.165	1.29
A_51_P245368	Abcb1b	NM_011075	ATP-binding cassette, sub-family B (MDR/TAP), member 1B	-2.165	2.165	2.27
A_52_P387502	Ubr2	NM_146078	ubiquitin protein ligase E3 component n-recogin 2	-2.16	2.16	3.43
A_52_P602996	5730403B10Rik	NM_025670	RIKEN cDNA 5730403B10 gene	-2.155	2.155	2.27
A_51_P504037	Smarca2	NM_011416	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 2	-2.155	2.155	2.56
A_52_P184145	Fbxo21	NM_145564	F-box protein 21	-2.155	2.155	2.56
A_51_P442366	Diap2	NM_172493	diaphanous homolog 2 (Drosophila)	-2.141	2.141	2.32
A_51_P383399	Aldh1a7	NM_011921	aldehyde dehydrogenase family 1, subfamily A7	-2.141	2.141	7.92

A_52_P125485	AU042651	NM_177809	expressed sequence AU042651	-2.141	2.141	2.27
A_52_P320193	Clec2h	NM_053165	C-type lectin domain family 2, member h	-2.137	2.137	2.32
A_51_P175424	Car14	NM_011797	carbonic anhydrase 14	-2.137	2.137	4.44
A_52_P239752	Ttc39c	AK077971	RIKEN cDNA 2810439F02 gene	-2.132	2.132	6.58
A_51_P299149	Gpx6	NM_145451	glutathione peroxidase 6	-2.132	2.132	2.27
A_51_P436447	Zfp871	NM_172458	RIKEN cDNA 9030612M13 gene	-2.128	2.128	3.43
A_52_P247513	Hook3	NM_207659	hook homolog 3 (Drosophila)	-2.128	2.128	3.45
A_52_P228667	A930004D18Rik	NR_028376	RIKEN cDNA A930004D18 gene	-2.123	2.123	1.29
A_51_P157406	Ptgds	NM_008963	prostaglandin D2 synthase (brain)	-2.119	2.119	4.44
A_51_P471177	Stra6	NM_009291	stimulated by retinoic acid gene 6	-2.119	2.119	1.71
A_51_P510891	Afp	NM_007423	alpha fetoprotein	-2.114	2.114	4.2
A_52_P631613	NAP014312-001	NAP014312-001		-2.114	2.114	3.43
A_52_P344116	Rnf6	NM_028774	ring finger protein (C3H2C3 type) 6	-2.11	2.11	2.56
A_51_P157976	Mmab	NM_029956	methylmalonic aciduria (cobalamin deficiency) type B homolog (human)	-2.105	2.105	4.96
A_52_P475229	Ep400	NM_029337	E1A binding protein p400	-2.105	2.105	4.2
A_52_P601437	Dntt	NM_009345	deoxynucleotidyltransferase, terminal	-2.092	2.092	3.45
A_52_P207314	Htra4	NM_001081187	HtrA serine peptidase 4	-2.088	2.088	4.96
A_51_P256066	Tiam2	NM_011878	T-cell lymphoma invasion and metastasis 2	-2.083	2.083	7.92
A_51_P166152	Spp2	NM_029269	secreted phosphoprotein 2	-2.083	2.083	2.32
A_51_P335849	Ctnnbip1	NM_023465	catenin beta interacting protein 1	-2.075	2.075	5.56
A_52_P102432	Dsg1c	AK034104	desmoglein 1 gamma	-2.075	2.075	4.2
A_52_P94201	Syt1	NM_009306	synaptotagmin I	-2.075	2.075	4.2
A_52_P127280	Anubl1	NM_001081317	AN1, ubiquitin-like, homolog (Xenopus laevis)	-2.07	2.07	2.56
A_52_P461517	Ubap2l	NM_153489	ubiquitin associated protein 2-like	-2.07	2.07	4.96
A_52_P844857	TC1760261	TC1760261		-2.066	2.066	3.45
A_51_P510891	Afp	NM_007423	alpha fetoprotein	-2.066	2.066	2.56
A_51_P268983	Myom3	NM_001085509	myomesin family, member 3	-2.062	2.062	3.45
A_52_P662562	NAP122883-1	NAP122883-1		-2.058	2.058	4.44
A_52_P623211	ENSMUST00000049544	ENSMUST00000049544	RIKEN cDNA 2610301F02 gene	-2.058	2.058	4.44
A_51_P418884	BC020078	BC020078		-2.058	2.058	3.43
A_52_P30451	Ppp1r3c	NM_016854	protein phosphatase 1, regulatory (inhibitor) subunit 3C	-2.058	2.058	6.58
A_52_P424563	Ddx1	NM_134040	DEAD (Asp-Glu-Ala-Asp) box polypeptide 1	-2.045	2.045	3.45
A_51_P135268	Corin	NM_016869	corin	-2.041	2.041	3.45
A_52_P541118	Snhg11	NM_175692	RIKEN cDNA A930034L06 gene	-2.037	2.037	2.56
A_52_P92121	Ankrd33b	NM_001164441	RIKEN cDNA 3021401C12 gene	-2.037	2.037	5.56
A_52_P469956	Zc3h6	NM_178404	zinc finger CCCH type containing 6	-2.037	2.037	4.96
A_51_P294891	Ppargc1b	NM_133249	peroxisome proliferative activated receptor, gamma, coactivator 1 beta	-2.037	2.037	6.58
A_51_P116395	Dhrs7b	NM_145428	dehydrogenase/reductase (SDR family) member 7B	-2.028	2.028	2.32
A_51_P325651	Cd47	AK164165	CD47 antigen (Rh-related antigen, integrin-associated signal transducer)	-2.028	2.028	7.92
A_51_P352738	Mpv17l	NM_033564	Mpv17 transgene, kidney disease mutant-like	-2.028	2.028	6.58
A_52_P566718	Acss2	NM_019811	acyl-CoA synthetase short-chain family member 2	-2.024	2.024	7.92
A_52_P213889	Tmc7	NM_172476	transmembrane channel-like gene family 7	-2.024	2.024	4.96
A_51_P268929	AK050061	AK050061		-2.02	2.02	2.56
A_52_P281888	C4bp-ps1	NR_028304		-2.02	2.02	3.43
A_52_P379277	Enpp3	NM_134005	ectonucleotide pyrophosphatase/phosphodiesterase 3	-2.016	2.016	4.2
A_51_P176912	Hlcs	NM_139145	holocarboxylase synthetase (biotin- [propionyl-Coenzyme A-carboxylase (ATP-hydrolysing)] ligase)	-2.016	2.016	2.27
A_52_P355276	Smg6	NM_001002764	Smg-6 homolog, nonsense mediated mRNA decay factor (C. elegans)	-2.016	2.016	3.45

A_52_P147870	Mrps5	NM_029963	mitochondrial ribosomal protein S5	-2.012	2.012	3.43
A_51_P510891	Afp	NM_007423	alpha fetoprotein	-2.012	2.012	4.2
A_51_P258766	Smo	NM_176996	smoothened homolog (Drosophila)	-2.012	2.012	4.96
A_52_P187855	Trim37	NM_197987	tripartite motif protein 37	-2.012	2.012	3.45
A_51_P124315	ENSMUST00000113532	ENSMUST00000113532	cDNA sequence BC034076	-2.012	2.012	3.45
A_51_P510891	Afp	NM_007423	alpha fetoprotein	-2.008	2.008	3.43
A_51_P431018	Selenbp2	NM_019414	selenium binding protein 2	-2.008	2.008	5.56
A_51_P502872	2200002D01Rik	NM_028179		-2.008	2.008	3.43
A_51_P512340	Pde4b	NM_019840	phosphodiesterase 4B, cAMP specific	-2.008	2.008	7.92
A_51_P324134	Hps4	NM_138646	Hermansky-Pudlak syndrome 4 homolog (human)	-2.008	2.008	4.2
A_52_P625277	Accs	NM_183220	RIKEN cDNA 2610203E10 gene	-2.004	2.004	2.56
A_52_P400967	Arl13b	NM_026577	ADP-ribosylation factor-like 13B	-2	2	2.56
A_51_P413088	Apob	NM_009693		-2	2	4.44
A_51_P304397	Cpm	NM_027468	carboxypeptidase M	-2	2	4.2
A_52_P257774	Cyp4a10	NM_010011	cytochrome P450, family 4, subfamily a, polypeptide 10	-1.996	1.996	5.56
A_51_P116496	BC024139	NM_001142968	cDNA sequence BC024139	-1.996	1.996	4.2
A_52_P566840	Gpr110	NM_133776	G protein-coupled receptor 110	-1.996	1.996	3.45
A_51_P510891	Afp	NM_007423	alpha fetoprotein	-1.996	1.996	3.45
A_51_P424221	Irf2bp2	NM_001164598	interferon regulatory factor 2 binding protein 2	-1.992	1.992	6.58
A_52_P258537	5430407P10Rik	NM_144883	RIKEN cDNA 5430407P10 gene	-1.992	1.992	5.56
A_51_P217336	Scamp1	NM_029153	secretory carrier membrane protein 1	-1.988	1.988	0
A_51_P291139	Upf3b	NM_026573	UPF3 regulator of nonsense transcripts homolog B (yeast)	-1.988	1.988	2.27
A_51_P220681	Aldoc	NM_009657	aldolase 3, C isoform	-1.988	1.988	5.56
A_52_P71146	NAP041834-1	NAP041834-1		-1.988	1.988	3.45
A_51_P301713	A_51_P301713	A_51_P301713		-1.984	1.984	2.32
A_52_P413348	Fam35a	NM_029389	RIKEN cDNA 3110001K24 gene	-1.98	1.98	3.43
A_52_P5945	Ppargc1a	NM_008904	peroxisome proliferative activated receptor, gamma, coactivator 1 alpha	-1.972	1.972	4.2
A_51_P332917	Enpp3	BC005527	ectonucleotide pyrophosphatase/phosphodiesterase 3	-1.969	1.969	6.58
A_51_P136014	Tfdp2	S79780	transcription factor Dp 2	-1.969	1.969	2.27
A_52_P225700	ENSMUST00000113326	ENSMUST00000113326	forkhead box P1	-1.969	1.969	4.2
A_51_P510891	Afp	NM_007423	alpha fetoprotein	-1.965	1.965	3.45
A_52_P675052	Golgb1	NM_030035	golgi autoantigen, golgin subfamily b, macrogolgin 1	-1.961	1.961	3.45
A_52_P676406	Cdc3711	NM_025950	cell division cycle 37 homolog (S. cerevisiae)-like 1	-1.957	1.957	4.44
A_51_P218535	Neb	NM_010889	nebulin	-1.957	1.957	4.2
A_51_P512541	Sdr39u1	NM_001082975	RIKEN cDNA 2310014G06 gene	-1.953	1.953	3.45
A_52_P148428	Nfix	ENSMUST00000109764	nuclear factor I/X	-1.953	1.953	2.56
A_52_P636038	Park2	NM_016694	parkin	-1.946	1.946	3.43
A_52_P338626	Nipal3	NM_028995	NIPA-like domain containing 3	-1.946	1.946	4.2
A_51_P144712	Gbf1	NM_178930	golgi-specific brefeldin A-resistance factor 1	-1.942	1.942	3.45
A_52_P564413	Pik3c2g	NM_207683	phosphatidylinositol 3-kinase, C2 domain containing, gamma polypeptide	-1.942	1.942	4.44
A_52_P237176	Kiss1	NM_178260	KiSS-1 metastasis-suppressor	-1.942	1.942	3.45
A_51_P452506	Tmem189	NM_145538	expressed sequence AI840826	-1.942	1.942	3.43
A_51_P150763	Ropn11	NM_145852	ropporin 1-like	-1.942	1.942	3.43
A_52_P147803	AI428936	NM_153577	expressed sequence AI428936	-1.931	1.931	4.96
A_51_P117581	Cables1	NM_022021	Cdk5 and Abl enzyme substrate 1	-1.931	1.931	7.92
A_52_P135873	Gm2744	XM_001475453		-1.931	1.931	3.43
A_52_P337427	9030607L17Rik	NM_027829	RIKEN cDNA 9030607L17 gene	-1.927	1.927	3.45

A_51_P495331	Neb	NM_010889	nebulin	-1.927	1.927	2.27
A_51_P331900	Dlg3	NM_016747	discs, large homolog 3 (Drosophila)	-1.927	1.927	7.92
A_51_P150770	Ropn1l	NM_145852	ropporin 1-like	-1.923	1.923	3.43
A_51_P236588	9430038I01Rik	NM_029886	RIKEN cDNA 9430038I01 gene	-1.919	1.919	4.44
A_52_P487362	Ppp4r4	NM_028980	RIKEN cDNA 8430415E04 gene	-1.919	1.919	4.2
A_52_P941128	CF546364	CF546364		-1.916	1.916	4.44
A_51_P161691	Coq7	NM_009940	demethyl-Q 7	-1.916	1.916	4.2
A_52_P633193	2810407C02Rik	AK017528	RIKEN cDNA 2810407C02 gene	-1.912	1.912	2.56
A_51_P265695	Gapdhs	NM_008085	glyceraldehyde-3-phosphate dehydrogenase, spermatogenic	-1.908	1.908	2.32
A_52_P574668	Nt5e	NM_011851	5' nucleotidase, ecto	-1.901	1.901	3.45
A_52_P550094	Klhl24	NM_029436	kelch-like 24 (Drosophila)	-1.898	1.898	4.2
A_51_P510891	Afp	NM_007423	alpha fetoprotein	-1.898	1.898	2.56
A_51_P130057	Ppm1k	NM_175523	protein phosphatase 1K (PP2C domain containing)	-1.898	1.898	7.92
A_51_P121302	Them4	NM_029431	thioesterase superfamily member 4	-1.894	1.894	4.44
A_52_P644613	Sult1b1	NM_019878	sulfotransferase family 1B, member 1	-1.894	1.894	4.96
A_52_P412796	NAP043943-1	NAP043943-1		-1.894	1.894	3.45
A_52_P572368	1300015D01Rik	AK005014	RIKEN cDNA 1300015D01 gene	-1.89	1.89	7.92
A_51_P137481	1700011J10Rik	AK005870	RIKEN cDNA 1700011J10 gene	-1.89	1.89	3.43
A_51_P502225	Slc22a4	NM_019687	solute carrier family 22 (organic cation transporter), member 4	-1.89	1.89	7.92
A_52_P415996	Gstm6	NM_008184	glutathione S-transferase, mu 6	-1.883	1.883	5.56
A_51_P266987	Odf2	NM_013615	outer dense fiber of sperm tails 2	-1.883	1.883	3.45
A_52_P477785	Slc17a4	NM_177016	solute carrier family 17 (sodium phosphate), member 4	-1.883	1.883	4.96
A_52_P81252	D14Ert436e	NM_172599	DNA segment, Chr 14, ERATO Doi 436, expressed	-1.88	1.88	7.92
A_51_P329949	Fam13a	NM_153574	RIKEN cDNA D430015B01 gene	-1.88	1.88	6.58
A_52_P354363	Ino80	NM_026574	INO80 complex homolog 1 (S. cerevisiae)	-1.876	1.876	4.96
A_52_P229770	Akap13	NM_029332	A kinase (PRKA) anchor protein 13	-1.876	1.876	4.96
A_52_P645285	NAP040538-1	NAP040538-1		-1.873	1.873	5.56
A_52_P800301	NAP061993-1	NAP061993-1		-1.873	1.873	2.32
A_52_P84901	Slc44a1	NM_133891	solute carrier family 44, member 1	-1.869	1.869	1.29
A_51_P385114	Snhg11	NM_175692	RIKEN cDNA A930034L06 gene	-1.869	1.869	3.43
A_51_P456208	Tff3	NM_011575	trefoil factor 3, intestinal	-1.869	1.869	6.58
A_51_P510891	Afp	NM_007423	alpha fetoprotein	-1.866	1.866	3.45
A_51_P246773	Sesn3	NM_030261	sestrin 3	-1.862	1.862	2.27
A_51_P510891	Afp	NM_007423	alpha fetoprotein	-1.862	1.862	3.43
A_52_P193236	1600002H07Rik	NM_028056	RIKEN cDNA 1600002H07 gene	-1.862	1.862	4.2
A_52_P78373	Sorbs3	NM_011366	sorbin and SH3 domain containing 3	-1.859	1.859	5.56
A_52_P326354	Erf	NM_010155	Ets2 repressor factor	-1.859	1.859	4.44
A_51_P161225	Ddx46	NM_145975	DEAD (Asp-Glu-Ala-Asp) box polypeptide 46	-1.859	1.859	2.27
A_52_P663303	Wdr60	NM_146039	WD repeat domain 60	-1.859	1.859	4.2
A_51_P318804	Shpk	NM_029031	carbohydrate kinase-like	-1.855	1.855	5.56
A_52_P634329	Gm7298	XM_001480274	predicted gene, EG640530	-1.855	1.855	2.32
A_52_P276792	Foxp1	NM_053202	forkhead box P1	-1.852	1.852	5.56
A_52_P306387	Rnf214	NM_178709	ring finger protein 214	-1.852	1.852	4.2
A_51_P265695	Gapdhs	NM_008085	glyceraldehyde-3-phosphate dehydrogenase, spermatogenic	-1.852	1.852	2.32
A_51_P474169	5430407P10Rik	NM_144883	RIKEN cDNA 5430407P10 gene	-1.852	1.852	6.58
A_51_P510891	Afp	NM_007423	alpha fetoprotein	-1.852	1.852	5.56
A_51_P488554	3010026O09Rik	NM_026543	RIKEN cDNA 3010026O09 gene	-1.848	1.848	9.3
A_51_P265695	Gapdhs	NM_008085	glyceraldehyde-3-phosphate dehydrogenase, spermatogenic	-1.848	1.848	3.43

A_52_P392229	Rnf152	AK039635	ring finger protein 152	-1.848	1.848	4.2
A_51_P479618	Rdh5	NM_134006	retinol dehydrogenase 5	-1.845	1.845	4.44
A_51_P255295	C9	NM_013485	complement component 9	-1.845	1.845	3.45
A_51_P155323	Hc	NM_010406	hemolytic complement	-1.845	1.845	4.2
A_51_P323443	Vapb	NM_019806	vesicle-associated membrane protein, associated protein B and C	-1.845	1.845	7.92
A_51_P206551	Sult1b1	NM_019878	sulfotransferase family 1B, member 1	-1.845	1.845	4.96
A_51_P434928	Olf114	NM_146287	olfactory receptor 114	-1.835	1.835	4.44
A_52_P300344	Pm20d1	NM_178079	RIKEN cDNA 4732466D17 gene	-1.835	1.835	3.45
A_51_P265695	Gapdhs	NM_008085	glyceraldehyde-3-phosphate dehydrogenase, spermatogenic	-1.835	1.835	3.43
A_52_P1156465	Mbd2	AK083162		-1.835	1.835	1.71
A_51_P266958	Nr1i2	NM_010936	nuclear receptor subfamily 1, group I, member 2	-1.835	1.835	7.92
A_52_P423247	Pde4b	NM_019840	phosphodiesterase 4B, cAMP specific	-1.832	1.832	9.3
A_51_P478008	Bclaf1	NM_001025393	BCL2-associated transcription factor 1	-1.828	1.828	2.27
A_52_P346706	Akr1b3	NM_009658	aldo-keto reductase family 1, member B3 (aldose reductase)	-1.828	1.828	3.43
A_52_P464570	Wwp1	NM_177327	WW domain containing E3 ubiquitin protein ligase 1	-1.828	1.828	4.44
A_51_P394512	AK032729	AK032729		-1.825	1.825	4.96
A_51_P492408	Pmvk	NM_026784	phosphomevalonate kinase	-1.825	1.825	9.3
A_51_P466221	Amhr2	NM_144547	anti-Mullerian hormone type 2 receptor	-1.821	1.821	2.32
A_52_P175242	Irs1	NM_010570	insulin receptor substrate 1	-1.821	1.821	5.56
A_51_P299805	Slc46a3	NM_027872	solute carrier family 46, member 3	-1.821	1.821	4.96
A_52_P317653	Car1	NM_009799	carbonic anhydrase 1	-1.815	1.815	2.56
A_51_P249335	Sds	NM_145565	serine dehydratase	-1.815	1.815	7.92
A_52_P307938	Pik3r1	NM_001077495	phosphatidylinositol 3-kinase, regulatory subunit, polypeptide 1 (p85 alpha)	-1.812	1.812	5.56
A_51_P492410	Pmvk	NM_026784	phosphomevalonate kinase	-1.812	1.812	9.3
A_52_P150525	2310030N02Rik	NM_001085493	RIKEN cDNA 2310030N02 gene	-1.812	1.812	3.45
A_52_P466288	Tmem161b	NM_175187	transmembrane protein 161B	-1.808	1.808	2.56
A_51_P265695	Gapdhs	NM_008085	glyceraldehyde-3-phosphate dehydrogenase, spermatogenic	-1.808	1.808	2.27
A_51_P131315	Serpina9	NM_027997	serine (or cysteine) peptidase inhibitor, clade A (alpha-1 antitrypsin, antitrypsin), member 9	-1.808	1.808	7.92
A_51_P297900	Syt1	NM_009306	synaptotagmin I	-1.808	1.808	3.45
A_52_P684647	Ptk2b	NM_172498	PTK2 protein tyrosine kinase 2 beta	-1.805	1.805	4.96
A_52_P811124	AK047019	AK047019		-1.805	1.805	2.56
A_51_P265695	Gapdhs	NM_008085	glyceraldehyde-3-phosphate dehydrogenase, spermatogenic	-1.805	1.805	4.96
A_51_P466229	Pdgfrl	NM_026840	platelet-derived growth factor receptor-like	-1.805	1.805	7.92
A_52_P609448	Brwd1	NM_145125	bromodomain and WD repeat domain containing 1	-1.802	1.802	4.96
A_52_P408338	ENSMUST00000106059	ENSMUST00000106059	S100P binding protein	-1.799	1.799	3.43
A_52_P1164839	Onecut2	NM_194268	one cut domain, family member 2	-1.799	1.799	3.45
A_51_P213666	Pσμα8	NM_001163609	proteasome (prosome, macropain) subunit, alpha type, 8	-1.795	1.795	3.43
A_51_P469951	Srgap3	NM_080448	SLIT-ROBO Rho GTPase activating protein 3	-1.795	1.795	6.58
A_52_P78033	Ip6k2	AK005166	inositol hexaphosphate kinase 2	-1.795	1.795	5.56
A_51_P160576	Brsk2	AK014760	BR serine/threonine kinase 2	-1.795	1.795	9.3
A_52_P521163	Zfp644	NM_026856	zinc finger protein 644	-1.795	1.795	4.2
A_51_P253359	5730403B10Rik	NM_025670	RIKEN cDNA 5730403B10 gene	-1.792	1.792	4.96
A_51_P517388	Plbd1	NM_025806	RIKEN cDNA 1100001H23 gene	-1.792	1.792	3.45
A_51_P265695	Gapdhs	NM_008085	glyceraldehyde-3-phosphate dehydrogenase, spermatogenic	-1.789	1.789	3.45
A_52_P61903	Chka	AK014174	choline kinase alpha	-1.789	1.789	9.3

A_51_P341918	Tsc22d1	NM_009366	TSC22 domain family, member 1	-1.789	1.789	9.3
A_51_P331570	Trib3	NM_175093	tribbles homolog 3 (Drosophila)	-1.786	1.786	9.3
A_52_P79763	Thrap3	NM_146153	thyroid hormone receptor associated protein 3	-1.786	1.786	2.56
A_52_P336259	Mll3	NM_001081383	myeloid/lymphoid or mixed-lineage leukemia 3	-1.783	1.783	2.56
A_51_P475580	Ugp2	NM_139297	UDP-glucose pyrophosphorylase 2	-1.783	1.783	1.29
A_51_P252000	Susd4	NM_144796	sushi domain containing 4	-1.779	1.779	3.45
A_51_P327141	Zap70	NM_009539	zeta-chain (TCR) associated protein kinase	-1.776	1.776	4.2
A_51_P428578	Fam134b	NM_025459	RIKEN cDNA 1810015C04 gene	-1.776	1.776	4.96
A_51_P320434	Smg6	NM_001002764	Smg-6 homolog, nonsense mediated mRNA decay factor (C. elegans)	-1.776	1.776	4.44
A_52_P76146	Dnmt3a	NM_153743	DNA methyltransferase 3A	-1.776	1.776	3.43
A_51_P424550	Slc23a3	NM_194333	solute carrier family 23 (nucleobase transporters), member 3	-1.776	1.776	7.92
A_52_P552547	1110054M08Rik	XM_001479385	RIKEN cDNA 1110054M08 gene	-1.773	1.773	4.2
A_52_P334301	E130304F04Rik	NM_175538	RIKEN cDNA E130304F04 gene	-1.773	1.773	4.44
A_52_P599578	Cald1	NM_145575	caldesmon 1	-1.77	1.77	3.43
A_51_P377557	Cpsf4l	NM_029794	DNA segment, Chr 11, ERATO Doi 636, expressed	-1.77	1.77	7.92
A_52_P373024	Efha1	NM_028643	EF hand domain family A1	-1.767	1.767	3.45
A_52_P94055	Pcm1	NM_023662	pericentriolar material 1	-1.767	1.767	4.44
A_52_P453650	1500011K16Rik	NR_015476		-1.767	1.767	5.56
A_51_P192089	2610028A01Rik	NM_028228	RIKEN cDNA 2610028A01 gene	-1.767	1.767	2.32
A_51_P265695	Gapdhs	NM_008085	glyceraldehyde-3-phosphate dehydrogenase, spermatogenic	-1.767	1.767	4.2
A_51_P362483	Slc43a1	NM_001081349	solute carrier family 43, member 1	-1.764	1.764	4.96
A_52_P381484	Spon2	NM_133903	spondin 2, extracellular matrix protein	-1.764	1.764	7.92
A_52_P1126526	Nucks1	NM_175294	nuclear casein kinase and cyclin-dependent kinase substrate 1	-1.764	1.764	4.96
A_52_P120842	Man1a2	NM_010763	mannosidase, alpha, class 1A, member 2	-1.761	1.761	4.96
A_52_P336080	Eif5	AK051980	eukaryotic translation initiation factor 5	-1.761	1.761	3.45
A_51_P384515	Ido2	NM_145949	indoleamine-pyrrole 2,3 dioxygenase-like 1	-1.757	1.757	6.58
A_52_P37702	ENSMUST00000045307	ENSMUST00000045307		-1.754	1.754	4.2
A_52_P569348	Dbt	NM_010022	dihydroipoamide branched chain transacylase E2	-1.754	1.754	3.43
A_52_P645862	Agtr1a	NM_177322	angiotensin II receptor, type 1a	-1.751	1.751	4.44
A_52_P654965	Eif3j	NM_144545	eukaryotic translation initiation factor 3, subunit 1 alpha	-1.751	1.751	4.2
A_52_P547965	Chd1	NM_007690	chromodomain helicase DNA binding protein 1	-1.751	1.751	5.56
A_51_P479311	Gstm1	NM_010358	glutathione S-transferase, mu 1	-1.751	1.751	9.3
A_51_P213691	Scnn1a	NM_011324	sodium channel, nonvoltage-gated, type I, alpha	-1.748	1.748	5.56
A_52_P325388	Ttc39c	AK080904	RIKEN cDNA 2810439F02 gene	-1.748	1.748	4.44
A_51_P172344	Foxn3	NM_183186	checkpoint suppressor 1	-1.748	1.748	5.56
A_52_P19606	Osbp1a	NM_207530	oxysterol binding protein-like 1A	-1.748	1.748	4.96
A_51_P406346	Magi1	NM_010367	membrane associated guanylate kinase, WW and PDZ domain containing 1	-1.748	1.748	2.27
A_51_P171728	Ceacam2	NM_007543	CEA-related cell adhesion molecule 1	-1.745	1.745	2.32
A_52_P504268	B3galnt1	NM_020026	UDP-GalNAc:betaGlcNAc beta 1,3-galactosaminyltransferase, polypeptide 1	-1.745	1.745	4.96
A_52_P35064	Tm7sf2	NM_028454	transmembrane 7 superfamily member 2	-1.745	1.745	7.92
A_52_P384574	Stard4	NM_133774	StAR-related lipid transfer (START) domain containing 4	-1.745	1.745	4.96
A_51_P278018	Vps36	NM_027338	vacuolar protein sorting 36 (yeast)	-1.745	1.745	4.2
A_52_P237077	Esr1	NM_007956	estrogen receptor 1 (alpha)	-1.745	1.745	4.44
A_52_P1037549	BF721801	BF721801		-1.745	1.745	6.58
A_52_P199360	Cdk13	NM_027118	cell division cycle 2-like 5 (cholinesterase-related cell division controller)	-1.742	1.742	4.44

A_51_P236314	Ndst1	AK004787	N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 1	-1.742	1.742	3.43
A_51_P127215	Sesn3	AK033655	sestrin 3	-1.742	1.742	4.96
A_52_P198239	Ube2u	NM_001033773	ubiquitin-conjugating enzyme E2U (putative)	-1.742	1.742	7.92
A_52_P363110	Fgfr2	NM_010207	fibroblast growth factor receptor 2	-1.742	1.742	5.56
A_51_P371311	Slc1a4	NM_018861	solute carrier family 1 (glutamate/neutral amino acid transporter), member 4	-1.742	1.742	3.45
A_51_P174645	Asl	NM_133768	argininosuccinate lyase	-1.742	1.742	5.56
A_51_P235816	Tsc22d3	AF024519	TSC22 domain family 3	-1.739	1.739	9.3
A_52_P168319	Mia2	NM_177321	melanoma inhibitory activity 2	-1.736	1.736	4.44
A_52_P416123	Malat1	NR_002847	receptor (calcitonin) activity modifying protein 2	-1.736	1.736	6.58
A_52_P237077	Esr1	NM_007956	estrogen receptor 1 (alpha)	-1.733	1.733	4.44
A_51_P461578	Fdxr	NM_007997	ferredoxin reductase	-1.733	1.733	3.43
A_52_P362981	ENSMUST00000068960	ENSMUST00000068960	RIKEN cDNA D830050J10 gene	-1.733	1.733	2.56
A_51_P250934	Hsd17b7	NM_010476	hydroxysteroid (17-beta) dehydrogenase 7	-1.73	1.73	6.58
A_52_P599014	Kif1b	NM_207682	kinesin family member 1B	-1.73	1.73	4.44
A_52_P629487	Selenbp1	NM_009150	selenium binding protein 1	-1.73	1.73	5.56
A_52_P237077	Esr1	NM_007956	estrogen receptor 1 (alpha)	-1.73	1.73	4.44
A_51_P291713	Ncald	NM_134094	neurocalcin delta	-1.73	1.73	9.3
A_51_P417917	Plekhg5	NM_001004156	pleckstrin homology domain containing, family G (with RhoGef domain) member 5	-1.727	1.727	4.96
A_51_P402583	Gpld1	NM_008156	glycosylphosphatidylinositol specific phospholipase D1	-1.727	1.727	7.92
A_51_P125779	Serpina3a	NM_001167705	serine (or cysteine) peptidase inhibitor, clade A, member 3A	-1.727	1.727	4.96
A_52_P330201	Atp5sl	NM_025504	RIKEN cDNA 2310004L02 gene	-1.727	1.727	6.58
A_52_P78423	5330421C15Rik	AK039175	RIKEN cDNA 5330421C15 gene	-1.727	1.727	7.92
A_51_P210560	Pptc7	NM_177242	PTC7 protein phosphatase homolog (S. cerevisiae)	-1.727	1.727	4.2
A_52_P122393	Zfc3h1	NM_001033261	coiled-coil domain containing 131	-1.724	1.724	4.2
A_51_P348183	Tmem141	NM_001040130	transmembrane protein 141	-1.724	1.724	7.92
A_51_P125629	Rgs12	NM_173402	regulator of G-protein signaling 12	-1.724	1.724	4.96
A_52_P237077	Esr1	NM_007956	estrogen receptor 1 (alpha)	-1.724	1.724	4.44
A_51_P504546	Aldh1l1	NM_027406	aldehyde dehydrogenase 1 family, member L1	-1.721	1.721	6.58
A_52_P526724	Ppargc1b	NM_133249	peroxisome proliferative activated receptor, gamma, coactivator 1 beta	-1.721	1.721	9.3
A_52_P876218	Slc8a1	NM_011406	solute carrier family 8 (sodium/calcium exchanger), member 1	-1.721	1.721	5.56
A_52_P528592	Rbm9	NM_175387	RNA binding motif protein 9	-1.718	1.718	9.3
A_52_P98778	Ang4	NM_177544	angiogenin, ribonuclease A family, member 4	-1.718	1.718	7.92
A_51_P507880	Ppp4r4	NM_028980	RIKEN cDNA 8430415E04 gene	-1.718	1.718	4.96
A_52_P290088	Stbd1	AK021293	DNA segment, Chr 5, ERATO Doi 593, expressed	-1.718	1.718	3.45
A_51_P229325	Smyd3	NM_027188	SET and MYND domain containing 3	-1.718	1.718	4.2
A_51_P276063	Phyh	NM_010726	phytanoyl-CoA hydroxylase	-1.718	1.718	4.44
A_51_P467971	Ank3	NM_146005	ankyrin 3, epithelial	-1.715	1.715	5.56
A_52_P673519	Nek1	NM_175089	NIMA (never in mitosis gene a)-related expressed kinase 1	-1.715	1.715	3.45
A_51_P107243	AK079264	AK079264		-1.715	1.715	4.44
A_51_P384033	Psen2	NM_011183	presenilin 2	-1.715	1.715	7.92
A_51_P449995	C6	NM_016704	complement component 6	-1.712	1.712	5.56
A_51_P515173	Zkscan17	NM_172941	zinc finger with KRAB and SCAN domains 17	-1.712	1.712	4.2
A_51_P106859	Lsm10	NM_138721	U7 snRNP-specific Sm-like protein LSM10	-1.709	1.709	9.3
A_52_P633393	Cxxc5	NM_133687	CXXC finger 5	-1.709	1.709	7.92
A_51_P194853	Sec14l4	NM_146013	SEC14-like 4 (S. cerevisiae)	-1.709	1.709	3.45
A_51_P151214	C8b	NM_133882	complement component 8, beta subunit	-1.709	1.709	9.3

A_52_P684130	2510002D24Rik	NM_001033164	RIKEN cDNA 2510002D24 gene	-1.709	1.709	2.32
A_52_P107571	Rsrc1	NM_025822	arginine/serine-rich coiled-coil 1	-1.706	1.706	4.2
A_51_P453111	Hexb	NM_010422	hexosaminidase B	-1.706	1.706	7.92
A_51_P189442	Adh4	NM_011996	alcohol dehydrogenase 4 (class II), pi polypeptide	-1.704	1.704	9.3
A_51_P436346	1810013D15Rik	AK007475	RIKEN cDNA 1810013D15 gene	-1.701	1.701	4.96
A_51_P223132	Tln2	NM_001081242	talín 2	-1.701	1.701	3.45
A_52_P409778	Wdfy3	NM_172882	WD repeat and FYVE domain containing 3	-1.698	1.698	3.43
A_51_P167489	Lama3	NM_010680	laminin, alpha 3	-1.698	1.698	4.2
A_52_P409900	Golim4	NM_175193	golgi phosphoprotein 4	-1.698	1.698	3.45
A_51_P396752	Arl2bp	NM_024191	ADP-ribosylation factor-like 2 binding protein	-1.698	1.698	7.92
A_51_P309854	Kcnn2	NM_080465	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2	-1.698	1.698	2.56
A_51_P486008	Rbm25	NM_027349	RNA binding motif protein 25	-1.695	1.695	4.44
A_51_P224013	Tk1	NM_009387	thymidine kinase 1	-1.695	1.695	7.92
A_52_P474719	Lrrc16a	NM_026825	leucine rich repeat containing 16	-1.695	1.695	6.58
A_52_P237077	Esr1	NM_007956	estrogen receptor 1 (alpha)	-1.692	1.692	4.44
A_51_P357573	Cald1	NM_145575	caldesmon 1	-1.692	1.692	7.92
A_51_P310967	Aifm2	NM_153779	apoptosis-inducing factor, mitochondrion-associated 2	-1.692	1.692	5.56
A_51_P159895	Dnajc1	NM_007869	DnaJ (Hsp40) homolog, subfamily C, member 1	-1.692	1.692	4.96
A_52_P234127	Odz3	NM_011857	odd Oz/ten-m homolog 3 (Drosophila)	-1.692	1.692	5.56
A_52_P1045790	Al385586	Al385586		-1.689	1.689	4.2
A_51_P359078	Rangrf	NM_021329	RIKEN cDNA 2400006H24 gene	-1.689	1.689	2.56
A_52_P237077	Esr1	NM_007956	estrogen receptor 1 (alpha)	-1.686	1.686	4.2
A_51_P325501	Crip3	NM_053250	cysteine-rich protein 3	-1.686	1.686	9.3
A_51_P334789	Nudt16	NM_029385	nudix (nucleoside diphosphate linked moiety X)-type motif 16	-1.686	1.686	5.56
A_51_P267653	Olfm3	NM_153157	olfactomedin 3	-1.686	1.686	4.96
A_52_P249672	4833417J20Rik	AK014716	RIKEN cDNA 4833417J20 gene	-1.684	1.684	4.96
A_52_P365011	Fes	NM_010194	feline sarcoma oncogene	-1.684	1.684	4.2
A_52_P26976	Rbm28	NM_133925	RNA binding motif protein 28	-1.684	1.684	4.2
A_52_P286928	NAP115494-1	NAP115494-1		-1.684	1.684	2.56
A_51_P431329	Car3	NM_007606	carbonic anhydrase 3	-1.684	1.684	9.3
A_52_P626101	Letm2	AK041725	RIKEN cDNA D030041N04 gene	-1.684	1.684	4.2
A_51_P309854	Kcnn2	NM_080465	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2	-1.684	1.684	2.56
A_51_P502906	Ang4	BC132444	angiogenin, ribonuclease A family, member 4	-1.681	1.681	7.92
A_51_P417025	Tpst1	NM_013837	protein-tyrosine sulfotransferase 1	-1.681	1.681	4.44
A_51_P492797	Lrrc61	NM_177736	leucine rich repeat containing 61	-1.681	1.681	3.43
A_52_P237077	Esr1	NM_007956	estrogen receptor 1 (alpha)	-1.678	1.678	4.44
A_51_P309854	Kcnn2	NM_080465	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2	-1.675	1.675	2.56
A_51_P380215	Prkacb	NM_011100	protein kinase, cAMP dependent, catalytic, beta	-1.675	1.675	4.96
A_51_P393161	Scaper	NM_001081341	zinc finger protein 291	-1.675	1.675	9.3
A_51_P309854	Kcnn2	NM_080465	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2	-1.675	1.675	2.56
A_51_P349888	Ang2	NM_007449	angiogenin, ribonuclease A family, member 2	-1.672	1.672	7.92
A_52_P594768	Aprt	NM_009698	adenine phosphoribosyl transferase	-1.672	1.672	3.45
A_52_P237077	Esr1	NM_007956	estrogen receptor 1 (alpha)	-1.672	1.672	4.44
A_52_P51564	Arhgap10	NM_030113	Rho GTPase activating protein 10	-1.672	1.672	4.96
A_51_P101545	Hgfac	NM_019447	hepatocyte growth factor activator	-1.672	1.672	3.45
A_52_P329105	Rbm26	AK049083	RNA binding motif protein 26	-1.669	1.669	7.92
A_52_P440265	LOC100048116	XM_001479554		-1.669	1.669	6.58
A_52_P601891	LOC100047822	XM_001478931	zinc finger protein 668	-1.669	1.669	5.56

A_52_P67849	Dync2h1	NM_029851	dynein cytoplasmic 2 heavy chain 1	-1.669	1.669	6.58
A_52_P382731	Rbbp4	AK140625		-1.669	1.669	3.45
A_51_P309854	Kcnn2	NM_080465	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2	-1.667	1.667	3.43
A_51_P179504	Ang3	NM_001123394	predicted gene, EG630952	-1.667	1.667	7.92
A_52_P287839	Ccdc28a	NM_144820	coiled-coil domain containing 28A	-1.667	1.667	4.2
A_51_P114002	Gstm7	AK002213	glutathione S-transferase, mu 7	-1.667	1.667	4.44
A_52_P237077	Esr1	NM_007956	estrogen receptor 1 (alpha)	-1.664	1.664	4.96
A_52_P237077	Esr1	NM_007956	estrogen receptor 1 (alpha)	-1.664	1.664	4.44
A_52_P189038	Rbms1	NM_020296	RNA binding motif, single stranded interacting protein 1	-1.664	1.664	6.58
A_52_P97670	Atad2b	NM_001099628	ATPase family, AAA domain containing 2B	-1.661	1.661	6.58
A_51_P345792	Tmem180	NM_029186	transmembrane protein 180	-1.661	1.661	4.44
A_52_P163820	2810006K23Rik	NM_028310	RIKEN cDNA 2810006K23 gene	-1.661	1.661	4.2
A_52_P25774	Grm8	NM_008174	glutamate receptor, metabotropic 8	-1.661	1.661	9.3
A_51_P288592	BE953138	BE953138		-1.661	1.661	3.45
A_52_P314181	AK040606	AK040606		-1.661	1.661	7.92
A_52_P112676	Ccdc28b	NM_025455	coiled coil domain containing 28B	-1.661	1.661	6.58
A_51_P168439	Klhl24	AK004187	kelch-like 24 (Drosophila)	-1.658	1.658	6.58
A_52_P599736	Arhgef10l	NM_172415	Rho guanine nucleotide exchange factor (GEF) 10-like	-1.658	1.658	4.44
A_51_P175758	9430023L20Rik	NM_026566	RIKEN cDNA 9430023L20 gene	-1.658	1.658	6.58
A_51_P126484	Myo1b	NM_010863	myosin IB	-1.658	1.658	2.56
A_52_P679966	Slmap	NM_032008	sarcolemma associated protein	-1.656	1.656	7.92
A_51_P454949	Gstm3	NM_010359	glutathione S-transferase, mu 3	-1.656	1.656	9.3
A_52_P626438	NAP031829-1	NAP031829-1		-1.656	1.656	2.56
A_51_P275407	Phactr2	NM_001033257	phosphatase and actin regulator 2	-1.653	1.653	3.45
A_51_P466828	Fam109a	AK039192	RIKEN cDNA A230106M15 gene	-1.653	1.653	4.96
A_51_P159896	Dnajc1	NM_007869	DnaJ (Hsp40) homolog, subfamily C, member 1	-1.653	1.653	4.96
A_51_P404193	Sp5	NM_022435	trans-acting transcription factor 5	-1.653	1.653	6.58
A_52_P1139491	4930588G05Rik	AK019832	RIKEN cDNA 4930588G05 gene	-1.653	1.653	4.2
A_51_P309854	Kcnn2	NM_080465	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2	-1.65	1.65	3.43
A_51_P265695	Gapdhs	NM_008085	glyceraldehyde-3-phosphate dehydrogenase, spermatogenic	-1.65	1.65	6.58
A_51_P143805	Tmem42	NM_025339	transmembrane protein 42	-1.65	1.65	3.43
A_52_P635338	Fes	NM_010194	feline sarcoma oncogene	-1.65	1.65	4.96
A_51_P161682	Coq7	NM_009940	demethyl-Q 7	-1.65	1.65	4.44
A_52_P290090	Stbd1	AK021293	DNA segment, Chr 5, ERATO Doi 593, expressed	-1.65	1.65	4.96
A_52_P292213	E130203B14Rik	NM_178791	RIKEN cDNA E130203B14 gene	-1.65	1.65	4.96
A_51_P383599	Golgb1	NM_030035	golgi autoantigen, golgin subfamily b, macrogolgin 1	-1.65	1.65	4.2
A_52_P24439	Sftpa1	NM_023134	surfactant associated protein A1	-1.65	1.65	3.43
A_51_P406105	Rps4y2	NR_003634	RIKEN cDNA 1110033J19 gene	-1.65	1.65	5.56
A_51_P126476	Myo1b	NM_010863	myosin IB	-1.647	1.647	3.43
A_51_P470295	BG073133	BG073133	developmentally regulated repeat element-containing transcript 1	-1.647	1.647	4.2
A_51_P181297	Serpnb1a	NM_025429	serine (or cysteine) peptidase inhibitor, clade B, member 1a	-1.647	1.647	6.58
A_51_P358243	2610029I01Rik	NM_029840	RIKEN cDNA 2610029I01 gene	-1.647	1.647	6.58
A_51_P261999	2410075B13Rik	NM_001163518	RIKEN cDNA 2410075B13 gene	-1.645	1.645	4.96
A_51_P256323	Lpin2	NM_001164885	lipin 2	-1.645	1.645	4.2
A_51_P136303	Cyp4f15	NM_134127	cytochrome P450, family 4, subfamily f, polypeptide 15	-1.642	1.642	5.56
A_52_P60519	D19ErtD737e	NM_029648	DNA segment, Chr 19, ERATO Doi 737, expressed	-1.642	1.642	4.96
A_52_P488074	Wac	NM_153085	WW domain containing adaptor with coiled-coil	-1.642	1.642	7.92

A_51_P469724	V1rb8	NM_053229	vomeronal 1 receptor, B8	-1.642	1.642	3.45
A_51_P231072	Clec2h	NM_053165	C-type lectin domain family 2, member h	-1.642	1.642	6.58
A_51_P309854	Kcnn2	NM_080465	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2	-1.642	1.642	3.43
A_52_P380649	Prkri	NM_028410	protein-kinase, interferon-inducible double stranded RNA dependent inhibitor, repressor of (P58 repressor)	-1.639	1.639	3.45
A_52_P275354	Osbpl7	NM_001081434	oxysterol binding protein-like 7	-1.639	1.639	6.58
A_51_P323521	Snx21	NM_133924	sorting nexin family member 21	-1.639	1.639	7.92
A_51_P309854	Kcnn2	NM_080465	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2	-1.637	1.637	3.43
A_51_P133612	Cdt1	NM_026014	chromatin licensing and DNA replication factor 1	-1.637	1.637	5.56
A_51_P111164	Rnd1	NM_172612	Rho family GTPase 1	-1.634	1.634	9.3
A_52_P398730	C87414	NM_001164284	expressed sequence AA792892	-1.634	1.634	6.58
A_51_P151070	Gm9971	AK046642	predicted gene, ENSMUSG00000055440	-1.634	1.634	9.3
A_51_P511546	Gldc	NM_138595	glycine decarboxylase	-1.634	1.634	5.56
A_51_P114005	Gstm7	NM_026672	glutathione S-transferase, mu 7	-1.634	1.634	3.45
A_52_P491842	Brd3	NM_023336	bromodomain containing 3	-1.634	1.634	3.45
A_51_P293753	Cul7	NM_025611	cullin 7	-1.631	1.631	9.3
A_51_P393426	Pros1	NM_011173	protein S (alpha)	-1.631	1.631	7.92
A_51_P183261	Aqp8	NM_007474	aquaporin 8	-1.631	1.631	5.56
A_52_P434549	Acin1	NM_023190	apoptotic chromatin condensation inducer 1	-1.629	1.629	4.96
A_51_P491329	Pdzk1ip1	NM_026018	PDZK1 interacting protein 1	-1.629	1.629	2.32
A_52_P156110	lkbkg	NM_001136067	inhibitor of kappaB kinase gamma	-1.629	1.629	4.96
A_52_P253317	4930481A15Rik	NR_027939	RIKEN cDNA 4930481A15 gene	-1.626	1.626	6.58
A_52_P640922	Dcdc2a	NM_177577	doublecortin domain containing 2a	-1.626	1.626	3.45
A_52_P245059	Sgsm2	NM_197943	RUN and TBC1 domain containing 1	-1.626	1.626	7.92
A_52_P193440	E130102H24Rik	XM_001472210	RIKEN cDNA E130102H24 gene	-1.626	1.626	9.3
A_51_P309854	Kcnn2	NM_080465	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2	-1.626	1.626	3.45
A_51_P454696	Mosc1	NM_001081361	MOCO sulphurase C-terminal domain containing 1	-1.626	1.626	6.58
A_51_P466829	Fam109a	NM_175474	RIKEN cDNA A230106M15 gene	-1.623	1.623	5.56
A_52_P28624	Gm3346	XM_001477617	hypothetical protein LOC671950	-1.623	1.623	4.2
A_51_P336790	Lsm5	NM_025520	LSM5 homolog, U6 small nuclear RNA associated (S. cerevisiae)	-1.623	1.623	3.43
A_52_P280821	NAP123201-1	NAP123201-1		-1.623	1.623	3.43
A_52_P346367	Ddx42	NM_028074	DEAD (Asp-Glu-Ala-Asp) box polypeptide 42	-1.623	1.623	4.96
A_51_P409173	Ldhd	NM_008492	lactate dehydrogenase B	-1.623	1.623	3.45
A_51_P246339	Rfc5	NM_028128	replication factor C (activator 1) 5	-1.621	1.621	5.56
A_52_P177988	Fam179b	NM_177805	RIKEN cDNA A430041B07 gene	-1.621	1.621	5.56
A_51_P141660	Dmx2	NM_172771	Dmx-like 2	-1.621	1.621	5.56
A_51_P202050	Dtx1	NM_008052	deltex 1 homolog (Drosophila)	-1.621	1.621	4.96
A_52_P197179	NAP040732-1	NAP040732-1		-1.621	1.621	4.96
A_51_P262773	Cdh2	NM_007664	cadherin 2	-1.618	1.618	4.2
A_52_P135392	Uck2	BC004016	uridine-cytidine kinase 2	-1.618	1.618	3.45
A_52_P172691	4732465E10Rik	AK028870	RIKEN cDNA 4732465E10 gene	-1.618	1.618	6.58
A_51_P268514	6820445E23Rik	AK135532	predicted gene, ENSMUSG00000073100	-1.618	1.618	5.56
A_52_P289835	Foxn3	NM_183186	checkpoint suppressor 1	-1.618	1.618	7.92
A_51_P162773	Sccpdh	NM_178653	saccharopine dehydrogenase (putative)	-1.618	1.618	3.43
A_52_P365721	Senp6	NM_146003	SUMO/sentrin specific peptidase 6	-1.616	1.616	6.58
A_52_P418014	Akt1	NM_009652	thymoma viral proto-oncogene 1	-1.616	1.616	9.3
A_51_P448946	Sertad2	NM_021372	SERTA domain containing 2	-1.613	1.613	4.96
A_51_P201971	Setd8	NM_030241	SET domain containing (lysine methyltransferase) 8	-1.613	1.613	7.92
A_52_P57686	Ccdc28a	NM_144820	coiled-coil domain containing 28A	-1.61	1.61	4.96

A_51_P230103	Birc5	NM_001012273	baculoviral IAP repeat-containing 5	-1.61	1.61	6.58
A_52_P335089	6820431F20Rik	NR_028428	RIKEN cDNA 6820431F20 gene	-1.61	1.61	4.96
A_52_P131353	Camk1d	NM_177343	calcium/calmodulin-dependent protein kinase ID	-1.61	1.61	4.2
A_52_P69867	Ppme1	NM_028292	protein phosphatase methylesterase 1	-1.61	1.61	5.56
A_51_P117739	Figf	NM_010216	c-fos induced growth factor	-1.608	1.608	7.92
A_51_P428754	Grik5	NM_008168	glutamate receptor, ionotropic, kainate 5 (gamma 2)	-1.608	1.608	5.56
A_51_P309854	Kcnn2	NM_080465	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 2	-1.608	1.608	3.43
A_52_P18897	Bclaf1	NM_001025393	BCL2-associated transcription factor 1	-1.608	1.608	4.96
A_51_P366161	Mpg	NM_010822	N-methylpurine-DNA glycosylase	-1.608	1.608	9.3
A_52_P339722	Cskn1a1	NM_146087	casein kinase 1, alpha 1	-1.608	1.608	5.56
A_51_P228385	Pum2	NM_030723	pumilio 2 (Drosophila)	-1.605	1.605	4.2
A_51_P306892	Pqlc2	NM_145384	PQ loop repeat containing 2	-1.605	1.605	3.45
A_52_P324825	Tspan9	NM_175414	tetraspanin 9	-1.605	1.605	5.56
A_51_P318262	Hao1	AF104312	hydroxyacid oxidase 1, liver	-1.603	1.603	4.44
A_51_P446477	Cldnd1	NM_171826	claudin domain containing 1	-1.6	1.6	7.92
A_51_P502964	Tmem63a	NM_144794	transmembrane protein 63a	-1.6	1.6	4.44
A_52_P18775	Cyb5rl	NM_175471	RIKEN cDNA 2810410C14 gene	-1.6	1.6	3.45
A_51_P518592	Atxn7	NM_139227	ataxin 7	-1.6	1.6	9.3
A_51_P291501	Ccno	NM_001081062	cyclin U	-1.6	1.6	5.56
A_52_P541270	Crebl2	NM_177687	cAMP responsive element binding protein-like 2	-1.6	1.6	4.2
A_52_P629333	BC021891	NM_145608	cDNA sequence BC021891	-1.597	1.597	9.3
A_52_P313607	NAP108117-1	NAP108117-1		-1.597	1.597	5.56
A_52_P134874	Rnf214	AK050638	ring finger protein 214	-1.597	1.597	5.56
A_51_P265695	Gapdhs	NM_008085	glyceraldehyde-3-phosphate dehydrogenase, spermatogenic	-1.597	1.597	4.96
A_51_P268673	2210016H18Rik	AK008737	RIKEN cDNA 2210016H18 gene	-1.597	1.597	9.3
A_51_P306109	AK019683	AK019683		-1.597	1.597	5.56
A_51_P284665	Plcb1	U85712	phospholipase C, beta 1	-1.595	1.595	5.56
A_51_P265905	Zranb3	NM_027678	zinc finger, RAN-binding domain containing 3	-1.595	1.595	3.45
A_52_P639223	Bche	NM_009738	butyrylcholinesterase	-1.595	1.595	6.58
A_52_P95740	AI316807	NM_001012667	expressed sequence AI316807	-1.595	1.595	4.44
A_52_P481097	AK086528	AK086528		-1.595	1.595	2.56
A_51_P480709	Ywhaz	NM_011740	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide	-1.595	1.595	4.96
A_52_P382565	NAP101987-1	NAP101987-1	similar to putative retrovirus-related gag protein	-1.595	1.595	9.3
A_51_P191893	ENSMUST00000095785	ENSMUST00000095785	RIKEN cDNA 2410022M11 gene	-1.595	1.595	7.92
A_51_P391159	Ang	NM_007447	angiogenin, ribonuclease A family, member 1	-1.592	1.592	9.3
A_52_P408315	ENSMUST00000055564	ENSMUST00000055564	RIKEN cDNA A230074B11 gene	-1.592	1.592	9.3
A_51_P398887	Ctns	NM_031251	cystinosis, nephropathic	-1.592	1.592	9.3
A_52_P396774	2700094K13Rik	NM_001037279	RIKEN cDNA 2700094K13 gene	-1.592	1.592	5.56
A_51_P158400	Rc3h2	NM_001100591	ring finger and CCCH-type zinc finger domains 2	-1.59	1.59	4.44
A_51_P305547	Snai2	NM_011415	snail homolog 2 (Drosophila)	-1.59	1.59	7.92
A_52_P187565	LOC100038980	XM_001472087		-1.59	1.59	4.96
A_51_P406105	Rps4y2	NR_003634	RIKEN cDNA 1110033J19 gene	-1.59	1.59	5.56
A_51_P367947	Arhgap29	NM_172525	Rho GTPase activating protein 29	-1.59	1.59	5.56
A_52_P102115	AK013994	AK013994		-1.59	1.59	6.58
A_51_P385086	Thpo	NM_009379	thrombopoietin	-1.59	1.59	4.2
A_52_P135398	NAP031874-1	NAP031874-1		-1.587	1.587	3.45
A_52_P369415	Rcan2	NM_207649	Down syndrome critical region gene 1-like 1	-1.587	1.587	4.2

A_52_P545010	Slc39a11	NM_027216	solute carrier family 39 (metal ion transporter), member 11	-1.585	1.585	4.96
A_51_P235580	Dap3	NM_022994	death associated protein 3	-1.585	1.585	2.56
A_52_P965217	TC1691788	TC1691788		-1.585	1.585	7.92
A_51_P330717	Spop	NM_025287	speckle-type POZ protein	-1.582	1.582	5.56
A_51_P508402	Mical2	NM_177282	microtubule associated monooxygenase, calponin and LIM domain containing 2	-1.582	1.582	9.3
A_51_P485683	Trappc6a	NM_025960	trafficking protein particle complex 6A	-1.582	1.582	3.45
A_52_P640512	Ablim3	NM_198649	actin binding LIM protein family, member 3	-1.582	1.582	7.92
A_52_P491961	Ccdc25	NM_145944	coiled-coil domain containing 25	-1.582	1.582	5.56
A_52_P222073	Ccbp2	NM_021609	chemokine binding protein 2	-1.58	1.58	6.58
A_51_P147651	Ccdc15	NM_001081429	coiled-coil domain containing 15	-1.58	1.58	7.92
A_52_P571371	Tmem144	NM_027495	transmembrane protein 144	-1.577	1.577	5.56
A_51_P464738	Slc2a1	NM_011400	solute carrier family 2 (facilitated glucose transporter), member 1	-1.577	1.577	9.3
A_51_P215815	Atp11c	NM_001037863	ATPase, class VI, type 11C	-1.577	1.577	6.58
A_51_P406105	Rps4y2	NR_003634	RIKEN cDNA 1110033J19 gene	-1.577	1.577	5.56
A_51_P114563	Rhbdd3	NM_177370	rhomboid domain containing 3	-1.577	1.577	7.92
A_51_P384113	9330129D05Rik	NM_178799	RIKEN cDNA 9330129D05 gene	-1.577	1.577	5.56
A_51_P437938	6330578E17Rik	NM_198006	RIKEN cDNA 6330578E17 gene	-1.577	1.577	4.44
A_51_P318580	Myh14	NM_028021	myosin, heavy polypeptide 14	-1.577	1.577	6.58
A_51_P273928	AK039851	AK039851		-1.575	1.575	3.45
A_51_P406105	Rps4y2	NR_003634	RIKEN cDNA 1110033J19 gene	-1.575	1.575	5.56
A_52_P589509	Scaper	NM_001081341	zinc finger protein 291	-1.575	1.575	5.56
A_51_P215438	Prodh	NM_011172	proline dehydrogenase	-1.572	1.572	9.3
A_51_P483059	Dicer1	NM_148948	Dicer1, Dcr-1 homolog (Drosophila)	-1.572	1.572	5.56
A_51_P169567	Nfkbil1	NM_010909	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor-like 1	-1.572	1.572	6.58
A_51_P406105	Rps4y2	NR_003634	RIKEN cDNA 1110033J19 gene	-1.572	1.572	4.96
A_51_P301289	Atp5k	NM_007507	ATP synthase, H ⁺ transporting, mitochondrial F1F0 complex, subunit e	-1.572	1.572	3.45
A_52_P616996	Ube2q2	NM_180600	ubiquitin-conjugating enzyme E2Q (putative) 2	-1.57	1.57	4.96
A_52_P202367	Gm10319	NR_003624	predicted gene, EG381806	-1.57	1.57	4.44
A_51_P406105	Rps4y2	NR_003634	RIKEN cDNA 1110033J19 gene	-1.57	1.57	4.96
A_51_P158388	Cdk19	NM_198164	cell division cycle 2-like 6 (CDK8-like)	-1.57	1.57	6.58
A_51_P398596	Tnrc6b	NM_144812	trinucleotide repeat containing 6b	-1.567	1.567	5.56
A_51_P356942	Trim55	NM_001081281	tripartite motif-containing 55	-1.567	1.567	4.96
A_52_P142496	Herc1	NM_145617		-1.567	1.567	5.56
A_51_P303160	Arg1	NM_007482	arginase 1, liver	-1.567	1.567	5.56
A_52_P187987	2310001H17Rik	AK009064	RIKEN cDNA 2310001H17 gene	-1.567	1.567	5.56
A_51_P127607	Ppp2r5e	NM_012024	protein phosphatase 2, regulatory subunit B (B56), epsilon isoform	-1.565	1.565	7.92
A_51_P219532	1110003O08Rik	AK003388	RIKEN cDNA 1110003O08 gene	-1.565	1.565	6.58
A_51_P383369	Odz3	NM_011857	odd Oz/ten-m homolog 3 (Drosophila)	-1.565	1.565	7.92
A_52_P459399	Tnrc6b	NM_177124	trinucleotide repeat containing 6b	-1.565	1.565	6.58
A_52_P467805	Sfxn2	NM_053196	sideroflexin 2	-1.565	1.565	6.58
A_51_P323812	Slc6a12	NM_133661	solute carrier family 6 (neurotransmitter transporter, betaine/GABA), member 12	-1.562	1.562	6.58
A_52_P485939	Slc39a8	NM_026228	solute carrier family 39 (metal ion transporter), member 8	-1.562	1.562	4.44
A_51_P111655	Snhg11	NM_175692	RIKEN cDNA A930034L06 gene	-1.562	1.562	5.56
A_51_P236829	Zswim7	NM_027198	RIKEN cDNA 2410012H22 gene	-1.562	1.562	2.56
A_52_P505907	Gigyf2	NM_146112	trinucleotide repeat containing 15	-1.562	1.562	7.92
A_52_P43326	Rgs4	NM_009062	regulator of G-protein signaling 4	-1.56	1.56	7.92

A_51_P406105	Rps4y2	NR_003634	RIKEN cDNA 1110033J19 gene	-1.56	1.56	5.56
A_51_P336491	Csnk1a1	NM_146087	casein kinase 1, alpha 1	-1.56	1.56	5.56
A_51_P483544	Aass	NM_013930	aminoadipate-semialdehyde synthase	-1.56	1.56	4.96
A_51_P368496	Tmem98	NM_029537	transmembrane protein 98	-1.56	1.56	6.58
A_52_P456898	Lactb	NM_030717	lactamase, beta	-1.558	1.558	6.58
A_52_P558601	Rb1cc1	NM_009826	RB1-inducible coiled-coil 1	-1.558	1.558	6.58
A_52_P100293	4930526I15Rik	NR_015516	RIKEN cDNA 4930526I15 gene	-1.558	1.558	4.44
A_52_P214630	Sox9	NM_011448	SRY-box containing gene 9	-1.558	1.558	9.3
A_52_P358963	Hmg20b	NM_010440	high mobility group 20 B	-1.558	1.558	4.44
A_51_P308298	Myl9	NM_172118	myosin, light polypeptide 9, regulatory	-1.555	1.555	4.44
A_52_P137829	4930402E16Rik	ENSMUST00000039333	RIKEN cDNA 4930402E16 gene	-1.555	1.555	6.58
A_52_P9347	Ddx23	NM_001080981	DEAD (Asp-Glu-Ala-Asp) box polypeptide 23	-1.555	1.555	4.44
A_51_P159902	AU042671	XM_132325	expressed sequence AU042671	-1.555	1.555	4.2
A_52_P351574	Plcb1	NM_019677	phospholipase C, beta 1	-1.553	1.553	7.92
A_51_P219109	Il12rb1	NM_008353	interleukin 12 receptor, beta 1	-1.553	1.553	9.3
A_51_P406105	Rps4y2	NR_003634	RIKEN cDNA 1110033J19 gene	-1.553	1.553	5.56
A_52_P270446	Taok1	NM_144825	TAO kinase 1	-1.553	1.553	6.58
A_52_P677956	Pex11c	NM_026951	peroxisomal biogenesis factor 11c	-1.553	1.553	3.45
A_51_P406105	Rps4y2	NR_003634	RIKEN cDNA 1110033J19 gene	-1.553	1.553	4.96
A_51_P193130	Mrpl23	NM_011288	mitochondrial ribosomal protein L23	-1.55	1.55	3.45
A_51_P174176	Serpinf2	NM_008878	serine (or cysteine) peptidase inhibitor, clade F, member 2	-1.55	1.55	9.3
A_51_P140641	Fam176a	NM_145570	transmembrane protein 166	-1.55	1.55	4.96
A_51_P429197	Csnk1e	NM_013767	casein kinase 1, epsilon	-1.55	1.55	3.43
A_51_P475785	BC052040	NM_207264	cDNA sequence BC052040	-1.548	1.548	7.92
A_52_P52156	Isoc2a	NM_001101598	isochorismatase domain containing 2a	-1.548	1.548	5.56
A_51_P406105	Rps4y2	NR_003634	RIKEN cDNA 1110033J19 gene	-1.548	1.548	6.58
A_51_P484842	Asgr2	NM_007493	asialoglycoprotein receptor 2	-1.548	1.548	4.44
A_52_P346256	Ptcd3	NM_027275	Pentatricopeptide repeat domain 3	-1.546	1.546	9.3
A_52_P320279	Inca1	NM_213729	expressed sequence AI842396	-1.546	1.546	4.44
A_51_P212515	Ppm1l	NM_178726	protein phosphatase 1 (formerly 2C)-like	-1.546	1.546	5.56
A_52_P445382	Dnajc25	NM_001033165	RIKEN cDNA 2010203O07 gene	-1.546	1.546	6.58
A_51_P308048	Cmtm8	NM_027294	CKLF-like MARVEL transmembrane domain containing 8	-1.543	1.543	9.3
A_52_P214630	Sox9	NM_011448	SRY-box containing gene 9	-1.543	1.543	9.3
A_52_P309177	Zhx1	NM_001042438	zinc fingers and homeoboxes protein 1	-1.543	1.543	6.58
A_51_P504624	Slc24a6	NM_133221	solute carrier family 24 (sodium/potassium/calcium exchanger), member 6	-1.543	1.543	6.58
A_52_P11395	Fam123b	NM_175179	RIKEN cDNA 2810002O09 gene	-1.543	1.543	4.96
A_52_P303862	Baz2a	NM_054078	bromodomain adjacent to zinc finger domain, 2A	-1.543	1.543	3.45
A_51_P517215	Grb14	NM_016719	growth factor receptor bound protein 14	-1.543	1.543	7.92
A_52_P449199	Dyrk1b	NM_001037957	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 1b	-1.541	1.541	9.3
A_52_P581138	Ctdspl2	NM_212450	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) small phosphatase like 2	-1.541	1.541	9.3
A_51_P393748	Ddx58	NM_172689	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58	-1.538	1.538	9.3
A_51_P482070	Hist1h4d	NM_175654	histone cluster 1, H4d	-1.538	1.538	9.3
A_52_P329164	D130020L05Rik	AK087910	RIKEN cDNA D130020L05 gene	-1.536	1.536	3.45
A_51_P142046	1810049H13Rik	NM_025560	RIKEN cDNA 1810049H13 gene	-1.536	1.536	9.3
A_52_P780667	Rps4x	BE915090	ribosomal protein S4, X-linked	-1.536	1.536	6.58
A_52_P534355	Anxa7	AK041855		-1.534	1.534	6.58
A_51_P359333	Fh1	BC006048	fumarate hydratase 1	-1.534	1.534	6.58

A_52_P1188723	AK086376	AK086376		-1.534	1.534	7.92
A_51_P396852	Gsto2	NM_026619	glutathione S-transferase omega 2	-1.534	1.534	6.58
A_51_P344301	Svil	AK021019	supervillin	-1.534	1.534	5.56
A_51_P497484	Al118078	NM_172923	expressed sequence Al118078	-1.531	1.531	5.56
A_51_P296456	Ankrd11	NM_001081379	ankyrin repeat domain 11	-1.531	1.531	7.92
A_52_P463235	Ankrd33b	NM_027496	RIKEN cDNA 5730557B15 gene	-1.531	1.531	6.58
A_52_P620432	Fam82b	AK019968	RIKEN cDNA 2410005O16 gene	-1.531	1.531	7.92
A_51_P170795	Dcaf12l1	NM_178739	WD repeat domain 40B	-1.531	1.531	3.43
A_51_P138760	Abcd4	NM_008992	ATP-binding cassette, sub-family D (ALD), member 4	-1.531	1.531	5.56
A_52_P498608	Hmgn5	NM_016710	nucleosome binding protein 1	-1.531	1.531	5.56
A_51_P497993	Gpr155	AK003760	G protein-coupled receptor 155	-1.531	1.531	7.92
A_51_P268964	3100003M19Rik	AK013928	RIKEN cDNA 3100003M19 gene	-1.531	1.531	6.58
A_51_P328645	Mapk1ip1l	NM_178684	RIKEN cDNA C130032J12 gene	-1.531	1.531	9.3
A_52_P355934	Myo1b	NM_010863	myosin IB	-1.531	1.531	5.56
A_52_P14526	Zyg11b	NM_001033634	zyg-11 homolog B (C. elegans)	-1.531	1.531	9.3
A_52_P361462	ENSMUST00000051757	ENSMUST00000051757	solute carrier family 26 (sulfate transporter), member 1	-1.531	1.531	4.96
A_51_P469789	Agxt	NM_016702	alanine-glyoxylate aminotransferase	-1.529	1.529	9.3
A_52_P115191	NAP112463-1	NAP112463-1		-1.529	1.529	5.56
A_51_P473528	Ahcy	L32836	S-adenosylhomocysteine hydrolase	-1.529	1.529	4.44
A_51_P230439	Ppfbp2	NM_008905	protein tyrosine phosphatase, receptor-type, F interacting protein, binding protein 2	-1.529	1.529	9.3
A_51_P167857	Appl1	NM_145221	adaptor protein, phosphotyrosine interaction, PH domain and leucine zipper containing 1	-1.529	1.529	7.92
A_52_P108089	BC030336	NM_001164580	cDNA sequence BC030336	-1.529	1.529	9.3
A_52_P93432	M88489	M88489		-1.527	1.527	4.96
A_51_P229536	Nqo2	NM_020282	NAD(P)H dehydrogenase, quinone 2	-1.527	1.527	5.56
A_52_P467861	Prhoxnb	NM_001039678	predicted gene, EG231903	-1.527	1.527	7.92
A_51_P439711	Rif1	NM_175238	Rap1 interacting factor 1 homolog (yeast)	-1.524	1.524	6.58
A_52_P374676	NAP123498-1	NAP123498-1		-1.524	1.524	7.92
A_51_P241101	X61497	X61497		-1.524	1.524	4.96
A_51_P459661	Lipa	NM_021460	lysosomal acid lipase A	-1.524	1.524	9.3
A_51_P331431	Glt25d2	NM_177756	glycosyltransferase 25 domain containing 2	-1.524	1.524	9.3
A_51_P218814	Rp122l1	NM_026517	ribosomal protein L22 like 1	-1.524	1.524	6.58
A_51_P293706	2810021B07Rik	NM_025479	RIKEN cDNA 2810021B07 gene	-1.524	1.524	5.56
A_51_P508510	Notch1	Z11886	Notch gene homolog 1 (Drosophila)	-1.524	1.524	9.3
A_52_P563917	Tmem184a	NM_144914	cDNA sequence BC019731	-1.522	1.522	7.92
A_52_P260856	Lpp	NM_178665	LIM domain containing preferred translocation partner in lipoma	-1.522	1.522	6.58
A_52_P216226	Masp1	NM_008555	mannan-binding lectin serine peptidase 1	-1.522	1.522	4.96
A_51_P471386	Cdh20	NM_011800	cadherin 20	-1.522	1.522	4.2
A_52_P527924	Slc16a10	NM_028247	solute carrier family 16 (monocarboxylic acid transporters), member 10	-1.522	1.522	6.58
A_51_P311379	Tnrc6a	NM_144925	trinucleotide repeat containing 6a	-1.522	1.522	4.44
A_52_P477709	Dek	NM_025900	DEK oncogene (DNA binding)	-1.522	1.522	4.44
A_52_P684050	Fam110a	NM_028666	RIKEN cDNA 5430432M24 gene	-1.52	1.52	7.92
A_52_P142191	Aph1b	NM_177583	anterior pharynx defective 1b homolog (C. elegans)	-1.52	1.52	6.58
A_51_P226567	Hsd3b2	NM_153193	hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 2	-1.52	1.52	7.92
A_51_P127456	Lrrc68	ENSMUST00000058444	cDNA sequence BC024868	-1.52	1.52	7.92
A_52_P134083	Cyhr1	NM_180962	cysteine and histidine rich 1	-1.517	1.517	4.96
A_52_P641195	1700029J07Rik	NM_001033148	RIKEN cDNA 1700029J07 gene	-1.517	1.517	7.92

A_51_P153565	Il18	NM_008360	interleukin 18	-1.517	1.517	9.3
A_51_P326229	Ddx25	NM_013932	DEAD (Asp-Glu-Ala-Asp) box polypeptide 25	-1.515	1.515	5.56
A_51_P103144	Slco1a1	AY195869	solute carrier organic anion transporter family, member 1a1	-1.515	1.515	4.96
A_52_P474294	Iqgap2	NM_027711	IQ motif containing GTPase activating protein 2	-1.515	1.515	6.58
A_51_P153565	Il18	NM_008360	interleukin 18	-1.515	1.515	7.92
A_51_P153565	Il18	NM_008360	interleukin 18	-1.515	1.515	9.3
A_51_P283708	Msh2	NM_008628	mutS homolog 2 (E. coli)	-1.513	1.513	6.58
A_51_P271897	A_51_P271897	A_51_P271897	septin 10	-1.513	1.513	5.56
A_51_P472879	Masp1	ENSMUST00000023605	mannan-binding lectin serine peptidase 1	-1.513	1.513	6.58
A_52_P312828	Rtf1	NM_030112	Rtf1, Paf1/RNA polymerase II complex component, homolog (S. cerevisiae)	-1.513	1.513	5.56
A_51_P358251	2610029I01Rik	NM_029840	RIKEN cDNA 2610029I01 gene	-1.513	1.513	4.44
A_51_P438865	Pmf1	NM_025928	polyamine-modulated factor 1	-1.513	1.513	7.92
A_52_P90124	Prep	NM_011156	prolyl endopeptidase	-1.513	1.513	5.56
A_52_P470030	Kank1	NM_181404	ankyrin repeat domain 15	-1.513	1.513	9.3
A_51_P456366	Pard6a	NM_001047436	par-6 (partitioning defective 6,) homolog alpha (C. elegans)	-1.513	1.513	7.92
A_51_P159402	Gcat	NM_013847	glycine C-acetyltransferase (2-amino-3-ketobutyrate-coenzyme A ligase)	-1.511	1.511	6.58
A_51_P405970	Trrap	NM_001081362	transformation/transcription domain-associated protein	-1.511	1.511	5.56
A_52_P322421	Mpzl2	NM_007962	epithelial V-like antigen 1	-1.508	1.508	9.3
A_51_P399652	Ccdc151	NM_029939	RIKEN cDNA C330001K17 gene	-1.508	1.508	7.92
A_51_P508510	Notch1	Z11886	Notch gene homolog 1 (Drosophila)	-1.508	1.508	9.3
A_52_P586104	NAP061056-1	NAP061056-1		-1.508	1.508	4.96
A_51_P127934	Fancl	NM_025923	Fanconi anemia, complementation group L	-1.508	1.508	4.44
A_52_P300331	Wwp1	NM_177327	WW domain containing E3 ubiquitin protein ligase 1	-1.508	1.508	5.56
A_51_P270891	1700056E22Rik	XM_484951	RIKEN cDNA 1700056E22 gene	-1.508	1.508	4.96
A_51_P198488	Thap7	NM_026909	THAP domain containing 7	-1.508	1.508	4.44
A_52_P368881	Prr8	NM_028234	proline rich 8	-1.506	1.506	9.3
A_51_P379171	AK007819	AK007819		-1.506	1.506	6.58
A_52_P141384	Cdcp1	BC034137	CUB domain containing protein 1	-1.506	1.506	6.58
A_52_P124097	Zfp91	NM_053009	zinc finger protein 91	-1.506	1.506	7.92
A_52_P660753	Taf1	NM_001081008	TAF1 RNA polymerase II, TATA box binding protein (TBP)-associated factor	-1.506	1.506	6.58
A_51_P408749	4933439C10Rik	NR_015585	RIKEN cDNA 4933439C10 gene	-1.504	1.504	4.96
A_51_P167105	B3galt4	NM_019420	UDP-Gal:betaGalNAc beta 1,3-galactosyltransferase, polypeptide 4	-1.504	1.504	6.58
A_52_P471088	Ctage5	NM_146034	meningioma expressed antigen 6 (coiled-coil proline-rich)	-1.504	1.504	7.92
A_52_P779909	TC1721552	TC1721552		-1.504	1.504	4.96
A_52_P156932	Wac	NM_153085	WW domain containing adaptor with coiled-coil	-1.504	1.504	9.3
A_52_P708886	BB755555	BB755555		-1.502	1.502	4.96
A_52_P149766	Myo1e	NM_181072	myosin IE	-1.502	1.502	6.58
A_52_P638513	2310061J03Rik	NR_027965	RIKEN cDNA 2310061J03 gene	-1.502	1.502	5.56
A_51_P153565	Il18	NM_008360	interleukin 18	-1.502	1.502	9.3
A_51_P400375	0610007P14Rik	NM_021446	RIKEN cDNA 0610007P14 gene	-1.502	1.502	7.92
A_52_P674568	BC024659	NM_001135577	cDNA sequence BC024659	-1.502	1.502	5.56
A_51_P300281	Coro1a	NM_009898	coronin, actin binding protein 1A	1.5	1.5	6.58
A_52_P492644	D19Bwg1357e	NM_177474	DNA segment, Chr 19, Brigham & Women's Genetics 1357 expressed	1.5	1.5	9.3
A_52_P407983	4930402H24Rik	AK015050	RIKEN cDNA 4930402H24 gene	1.501	1.501	9.3
A_52_P614731	Gng12	NM_025278	guanine nucleotide binding protein (G protein), gamma 12	1.501	1.501	6.58

A_52_P158710	Dcbl1	NM_025705	discoidin, CUB and LCCL domain containing 1	1.501	1.501	9.3
A_52_P18596	NAP111074-1	NAP111074-1	hypothetical protein LOC622592	1.502	1.502	7.92
A_52_P214573	Lysmd3	AK003980	LysM, putative peptidoglycan-binding, domain containing 3	1.502	1.502	9.3
A_52_P327381	Fndc4	NM_022424	fibronectin type III domain containing 4	1.502	1.502	7.92
A_51_P342877	Scn1b	NM_011322	sodium channel, voltage-gated, type I, beta	1.502	1.502	6.58
A_52_P652212	Psm14	NM_021526	proteasome (prosome, macropain) 26S subunit, non-ATPase, 14	1.503	1.503	5.56
A_52_P350477	Mcf2	NM_139295	multiple coagulation factor deficiency 2	1.504	1.504	7.92
A_52_P151853	Tpd52	NM_001025262	tumor protein D52	1.504	1.504	7.92
A_52_P677117	Ptpcr	NM_011210	protein tyrosine phosphatase, receptor type, C	1.505	1.505	7.92
A_52_P290369	Usp19	NM_027804	ubiquitin specific peptidase 19	1.505	1.505	6.58
A_52_P582059	Lyz1	NM_013590	lysozyme	1.507	1.507	4.96
A_51_P296429	Tmem170	NM_025781	transmembrane protein 170	1.507	1.507	9.3
A_52_P652704	Hspa4l	NM_011020	heat shock protein 4 like	1.508	1.508	7.92
A_51_P442583	Parp4	NM_001145978	poly (ADP-ribose) polymerase family, member 4	1.508	1.508	7.92
A_51_P402943	S100a9	NM_009114	S100 calcium binding protein A9 (calgranulin B)	1.508	1.508	9.3
A_51_P169783	ENSMUST00000109390	ENSMUST00000109390	alpha globin regulatory element containing gene	1.51	1.51	7.92
A_51_P481721	Sult1d1	NM_016771	sulfotransferase family 1D, member 1	1.511	1.511	9.3
A_52_P55902	Il15ra	NM_008358	interleukin 15 receptor, alpha chain	1.511	1.511	9.3
A_52_P341449	Pgm3	NM_028352	phosphoglucomutase 3	1.512	1.512	7.92
A_51_P466673	Sfrs7	NM_146083	splicing factor, arginine/serine-rich 7	1.512	1.512	9.3
A_51_P490323	Pzp	NM_007376		1.513	1.513	9.3
A_52_P677117	Ptpcr	NM_011210	protein tyrosine phosphatase, receptor type, C	1.514	1.514	5.56
A_52_P181733	Fam102a	NM_153560	RIKEN cDNA C230093N12 gene	1.514	1.514	5.56
A_51_P332627	Mybbp1a	NM_016776	MYB binding protein (P160) 1a	1.515	1.515	6.58
A_52_P605387	Tsg101	NM_021884	tumor susceptibility gene 101	1.515	1.515	5.56
A_51_P502054	Gtf2b	NM_145546	general transcription factor IIB	1.516	1.516	9.3
A_51_P465043	Pole4	NM_025882	polymerase (DNA-directed), epsilon 4 (p12 subunit)	1.516	1.516	4.96
A_52_P677117	Ptpcr	NM_011210	protein tyrosine phosphatase, receptor type, C	1.517	1.517	9.3
A_51_P207403	Pwp1	NM_133993	PWP1 homolog (S. cerevisiae)	1.517	1.517	5.56
A_51_P313337	2700089E24Rik	NM_001163445	RIKEN cDNA 2700089E24 gene	1.519	1.519	4.44
A_51_P334942	Aldh1a1	NM_013467	aldehyde dehydrogenase family 1, subfamily A1 development and differentiation enhancing factor-like 1	1.519	1.519	6.58
A_51_P502203	Asap3	NM_001008232		1.52	1.52	7.92
A_51_P120239	Ptfr	NM_008986	polymerase I and transcript release factor	1.52	1.52	7.92
A_52_P612803	Ccng1	NM_009831	cyclin G1	1.521	1.521	7.92
A_51_P223475	Chuk	NM_007700	conserved helix-loop-helix ubiquitous kinase	1.521	1.521	7.92
A_51_P317706	Uba1	NM_009457	ubiquitin-activating enzyme E1, Chr X	1.521	1.521	7.92
A_52_P112182	Gnas	S49980	GNAS (guanine nucleotide binding protein, alpha stimulating) complex locus	1.521	1.521	7.92
A_51_P224872	Syne2	NM_001005510	synaptic nuclear envelope 2	1.522	1.522	6.58
A_51_P389539	Gpr98	NM_054053	G protein-coupled receptor 98	1.522	1.522	7.92
A_51_P483180	Snx7	NM_029655	sorting nexin 7	1.522	1.522	6.58
A_52_P528545	Rabggt1	NM_019519	Rab geranylgeranyl transferase, a subunit	1.523	1.523	4.96
A_51_P246705	Nop14	NM_029278	nucleolar protein 14	1.524	1.524	7.92
A_51_P306047	Sec13	NM_024206	SEC13 homolog (S. cerevisiae)	1.524	1.524	5.56
A_52_P677117	Ptpcr	NM_011210	protein tyrosine phosphatase, receptor type, C	1.525	1.525	9.3
A_52_P532029	Tbk1	NM_019786	TANK-binding kinase 1	1.526	1.526	6.58
A_52_P85020	Gadd45gip1	NM_183358	growth arrest and DNA-damage-inducible, gamma interacting protein 1	1.527	1.527	6.58
A_52_P141161	Hnrnpf	NM_133834	heterogeneous nuclear ribonucleoprotein F	1.527	1.527	7.92
A_51_P241407	Arap2	NM_178407		1.527	1.527	7.92

A_52_P677117	Ptprc	NM_011210	protein tyrosine phosphatase, receptor type, C	1.529	1.529	7.92
A_52_P59908	4930420K17Rik	AK080123	RIKEN cDNA E030031F02 gene	1.529	1.529	9.3
A_51_P484027	AF251705	NM_134158	Cd300D antigen	1.529	1.529	7.92
A_51_P436020	Tmem167	NM_025335	transmembrane protein 167	1.53	1.53	9.3
A_51_P324768	Gm14288	NM_001033123	similar to gonadotropin inducible ovarian transcription factor 1	1.53	1.53	6.58
A_51_P153982	Cytsb	NM_001029936	sperm antigen with calponin homology and coiled-coil domains 1	1.531	1.531	5.56
A_51_P270286	Dync1li1	NM_146229	dynein cytoplasmic 1 light intermediate chain 1	1.535	1.535	7.92
A_52_P509744	Nup160	NM_021512	nucleoporin 160	1.536	1.536	7.92
A_51_P371120	Sec23b	NM_019787	SEC23B (<i>S. cerevisiae</i>)	1.536	1.536	9.3
A_52_P234138	Ube2d3	NM_025356	ubiquitin-conjugating enzyme E2D 3 (UBC4/5 homolog, yeast)	1.538	1.538	7.92
A_52_P517001	Rpf1	NM_027371	brix domain containing 5	1.54	1.54	4.96
A_51_P481159	Cbr3	NM_173047	carbonyl reductase 3	1.54	1.54	9.3
A_52_P304128	Mmp14	NM_008608	matrix metalloproteinase 14 (membrane-inserted)	1.541	1.541	7.92
A_51_P517928	Hspa4l	NM_011020	heat shock protein 4 like	1.542	1.542	9.3
A_52_P488305	Ndel1	NM_023668	nuclear distribution gene E-like homolog 1 (<i>A. nidulans</i>)	1.542	1.542	6.58
A_52_P1140740	AK089858	AK089858		1.543	1.543	7.92
A_52_P662098	Net1	NM_019671	neuroepithelial cell transforming gene 1	1.543	1.543	9.3
A_52_P260818	Card10	NM_130859	caspase recruitment domain family, member 10	1.543	1.543	5.56
A_51_P152216	Tmem41a	NM_025693	transmembrane protein 41a	1.545	1.545	6.58
A_51_P209308	Polr1e	NM_022811	polymerase (RNA) I polypeptide E	1.547	1.547	9.3
A_52_P85152	Acad11	NM_175324	acyl-Coenzyme A dehydrogenase family, member 11	1.547	1.547	6.58
A_51_P115093	Nup153	NM_175749	nucleoporin 153	1.547	1.547	9.3
A_52_P48976	Il17rc	AK033890	interleukin 17 receptor C	1.547	1.547	9.3
A_51_P164030	Tcp1	NM_013686	t-complex protein 1	1.547	1.547	4.96
A_52_P326214	Cttn	NM_007803	cortactin	1.548	1.548	5.56
A_52_P231410	Polr3e	NM_025298	polymerase (RNA) III (DNA directed) polypeptide E	1.548	1.548	9.3
A_52_P667923	Hspa4l	NM_011020	heat shock protein 4 like	1.548	1.548	9.3
A_51_P206849	Gm14288	NM_001033123	RIKEN cDNA 2210418O10 gene	1.549	1.549	6.58
A_52_P685021	Cxcl12	NM_021704	chemokine (C-X-C motif) ligand 12	1.55	1.55	9.3
A_52_P276343	D19Bwg1357e	NM_177474	DNA segment, Chr 19, Brigham & Women's Genetics 1357 expressed	1.551	1.551	7.92
A_51_P313561	Lmna	NM_019390	lamin A	1.552	1.552	9.3
A_52_P250753	Ghitm	NM_078478	growth hormone inducible transmembrane protein	1.554	1.554	5.56
A_51_P375227	Bcar1	NM_009954	breast cancer anti-estrogen resistance 1	1.557	1.557	9.3
A_52_P598971	Chd9	NM_177224	chromodomain helicase DNA binding protein 9	1.557	1.557	9.3
A_52_P32864	Prps2	NM_026662	phosphoribosyl pyrophosphate synthetase 2	1.557	1.557	5.56
A_51_P155174	Zfp672	NR_028331	zinc finger protein 672	1.558	1.558	9.3
A_51_P235878	Guk1	NM_008193	guanylate kinase 1	1.558	1.558	6.58
A_52_P305685	NAP111601-1	NAP111601-1		1.559	1.559	4.96
A_51_P439746	Tmem49	NM_029478	transmembrane protein 49	1.56	1.56	7.92
A_51_P463497	Rnh1	NM_145135	ribonuclease/angiogenesis inhibitor 1	1.56	1.56	6.58
A_51_P432924	Ugt2b34	NM_153598	UDP glucuronosyltransferase 2 family, polypeptide B34	1.56	1.56	9.3
A_52_P305539	Kng2	NM_201375	kininogen 2	1.562	1.562	7.92
A_52_P616392	Sbno2	NM_183426	strawberry notch homolog 2 (<i>Drosophila</i>)	1.562	1.562	6.58
A_52_P608020	Kpna2	NM_010655	karyopherin (importin) alpha 2	1.562	1.562	7.92
A_51_P490023	Tubb2a	NM_009450	tubulin, beta 2a	1.564	1.564	7.92
A_51_P340226	Sh3yl1	NM_013709	Sh3 domain YSC-like 1	1.566	1.566	5.56
A_51_P297865	Kctd6	NM_027782	potassium channel tetramerisation domain containing 6	1.567	1.567	4.44

A_52_P561073	Tox	NM_145711	thymocyte selection-associated HMG box gene	1.567	1.567	9.3
A_52_P175066	Cd2ap	NM_009847	CD2-associated protein	1.567	1.567	9.3
A_51_P465449	Mybpc3	NM_008653	myosin binding protein C, cardiac	1.567	1.567	3.45
A_52_P205789	Unc119b	NM_175352	expressed sequence AA407659	1.569	1.569	6.58
A_51_P337675	Cd53	NM_007651	CD53 antigen	1.569	1.569	5.56
A_51_P135137	St3gal4	NM_009178	ST3 beta-galactoside alpha-2,3-sialyltransferase 4	1.57	1.57	9.3
A_52_P415440	Rps12	AK132208		1.571	1.571	9.3
A_51_P291819	Z310033P09Rik	NM_024210	RIKEN cDNA Z310033P09 gene	1.572	1.572	4.44
A_52_P650553	Coq10b	NM_001039710	coenzyme Q10 homolog B (<i>S. cerevisiae</i>)	1.572	1.572	9.3
A_52_P249965	Xdh	NM_011723	xanthine dehydrogenase	1.573	1.573	9.3
A_51_P244453	Kctd3	NM_172650	potassium channel tetramerisation domain containing 3	1.573	1.573	9.3
A_51_P384193	Eif4g1	NM_145941	eukaryotic translation initiation factor 4, gamma 1	1.575	1.575	9.3
A_52_P452787	Pdcd6ip	NM_011052	programmed cell death 6 interacting protein	1.575	1.575	6.58
A_51_P339503	Cct4	NM_009837	chaperonin subunit 4 (delta)	1.576	1.576	5.56
A_52_P440102	Crnk1	NM_025820	Cm, crooked neck-like 1 (<i>Drosophila</i>)	1.576	1.576	6.58
A_51_P124505	lars	NM_172015	isoleucine-tRNA synthetase	1.576	1.576	6.58
A_52_P598278	Tubb2c	NM_146116	tubulin, beta 2c	1.58	1.58	6.58
A_52_P309381	Cfh	NM_009888	complement component factor h	1.581	1.581	4.2
A_51_P187579	M17518	M17518		1.582	1.582	7.92
A_51_P230624	Z010109K11Rik	NM_001162903	RIKEN cDNA Z010109K11 gene	1.583	1.583	9.3
A_52_P605846	Cebpb	NM_009883	CCAAT/enhancer binding protein (C/EBP), beta	1.583	1.583	6.58
A_52_P517006	Rpf1	NM_027332	brix domain containing 5	1.583	1.583	4.44
A_51_P319425	Utp20	NM_175158	UTP20, small subunit (SSU) processome component, homolog (yeast)	1.583	1.583	4.96
A_52_P192106	Gm6548	NR_003363	predicted gene, EG625054	1.584	1.584	6.58
A_51_P258078	Nop2	NM_138747	nucleolar protein 1	1.585	1.585	9.3
A_51_P413097	Ints2	NM_027421	integrator complex subunit 2	1.589	1.589	6.58
A_51_P317941	Perp	NM_022032	PERP, TP53 apoptosis effector	1.591	1.591	4.96
A_52_P320553	Z900097C17Rik	NR_024329		1.592	1.592	7.92
A_51_P225427	Pkp2	NM_026163	plakophilin 2	1.592	1.592	9.3
A_52_P10932	Asb8	NM_030121	ankyrin repeat and SOCS box-containing protein 8	1.594	1.594	4.96
A_51_P381988	Hmx1	NM_010445	H6 homeo box 1	1.594	1.594	7.92
A_51_P200561	Z4930506M07Rik	NM_175172	RIKEN cDNA Z4930506M07 gene	1.594	1.594	4.96
A_52_P1330	Nol9	NM_001159599	nucleolar protein 9	1.596	1.596	5.56
A_51_P263302	Rnf24	NM_178607	ring finger protein 24	1.596	1.596	5.56
A_51_P195573	Dnmt1	NM_010066	DNA methyltransferase (cytosine-5) 1	1.598	1.598	6.58
A_51_P249494	Sdcbp	NM_016807	syndecan binding protein	1.598	1.598	7.92
A_51_P116130	Ube2g2	NM_019803	ubiquitin-conjugating enzyme E2G 2	1.598	1.598	7.92
A_51_P450957	Acta2	NM_007392	actin, alpha 2, smooth muscle, aorta	1.599	1.599	6.58
A_52_P329398	Atp12a	NM_138652	ATPase, H ⁺ /K ⁺ transporting, nongastric, alpha polypeptide	1.599	1.599	9.3
A_52_P685666	Cct3	NM_009836	chaperonin subunit 3 (gamma)	1.6	1.6	9.3
A_51_P363657	Stk40	NM_028800	serine/threonine kinase 40	1.6	1.6	7.92
A_51_P210395	Glrx	NM_053108	glutaredoxin	1.6	1.6	9.3
A_51_P258493	Per3	NM_011067	period homolog 3 (<i>Drosophila</i>)	1.601	1.601	5.56
A_51_P259995	Mak16	NM_026453	RNA binding motif protein 13	1.602	1.602	7.92
A_52_P242438	Arf1	NM_007476	ADP-ribosylation factor 1	1.604	1.604	6.58
A_52_P732508	A_52_P732508	A_52_P732508		1.606	1.606	4.44
A_52_P404403	Xrn2	NM_011917	5'-3' exoribonuclease 2	1.606	1.606	5.56
A_51_P512525	EG214403	NM_001029977	complement component factor h	1.607	1.607	3.45
A_51_P110455	Hsph1	NM_013559	heat shock protein 110	1.607	1.607	9.3
A_51_P506792	Tpd52	NM_001025261	tumor protein D52	1.607	1.607	7.92

A_52_P548940	Trim11	NM_053168	tripartite motif protein 11	1.607	1.607	4.44
A_51_P499918	Hck	NM_010407	hemopoietic cell kinase	1.609	1.609	9.3
A_51_P442016	Camkk2	AK050846	calcium/calmodulin-dependent protein kinase kinase 2, beta	1.609	1.609	4.96
A_51_P428708	C4b	NM_009780	complement component 4B (Childo blood group)	1.609	1.609	5.56
A_52_P394291	1190002N15Rik	NM_001033145	RIKEN cDNA 1190002N15 gene	1.611	1.611	5.56
A_51_P439970	Ggh	NM_010281	gamma-glutamyl hydrolase	1.611	1.611	9.3
A_51_P512519	EG214403	M29009	predicted gene, EG214403	1.612	1.612	6.58
A_51_P103659	Tubb2a	NM_009450	tubulin, beta 2a	1.612	1.612	6.58
A_51_P182794	Tgm2	NM_009373	transglutaminase 2, C polypeptide	1.612	1.612	7.92
A_51_P152725	NAP057020-1	NAP057020-1		1.612	1.612	4.44
A_51_P306066	Eif4g2	NM_013507	eukaryotic translation initiation factor 4, gamma 2	1.614	1.614	5.56
A_52_P408025	Mpped2	NM_001143683	metallophosphoesterase domain containing 2	1.616	1.616	9.3
A_51_P247955	Dhx15	NM_007839	DEAH (Asp-Glu-Ala-His) box polypeptide 15	1.617	1.617	7.92
A_51_P243930	Qrs1	NM_001081054	glutaminyl-tRNA synthase (glutamine-hydrolyzing)-like 1	1.618	1.618	9.3
A_51_P155234	Bnip3	NM_009760	BCL2/adenovirus E1B interacting protein 1, NIP3	1.619	1.619	5.56
A_52_P463578	Mphosph10	NM_026483	M-phase phosphoprotein 10 (U3 small nucleolar ribonucleoprotein)	1.621	1.621	7.92
A_51_P345316	Cep76	NM_001081073	centrosomal protein 76	1.621	1.621	3.45
A_51_P354077	Svil	NM_153153	supervillin	1.622	1.622	9.3
A_51_P428555	Adh1	NM_007409	alcohol dehydrogenase 1 (class I)	1.622	1.622	7.92
A_51_P114722	Hao2	NM_019545	hydroxyacid oxidase (glycolate oxidase) 3	1.624	1.624	5.56
A_51_P475156	Rnf19b	NM_029219	IBR domain containing 3	1.625	1.625	4.96
A_52_P358860	Gss	NM_008180	glutathione synthetase	1.625	1.625	4.96
A_52_P419678	Serpina3f	NM_001033335	serine (or cysteine) peptidase inhibitor, clade A, member 3F	1.625	1.625	9.3
A_52_P131548	Jub	NM_010590	ajuba	1.626	1.626	9.3
A_51_P353360	Farsb	NM_011811	phenylalanyl-tRNA synthetase, beta subunit	1.626	1.626	5.56
A_51_P364140	Ldha	NM_010699	lactate dehydrogenase A	1.627	1.627	6.58
A_51_P316379	Gpr146	NM_030258	G protein-coupled receptor 146	1.627	1.627	9.3
A_52_P373938	Gpd2	NM_001145820	glycerol phosphate dehydrogenase 2, mitochondrial	1.629	1.629	9.3
A_52_P232507	Mup3	M27608	major urinary protein 3	1.63	1.63	9.3
A_51_P416613	1810058I24Rik	AK082166	RIKEN cDNA 1810058I24 gene	1.63	1.63	5.56
A_51_P247960	Dhx15	AF017153	DEAH (Asp-Glu-Ala-His) box polypeptide 15	1.631	1.631	6.58
A_51_P387239	ligp1	NM_021792	interferon inducible GTPase 1	1.632	1.632	5.56
A_52_P49406	E430028B21Rik	NM_178668	RIKEN cDNA E430028B21 gene	1.632	1.632	9.3
A_51_P405882	Dmtf1	NM_011806	cyclin D binding myb-like transcription factor 1	1.632	1.632	5.56
A_51_P415555	Amy2a5	NM_001042711	amylase 2, pancreatic	1.633	1.633	7.92
A_51_P462102	Gpr125	NM_133911	G protein-coupled receptor 125	1.635	1.635	4.2
A_51_P377547	Tank	NM_011529	TRAF family member-associated Nf-kappa B activator	1.637	1.637	6.58
A_52_P207182	Arcn1	NM_145985	archain 1	1.639	1.639	4.96
A_52_P303834	Nek6	NM_021606	NIMA (never in mitosis gene a)-related expressed kinase 6	1.64	1.64	5.56
A_51_P164296	Adamdec1	NM_021475	ADAM-like, decysin 1	1.641	1.641	7.92
A_51_P184936	Zbp1	NM_021394	Z-DNA binding protein 1	1.641	1.641	9.3
A_51_P510782	Card10	NM_130859	caspace recruitment domain family, member 10	1.641	1.641	4.44
A_52_P452315	Syne2	NM_001005510	synaptic nuclear envelope 2	1.642	1.642	4.96
A_51_P226417	Rraga	NM_178376	Ras-related GTP binding A	1.643	1.643	9.3
A_51_P453343	Pnpt1	NM_027869	polyribonucleotide nucleotidyltransferase 1	1.644	1.644	5.56
A_51_P305843	Chordc1	NM_025844	cysteine and histidine-rich domain (CHORD)-containing, zinc-binding protein 1	1.645	1.645	5.56
A_52_P572476	Dhrs9	AK089247	dehydrogenase/reductase (SDR family) member 9	1.647	1.647	4.44

A_51_P485043	Hsp90ab1	NM_008302	heat shock protein 90kDa alpha (cytosolic), class B member 1	1.647	1.647	4.96
A_51_P365189	Il13ra1	NM_133990	interleukin 13 receptor, alpha 1	1.648	1.648	9.3
A_52_P385896	Atp8a1	NM_001038999	ATPase, aminophospholipid transporter (APLT), class I, type 8A, member 1	1.648	1.648	6.58
A_51_P223458	Polr3d	NM_025945	polymerase (RNA) III (DNA directed) polypeptide D	1.649	1.649	9.3
A_51_P463846	Gbp6	NM_145545	guanylate binding protein 6	1.65	1.65	7.92
A_51_P209996	Tuba-rs1	M19413	tubulin alpha, related sequence 1	1.652	1.652	6.58
A_52_P607674	Ppap2c	NM_015817	phosphatidic acid phosphatase type 2c	1.654	1.654	9.3
A_52_P460526	Eif4g2	NM_013507	eukaryotic translation initiation factor 4, gamma 2	1.656	1.656	4.96
A_51_P422124	Fam126a	NM_053090	down-regulated by Ctnnb1, a	1.658	1.658	7.92
A_51_P314497	Btbd10	NM_133700	BTB (POZ) domain containing 10	1.66	1.66	9.3
A_52_P299505	Eef1a1	NM_010106	eukaryotic translation elongation factor 1 alpha 1	1.661	1.661	5.56
A_51_P237367	Plekha1	NM_133942	pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 1	1.662	1.662	5.56
A_52_P372032	Ddx21	NM_019553	DEAD (Asp-Glu-Ala-Asp) box polypeptide 21	1.667	1.667	5.56
A_51_P182116	Rcan1	NM_019466	Down syndrome critical region homolog 1 (human)	1.667	1.667	3.45
A_51_P345393	Fas	NM_007987	Fas (TNF receptor superfamily member)	1.669	1.669	5.56
A_51_P464175	Aldh3a2	NM_007437	aldehyde dehydrogenase family 3, subfamily A2	1.67	1.67	9.3
A_52_P385409	Flnb	NM_134080	filamin, beta	1.672	1.672	4.96
A_52_P470316	Laptm4b	NM_033521	lysosomal-associated protein transmembrane 4B	1.672	1.672	4.44
A_51_P345393	Fas	NM_007987	Fas (TNF receptor superfamily member)	1.672	1.672	5.56
A_51_P431470	Mmd	NM_026178	monocyte to macrophage differentiation-associated	1.673	1.673	7.92
A_51_P182796	Tgm2	NM_009373	transglutaminase 2, C polypeptide	1.673	1.673	7.92
A_52_P656336	Crot	NM_023733	carnitine O-octanoyltransferase	1.675	1.675	6.58
A_52_P441974	Evc2	NM_145920	Ellis van Creveld syndrome 2 homolog (human)	1.675	1.675	4.96
A_51_P345393	Fas	NM_007987	Fas (TNF receptor superfamily member)	1.677	1.677	5.56
A_51_P291078	Sel113	NM_172710	RIKEN cDNA 2310045A20 gene	1.68	1.68	9.3
A_51_P281930	Hsd12	NM_024255	hydroxysteroid dehydrogenase like 2	1.68	1.68	9.3
A_52_P134666	Srpr	NM_026130	signal recognition particle receptor ('docking protein')	1.681	1.681	4.96
A_52_P557240	Ugt3a2	NM_144845	UDP glycosyltransferases 3 family, polypeptide A2	1.681	1.681	4.96
A_51_P153624	Impg2	NM_174876	interphotoreceptor matrix proteoglycan 2	1.681	1.681	4.96
A_51_P345393	Fas	NM_007987	Fas (TNF receptor superfamily member)	1.681	1.681	4.96
A_51_P375969	Ces3	NM_053200	carboxylesterase 3	1.682	1.682	4.96
A_51_P401184	Rarres1	NM_001164763	retinoic acid receptor responder (tazarotene induced) 1	1.683	1.683	7.92
A_51_P259230	Nup35	NM_027091	nucleoporin 35	1.683	1.683	4.96
A_52_P257812	Lpl	NM_008509	lipoprotein lipase	1.683	1.683	9.3
A_51_P186531	Tbrg1	NM_025289	transforming growth factor beta regulated gene 1	1.684	1.684	4.96
A_51_P145402	Tuba3a	NM_009446	tubulin, alpha 3A	1.687	1.687	4.96
A_51_P349961	Gc	NM_008096	group specific component	1.688	1.688	6.58
A_51_P468558	Trem14	NM_172623	triggering receptor expressed on myeloid cells-like 4	1.688	1.688	5.56
A_51_P345393	Fas	NM_007987	Fas (TNF receptor superfamily member)	1.688	1.688	5.56
A_51_P345393	Fas	NM_007987	Fas (TNF receptor superfamily member)	1.689	1.689	5.56
A_51_P321341	Sult1a1	NM_133670	sulfotransferase family 1A, phenol-preferring, member 1	1.689	1.689	4.44
A_52_P282200	Dock8	AK035336	dedicator of cytokinesis 8	1.691	1.691	9.3
A_52_P309389	Cfh	NM_009888	complement component factor h	1.691	1.691	3.45
A_52_P183598	BC026782	NM_001025575	complement component factor h	1.692	1.692	4.96
A_51_P280455	Prg4	NM_021400	proteoglycan 4 (megakaryocyte stimulating factor, articular superficial zone protein)	1.695	1.695	4.96
A_52_P338479	Unc13b	AK039015	unc-13 homolog B (C. elegans)	1.696	1.696	4.2
A_51_P345393	Fas	NM_007987	Fas (TNF receptor superfamily member)	1.701	1.701	5.56
A_51_P267063	Ugt3a2	NM_144845	UDP glycosyltransferases 3 family, polypeptide A2	1.705	1.705	3.43

A_51_P180905	Pcsk6	NM_011048	proprotein convertase subtilisin/kexin type 6	1.709	1.709	7.92
A_52_P460929	BC048507	NM_001001185	cDNA sequence BC048507	1.709	1.709	5.56
A_51_P292933	Brix1	NM_026396	brix domain containing 2	1.712	1.712	5.56
A_51_P439876	Map4k4	NM_008696	mitogen-activated protein kinase kinase kinase kinase 4	1.713	1.713	4.96
A_51_P307168	Ddah1	NM_026993		1.714	1.714	6.58
A_52_P604025	Gm5081	NM_001037746	expressed sequence AU021838	1.714	1.714	7.92
A_51_P345393	Fas	NM_007987	Fas (TNF receptor superfamily member)	1.715	1.715	4.96
A_51_P273213	Grhl1	NM_145890	grainyhead-like 1 (Drosophila)	1.715	1.715	7.92
A_52_P508985	Asb8	NM_030121	ankyrin repeat and SOCS box-containing protein 8	1.716	1.716	4.96
A_52_P413289	Arl1	NM_025859	ADP-ribosylation factor-like 1	1.717	1.717	7.92
A_51_P322396	Ugt3a1	NM_207216	UDP glycosyltransferases 3 family, polypeptide A1	1.717	1.717	3.43
A_52_P488640	Lima1	NM_023063	LIM domain and actin binding 1	1.719	1.719	3.43
A_51_P384673	Lrrc59	NM_133807	leucine rich repeat containing 59	1.719	1.719	4.96
A_51_P265374	Vnn3	NM_011979	vanin 3	1.72	1.72	6.58
A_52_P363452	1700019G17Rik	NM_029331	RIKEN cDNA 1700019G17 gene	1.722	1.722	5.56
A_51_P282760	Per2	NM_011066	period homolog 2 (Drosophila)	1.724	1.724	7.92
A_51_P286737	Ccl2	NM_011333	chemokine (C-C motif) ligand 2	1.728	1.728	7.92
A_51_P377856	Gst3	NM_133994	glutathione S-transferase, theta 3	1.729	1.729	9.3
A_51_P412640	Ccdc51	NM_025689	coiled-coil domain containing 51	1.73	1.73	6.58
A_51_P345393	Fas	NM_007987	Fas (TNF receptor superfamily member)	1.731	1.731	4.96
A_51_P345393	Fas	NM_007987	Fas (TNF receptor superfamily member)	1.731	1.731	4.96
A_51_P110471	Ddah1	NM_026993	dimethylarginine dimethylaminohydrolase 1	1.732	1.732	5.56
A_51_P308844	Nrn1	NM_153529	neuritin 1	1.733	1.733	3.45
A_52_P237899	4930402H24Rik	NM_029432	RIKEN cDNA 4930402H24 gene	1.735	1.735	7.92
A_51_P444740	Smad4	NM_008540	MAD homolog 4 (Drosophila)	1.737	1.737	4.44
A_51_P160907	Morc3	NM_001045529	microsporidia 3	1.738	1.738	6.58
A_51_P418650	Vps37c	NM_181403	vacuolar protein sorting 37C (yeast)	1.744	1.744	6.58
A_51_P170371	Hspa8	NM_031165	heat shock protein 8	1.745	1.745	9.3
A_51_P221031	Slc16a12	NM_172838	solute carrier family 16 (monocarboxylic acid transporters), member 12	1.746	1.746	6.58
A_51_P286737	Ccl2	NM_011333	chemokine (C-C motif) ligand 2	1.749	1.749	7.92
A_51_P286737	Ccl2	NM_011333	chemokine (C-C motif) ligand 2	1.753	1.753	7.92
A_52_P704340	NAP061200-1	NAP061200-1		1.758	1.758	5.56
A_51_P433360	Cyp4a12b	NM_172306	cytochrome P450, family 4, subfamily a, polypeptide 12	1.759	1.759	7.92
A_52_P353417	Gm2a	NM_010299	GM2 ganglioside activator protein	1.761	1.761	5.56
A_51_P260051	Arf1	NM_007476	ADP-ribosylation factor 1	1.762	1.762	5.56
A_51_P301994	Rg9mtd1	NM_029092	RNA (guanine-9-) methyltransferase domain containing 1	1.762	1.762	4.96
A_52_P117334	Thumpd3	NM_008188	THUMP domain containing 3	1.763	1.763	7.92
A_52_P629895	Adh1	NM_007409	alcohol dehydrogenase 1 (class I)	1.763	1.763	3.45
A_52_P541826	Eif4a1	NM_144958	eukaryotic translation initiation factor 4A1	1.767	1.767	3.45
A_51_P156857	2010002N04Rik	NM_134133	RIKEN cDNA 2010002N04 gene	1.768	1.768	7.92
A_51_P286737	Ccl2	NM_011333	chemokine (C-C motif) ligand 2	1.77	1.77	5.56
A_51_P286737	Ccl2	NM_011333	chemokine (C-C motif) ligand 2	1.771	1.771	5.56
A_52_P579441	Morc3	NM_001045529	microsporidia 3	1.773	1.773	6.58
A_51_P286737	Ccl2	NM_011333	chemokine (C-C motif) ligand 2	1.773	1.773	6.58
A_51_P258150	Plin2	NM_007408	adipose differentiation related protein	1.778	1.778	4.96
A_51_P379208	Ccdc21	NM_144527	coiled-coil domain containing 21	1.779	1.779	7.92
A_52_P663526	BC016495	NM_145497	cDNA sequence BC016495	1.781	1.781	4.2
A_51_P286737	Ccl2	NM_011333	chemokine (C-C motif) ligand 2	1.781	1.781	6.58
A_51_P347440	E430028B21Rik	NM_178668	RIKEN cDNA E430028B21 gene	1.783	1.783	7.92

A_51_P421912	Tox	NM_145711	thymocyte selection-associated HMG box gene	1.783	1.783	5.56
A_52_P492062	NAP017816-001	NAP017816-001	similar to L-lactate dehydrogenase A chain (LDH-A) (LDH muscle subunit) (LDH-M)	1.783	1.783	4.96
A_51_P286737	Ccl2	NM_011333	chemokine (C-C motif) ligand 2	1.784	1.784	6.58
A_51_P479590	Wwc1	ENSMUST00000018993	WW, C2 and coiled-coil domain containing 1	1.784	1.784	4.96
A_51_P312437	Dhrs7	NM_025522	dehydrogenase/reductase (SDR family) member 7	1.785	1.785	4.96
A_51_P136542	Bcl3	NM_033601	B-cell leukemia/lymphoma 3	1.787	1.787	6.58
A_52_P685979	1700055N04Rik	AK006803	RIKEN cDNA 1700055N04 gene	1.788	1.788	5.56
A_51_P286737	Ccl2	NM_011333	chemokine (C-C motif) ligand 2	1.79	1.79	6.58
A_52_P595140	Hsd17b13	NM_198030	hydroxysteroid (17-beta) dehydrogenase 13	1.793	1.793	4.96
A_52_P592230	Dnaja4	NM_021422	DnaJ (Hsp40) homolog, subfamily A, member 4	1.795	1.795	3.45
A_52_P658122	Ets2	NM_011809	E26 avian leukemia oncogene 2, 3' domain	1.797	1.797	5.56
A_52_P600750	NAP056541-1	NAP056541-1		1.797	1.797	4.96
A_51_P346938	Lrg1	NM_029796	leucine-rich alpha-2-glycoprotein 1	1.801	1.801	9.3
A_52_P16419	Gpd1	NM_010271	glycerol-3-phosphate dehydrogenase 1 (soluble)	1.803	1.803	3.45
A_51_P224843	Tmsb4x	NM_021278	thymosin, beta 4, X chromosome	1.805	1.805	6.58
A_52_P180972	NAP029125-1	NAP029125-1		1.806	1.806	4.44
A_52_P923110	6330509M05Rik	AK031957	RIKEN cDNA 6330509M05 gene	1.809	1.809	4.2
A_51_P262171	Irgm1	NM_008326	immunity-related GTPase family, M	1.814	1.814	9.3
A_51_P440682	Cap1	NM_007598	CAP, adenylate cyclase-associated protein 1 (yeast)	1.822	1.822	3.45
A_51_P286737	Ccl2	NM_011333	chemokine (C-C motif) ligand 2	1.825	1.825	4.96
A_51_P489153	Crot	NM_023733	carnitine O-octanoyltransferase	1.827	1.827	6.58
A_51_P243755	Slc10a2	NM_011388	solute carrier family 10, member 2	1.828	1.828	7.92
A_52_P375076	Hyou1	BC019785	hypoxia up-regulated 1	1.831	1.831	6.58
A_52_P294510	Fgl1	BC029734	fibrinogen-like protein 1	1.832	1.832	6.58
A_52_P639424	Gga3	NM_173048	golgi associated, gamma adaptin ear containing, ARF binding protein 3	1.835	1.835	5.56
A_52_P527822	Slc22a3	NM_011395	solute carrier family 22 (organic cation transporter), member 3	1.836	1.836	4.96
A_52_P972003	C730036E19Rik	AK050309	RIKEN cDNA C730036E19 gene	1.837	1.837	4.96
A_51_P129803	Cacybp	NM_009786	calcyclin binding protein	1.841	1.841	4.96
A_51_P232142	Thumpd3	NM_008188	THUMP domain containing 3	1.841	1.841	7.92
A_51_P371912	Kctd12	NM_177715	potassium channel tetramerisation domain containing 12	1.848	1.848	5.56
A_52_P310225	Dnaja1	NM_008298	DnaJ (Hsp40) homolog, subfamily A, member 1	1.851	1.851	7.92
A_51_P208121	Klhl25	NM_182782	kelch-like 25 (Drosophila)	1.854	1.854	7.92
A_52_P89683	Gm14470	XM_001474667	similar to L-lactate dehydrogenase A chain (LDH-A) (LDH muscle subunit) (LDH-M)	1.86	1.86	4.96
A_52_P473172	NAP012030-001	NAP012030-001		1.86	1.86	5.56
A_52_P64707	Foxa3	NM_008260	forkhead box A3	1.866	1.866	9.3
A_52_P34031	1700019G17Rik	NM_029331	RIKEN cDNA 1700019G17 gene	1.866	1.866	6.58
A_52_P263673	4833442J19Rik	NM_177101	RIKEN cDNA 4833442J19 gene	1.875	1.875	4.44
A_51_P221510	Fam81a	NM_029784	RIKEN cDNA 6430514L14 gene	1.876	1.876	7.92
A_52_P682045	Cml3	NM_053097	camello-like 3	1.876	1.876	4.96
A_51_P101729	Cfh	M12660	complement component factor h	1.883	1.883	3.45
A_51_P219505	Slc41a2	NM_177388	solute carrier family 41, member 2	1.883	1.883	4.96
A_51_P239750	Inhba	NM_008380	inhibin beta-A	1.884	1.884	7.92
A_51_P466180	Gm2a	NM_010299	GM2 ganglioside activator protein	1.888	1.888	4.96
A_52_P372925	Nck2	NM_010879	non-catalytic region of tyrosine kinase adaptor protein 2	1.891	1.891	3.45
A_51_P502443	Gga3	NM_173048	golgi associated, gamma adaptin ear containing, ARF binding protein 3	1.892	1.892	6.58
A_52_P613241	Icam1	NM_010493	intercellular adhesion molecule	1.894	1.894	3.45

A_52_P469502	Cda	NM_028176	cytidine deaminase	1.899	1.899	9.3
A_51_P305003	Ntrk1	NM_001033124	neurotrophic tyrosine kinase, receptor, type 1	1.9	1.9	9.3
A_52_P46085	Mvp	NM_080638	major vault protein	1.904	1.904	6.58
A_52_P330395	Farp1	NM_134082	FERM, RhoGEF (Arhgef) and pleckstrin domain protein 1 (chondrocyte-derived)	1.907	1.907	6.58
A_52_P459288	AK050350	AK050350	RIKEN cDNA 4930402H24 gene	1.912	1.912	6.58
A_51_P303346	Dnaja1	NM_008298	DnaJ (Hsp40) homolog, subfamily A, member 1	1.912	1.912	6.58
A_52_P422514	NAP037463-1	NAP037463-1		1.913	1.913	5.56
A_51_P258113	Laptm4b	NM_033521	lysosomal-associated protein transmembrane 4B	1.916	1.916	4.44
A_52_P240712	Cml2	NM_053096	camello-like 2	1.92	1.92	4.96
A_51_P430973	Paqr7	NM_027995	progesterin and adipoQ receptor family member VII	1.92	1.92	7.92
A_51_P332939	Farp1	NM_134082	FERM, RhoGEF (Arhgef) and pleckstrin domain protein 1 (chondrocyte-derived)	1.922	1.922	5.56
A_51_P266883	Mup4	NM_008648	major urinary protein 4	1.926	1.926	9.3
A_52_P220229	Plekhb2	NM_145516	pleckstrin homology domain containing, family B (evectins) member 2	1.928	1.928	3.45
A_52_P319552	1700024P16Rik	NM_001162980	RIKEN cDNA 1700024P16 gene	1.93	1.93	6.58
A_51_P144438	Znfx1	NM_001033196	expressed sequence AI481105	1.935	1.935	4.44
A_52_P552194	Il13ra1	NM_133990	interleukin 13 receptor, alpha 1	1.936	1.936	4.44
A_51_P364146	Ldha	NM_010699	lactate dehydrogenase A	1.937	1.937	4.44
A_52_P503809	Tuba1c	NM_009448	tubulin, alpha 1B	1.939	1.939	4.96
A_51_P408506	Icam1	ENSMUST00000086399	intercellular adhesion molecule	1.94	1.94	4.96
A_51_P114714	Trim13	NM_023233	tripartite motif protein 13	1.946	1.946	6.58
A_51_P306731	Agpat9	NM_172715	RIKEN cDNA A230097K15 gene	1.949	1.949	9.3
A_51_P414518	Dynll1	NM_019682	dynein light chain LC8-type 1	1.95	1.95	4.2
A_51_P408506	Icam1	ENSMUST00000086399	intercellular adhesion molecule	1.954	1.954	4.96
A_51_P261737	Pdzk1	NM_021517	PDZ domain containing 1	1.956	1.956	4.44
A_52_P432919	Rab3d	NM_031874	RAB3D, member RAS oncogene family	1.963	1.963	7.92
A_51_P234330	Rtkn	NM_133641	rhotekin	1.964	1.964	4.2
A_51_P157537	Mapkapk3	NM_178907	mitogen-activated protein kinase-activated protein kinase 3	1.972	1.972	3.45
A_51_P408506	Icam1	ENSMUST00000086399	intercellular adhesion molecule	1.976	1.976	4.96
A_51_P408506	Icam1	ENSMUST00000086399	intercellular adhesion molecule	1.982	1.982	4.44
A_51_P103237	Hunk	NM_015755	hormonally upregulated Neu-associated kinase	1.984	1.984	4.44
A_51_P456941	Ier5	NM_010500	immediate early response 5	1.986	1.986	7.92
A_51_P402267	Slc17a3	NM_134069	solute carrier family 17 (sodium phosphate), member 3	1.987	1.987	4.2
A_51_P408506	Icam1	ENSMUST00000086399	intercellular adhesion molecule	1.991	1.991	4.44
A_52_P186754	Srpr	NM_026130	signal recognition particle receptor ('docking protein')	1.993	1.993	4.2
A_51_P228658	Isyna1	NM_023627	myo-inositol 1-phosphate synthase A1	1.998	1.998	3.43
A_51_P387528	Ak7	NM_030187	adenylate kinase 7	1.999	1.999	3.45
A_51_P139678	Sprr1a	NM_009264	small proline-rich protein 1A	2.002	2.002	7.92
A_51_P424954	B230114P17Rik	AK045415	RIKEN cDNA B230114P17 gene	2.005	2.005	3.45
A_51_P469285	Nrp1	NM_008737	neuropilin 1	2.008	2.008	5.56
A_51_P498882	Cyp2c37	NM_010001	cytochrome P450, family 2, subfamily c, polypeptide 37	2.008	2.008	3.43
A_51_P408506	Icam1	ENSMUST00000086399	intercellular adhesion molecule	2.009	2.009	4.96
A_51_P408506	Icam1	ENSMUST00000086399	intercellular adhesion molecule	2.009	2.009	4.44
A_51_P408506	Icam1	ENSMUST00000086399	intercellular adhesion molecule	2.01	2.01	4.44

A_52_P452689	Atf3	NM_007498	activating transcription factor 3	2.01	2.01	4.96
A_51_P408506	Icam1	ENSMUST00000086399	intercellular adhesion molecule	2.011	2.011	4.44
A_52_P361081	Arhgef16	NM_001112744	Rho guanine nucleotide exchange factor (GEF) 16	2.012	2.012	7.92
A_52_P106429	Dnaja1	NM_008298	DnaJ (Hsp40) homolog, subfamily A, member 1	2.012	2.012	4.96
A_52_P257204	Hsp90ab1	NM_008302	heat shock protein 90kDa alpha (cytosolic), class B member 1	2.023	2.023	3.45
A_52_P600087	NAP107975-1	NAP107975-1		2.027	2.027	4.2
A_52_P126158	Irgm1	NM_008326	immunity-related GTPase family, M	2.028	2.028	9.3
A_51_P182813	A_51_P182813	A_51_P182813		2.034	2.034	5.56
A_51_P408506	Icam1	ENSMUST00000086399	intercellular adhesion molecule	2.041	2.041	4.44
A_51_P401343	Cldn14	NM_019500	claudin 14	2.041	2.041	7.92
A_52_P82991	NAP061094-1	NAP061094-1		2.061	2.061	4.2
A_51_P182362	ENSMUST00000005477	ENSMUST00000005477	cytochrome P450, family 2, subfamily b, polypeptide 10	2.062	2.062	4.96
A_51_P247799	Casp8	NM_009812	caspase 8	2.074	2.074	3.45
A_51_P290231	Hsp90aa1	NM_010480	heat shock protein 90kDa alpha (cytosolic), class A member 1	2.083	2.083	4.96
A_52_P572808	Agpat9	NM_172715	RIKEN cDNA A230097K15 gene	2.094	2.094	6.58
A_52_P190973	Vcl	NM_009502	vinculin	2.108	2.108	4.96
A_52_P609778	Mgll	NM_011844	monoglyceride lipase	2.109	2.109	4.44
A_52_P167278	Mthfd1l	NM_172308	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 1-like	2.12	2.12	3.45
A_51_P301394	Gspt2	NM_008179	G1 to S phase transition 2	2.125	2.125	4.96
A_52_P159276	Grhl1	NM_145890	grainyhead-like 1 (Drosophila)	2.14	2.14	4.96
A_51_P290526	Abcd2	NM_011994	ATP-binding cassette, sub-family D (ALD), member 2	2.143	2.143	4.2
A_51_P432180	Slc16a6	NM_001029842	solute carrier family 16 (monocarboxylic acid transporters), member 6	2.159	2.159	2.56
A_52_P472486	Cyp2b10	NM_009999	cytochrome P450, family 2, subfamily b, polypeptide 10	2.183	2.183	4.96
A_51_P450573	Tgfb2	NM_009371	transforming growth factor, beta receptor II	2.183	2.183	5.56
A_52_P518160	Galns	NM_016722	galactosamine (N-acetyl)-6-sulfate sulfatase	2.209	2.209	3.43
A_52_P166846	Gigyf2	AK034426	trinucleotide repeat containing 15	2.211	2.211	4.44
A_51_P399305	Tnfrsf19	NM_013869	tumor necrosis factor receptor superfamily, member 19	2.219	2.219	6.58
A_52_P72237	Actg1	NM_009609	actin, gamma, cytoplasmic 1	2.228	2.228	7.92
A_52_P423814	Cox8b	NM_007751	cytochrome c oxidase, subunit VIIIb	2.231	2.231	3.45
A_51_P139920	Mgll	NM_011844	monoglyceride lipase	2.237	2.237	3.45
A_51_P281734	Plxnb1	NM_172775	plexin B1	2.238	2.238	3.45
A_52_P193533	Slc25a30	ENSMUST00000022580	solute carrier family 25, member 30	2.25	2.25	9.3
A_51_P403477	Dio1	NM_007860	deiodinase, iodothyronine, type I	2.258	2.258	6.58
A_51_P372550	Cgref1	NM_026770	cell growth regulator with EF hand domain 1	2.265	2.265	4.96
A_51_P281078	A_51_P281078	A_51_P281078		2.274	2.274	6.58
A_52_P61102	Slc10a2	NM_011388	solute carrier family 10, member 2	2.282	2.282	4.96
A_51_P467076	Cyp2b9	NM_010000	cytochrome P450, family 2, subfamily b, polypeptide 9	2.289	2.289	3.45
A_52_P681787	Cyb561	NM_007805	cytochrome b-561	2.29	2.29	6.58
A_52_P254237	Tmem229a	NM_177013	RIKEN cDNA 6332401O19 gene	2.301	2.301	2.56
A_51_P420489	Acot3	NM_134246	acyl-CoA thioesterase 3	2.306	2.306	7.92
A_51_P143893	Steap4	NM_054098	STEAP family member 4	2.313	2.313	9.3
A_52_P348256	ENSMUST00000084544	ENSMUST00000084544	major urinary protein 1	2.313	2.313	5.56
A_52_P481320	NAP027922-1	NAP027922-1		2.314	2.314	5.56
A_51_P356705	Plekhb2	NM_145516	pleckstrin homology domain containing, family B (evectins) member 2	2.315	2.315	3.43

A_51_P481238	Dopey2	NM_027293	dopey family member 2	2.344	2.344	4.96
A_51_P214423	Tead1	NM_001166584	RIKEN cDNA 2610024B07 gene	2.351	2.351	5.56
A_52_P182919	Steap4	NM_054098	STEAP family member 4	2.377	2.377	9.3
A_52_P93910	Nrp2	NM_001077403	neuropilin 2	2.417	2.417	3.43
A_52_P364021	Mogat1	NM_026713	monoacylglycerol O-acyltransferase 1	2.421	2.421	2.56
A_51_P428977	Onecut1	AK051235	one cut domain, family member 1	2.449	2.449	4.96
A_52_P407145	Txnl4a	NM_025299	thioredoxin-like 4	2.455	2.455	2.56
A_51_P112151	Mogat1	NM_026713	monoacylglycerol O-acyltransferase 1	2.468	2.468	2.56
A_51_P461703	Mup1	NM_031188	major urinary protein 1	2.474	2.474	7.92
A_52_P139316	Mup8	NM_001134676		2.475	2.475	6.58
A_51_P325914	Jun	NM_010591	Jun oncogene	2.513	2.513	3.45
A_52_P364130	Map3k14	NM_016896	mitogen-activated protein kinase kinase kinase 14	2.522	2.522	4.44
A_51_P126198	Dapk2	NM_010019	death-associated kinase 2	2.55	2.55	3.45
A_52_P431615	Gm1966	XM_001000891	gene model 1966, (NCBI)	2.56	2.56	9.3
A_52_P12877	Hspa8	NM_031165	heat shock protein 8	2.581	2.581	4.96
A_52_P308465	Plxn1	NM_172775	plexin B1	2.587	2.587	3.43
A_51_P185882	Ccdc68	NM_201362	coiled-coil domain containing 68	2.644	2.644	2.56
A_51_P325914	Jun	NM_010591	Jun oncogene	2.648	2.648	3.45
A_52_P64376	Mogat1	NM_026713	monoacylglycerol O-acyltransferase 1	2.653	2.653	1.97
A_51_P514319	Slc13a4	NM_172892	solute carrier family 13 (sodium/sulfate symporters), member 4	2.654	2.654	3.45
A_51_P325914	Jun	NM_010591	Jun oncogene	2.665	2.665	3.45
A_51_P342206	Cyp2c38	NM_010002	cytochrome P450, family 2, subfamily c, polypeptide 38	2.668	2.668	1.97
A_51_P325914	Jun	NM_010591	Jun oncogene	2.669	2.669	3.45
A_52_P677262	Serpina4-ps1	NR_002861	serine (or cysteine) peptidase inhibitor, clade A, member 4, pseudogene 1	2.672	2.672	7.92
A_51_P306017	Dll1	NM_007865	delta-like 1 (Drosophila)	2.673	2.673	3.45
A_52_P371237	Nrp1	NM_008737	neuropilin 1	2.675	2.675	4.2
A_51_P306017	Dll1	NM_007865	delta-like 1 (Drosophila)	2.678	2.678	3.45
A_51_P325914	Jun	NM_010591	Jun oncogene	2.691	2.691	3.45
A_51_P325914	Jun	NM_010591	Jun oncogene	2.693	2.693	3.45
A_51_P306017	Dll1	NM_007865	delta-like 1 (Drosophila)	2.704	2.704	3.45
A_51_P325914	Jun	NM_010591	Jun oncogene	2.713	2.713	3.43
A_51_P325914	Jun	NM_010591	Jun oncogene	2.717	2.717	3.45
A_51_P306017	Dll1	NM_007865	delta-like 1 (Drosophila)	2.729	2.729	3.45
A_51_P325914	Jun	NM_010591	Jun oncogene	2.737	2.737	3.45
A_51_P306017	Dll1	NM_007865	delta-like 1 (Drosophila)	2.741	2.741	3.45
A_51_P465211	Wfdc2	NM_026323	WAP four-disulfide core domain 2	2.742	2.742	7.92
A_51_P306017	Dll1	NM_007865	delta-like 1 (Drosophila)	2.742	2.742	3.45
A_51_P306017	Dll1	NM_007865	delta-like 1 (Drosophila)	2.748	2.748	3.45
A_51_P325914	Jun	NM_010591	Jun oncogene	2.755	2.755	3.45
A_52_P256914	Cyp2b9	NM_010000	cytochrome P450, family 2, subfamily b, polypeptide 9	2.757	2.757	2.56
A_52_P617327	Rcan1	NM_019466	Down syndrome critical region homolog 1 (human)	2.775	2.775	3.45
A_52_P1147595	9130221J18Rik	AK033690	RIKEN cDNA 9130221J18 gene	2.791	2.791	4.2
A_51_P249302	Abcd2	NM_011994	ATP-binding cassette, sub-family D (ALD), member 2	2.793	2.793	2.56
A_51_P306017	Dll1	NM_007865	delta-like 1 (Drosophila)	2.799	2.799	3.45
A_51_P339098	Serpina4-ps1	NR_002861	serine (or cysteine) peptidase inhibitor, clade A, member 4, pseudogene 1	2.818	2.818	9.3
A_52_P170685	NAP102507-1	NAP102507-1		2.822	2.822	4.96
A_51_P492339	Cyp2b13	NM_007813	cytochrome P450, family 2, subfamily b, polypeptide 13	2.823	2.823	2.56
A_51_P306017	Dll1	NM_007865	delta-like 1 (Drosophila)	2.852	2.852	3.43

A_51_P281568	C730007P19Rik	NM_009286	RIKEN cDNA C730007P19 gene	2.879	2.879	9.3
A_52_P431159	Il1rn	NM_001039701	interleukin 1 receptor antagonist	2.883	2.883	4.96
A_52_P323111	Lass6	AK136463	longevity assurance homolog 6 (S. cerevisiae)	2.884	2.884	4.96
A_52_P468564	Cyp2c38	NM_010002	cytochrome P450, family 2, subfamily c, polypeptide 38	2.89	2.89	2.56
A_52_P624155	NAP103999-1	NAP103999-1		2.892	2.892	6.58
A_51_P306017	Dll1	NM_007865	delta-like 1 (Drosophila)	2.908	2.908	3.43
A_51_P180314	Mup10	AK011413	major urinary protein 1	2.948	2.948	5.56
A_52_P404533	Hspb1	NM_013560	heat shock protein 1	2.999	2.999	3.45
A_52_P402127	Mup9	NM_001126319		2.999	2.999	7.92
A_52_P185079	Xbp1	NM_013842	X-box binding protein 1	3.001	3.001	4.44
A_51_P128929	Alas1	NM_020559	aminolevulinic acid synthase 1	3.022	3.022	9.3
A_52_P129756	Alas1	NM_020559	aminolevulinic acid synthase 1	3.113	3.113	9.3
A_51_P500044	Vldlr	NM_013703	very low density lipoprotein receptor	3.125	3.125	4.96
A_51_P450278	2010003K11Rik	NM_027237	RIKEN cDNA 2010003K11 gene	3.131	3.131	6.58
A_52_P412506	Mup5	NM_008649	major urinary protein 5	3.186	3.186	4.96
A_52_P559066	Aim1l	NM_001162970	absent in melanoma 1-like	3.237	3.237	3.43
A_52_P382149	Cyp26a1	NM_007811	cytochrome P450, family 26, subfamily a, polypeptide 1	3.295	3.295	6.58
A_52_P549184	Gpr64	NM_178712	G protein-coupled receptor 64	3.3	3.3	2.56
A_52_P379337	Rtn4	NM_194054	reticulon 4	3.303	3.303	2.56
A_51_P164835	Ppl	NM_008909	periplakin	3.313	3.313	3.45
A_51_P262766	Ccnd1	S78355	cyclin D1	3.521	3.521	4.44
A_51_P160870	Rtn4	NM_194054	reticulon 4	3.536	3.536	3.43
A_51_P262766	Ccnd1	S78355	cyclin D1	3.543	3.543	4.44
A_51_P262766	Ccnd1	S78355	cyclin D1	3.546	3.546	4.44
A_51_P262766	Ccnd1	S78355	cyclin D1	3.549	3.549	4.96
A_51_P262766	Ccnd1	S78355	cyclin D1	3.574	3.574	4.96
A_51_P262766	Ccnd1	S78355	cyclin D1	3.575	3.575	4.96
A_51_P278334	Vldlr	NM_013703	very low density lipoprotein receptor	3.577	3.577	4.96
A_51_P262766	Ccnd1	S78355	cyclin D1	3.58	3.58	4.44
A_51_P262766	Ccnd1	S78355	cyclin D1	3.625	3.625	4.44
A_51_P262766	Ccnd1	S78355	cyclin D1	3.63	3.63	4.96
A_52_P387467	Mup6	NM_001081285	novel member of the major urinary protein (Mup) gene family	3.651	3.651	4.2
A_51_P262766	Ccnd1	S78355	cyclin D1	3.703	3.703	4.44
A_51_P268529	Csad	NM_144942	cysteine sulfinic acid decarboxylase	3.854	3.854	9.3
A_52_P328440	ENSMUST00000098050	ENSMUST00000098050		3.993	3.993	4.96
A_51_P490456	Cidec	NM_178373	cell death-inducing DFFA-like effector c	4.124	4.124	7.92
A_52_P231729	H2-Q1	NM_010390	histocompatibility 2, Q region locus 1	4.531	4.531	2.56
A_52_P251690	Gvin1	NM_029000	GTPase, very large interferon inducible 1	4.611	4.611	5.56
A_52_P661713	Gvin1	NM_029000	GTPase, very large interferon inducible 1	4.774	4.774	5.56
A_51_P327496	A_51_P327496	A_51_P327496		6.54	6.54	1.97
A_51_P129464	Scd2	NM_009128	stearoyl-Coenzyme A desaturase 2	7.003	7.003	3.45
A_51_P327491	Apoa4	NM_007468	apolipoprotein A-IV	7.632	7.632	1.97
A_51_P424532	Vnn1	NM_011704	vanin 1	9.535	9.535	2.56
A_51_P299527	ENSMUST00000120522	ENSMUST00000120522	cDNA sequence BC014805	9.957	9.957	0
A_52_P289091	Cyp2b13	NM_007813	cytochrome P450, family 2, subfamily b, polypeptide 13	10.262	10.262	0
A_52_P460393	BC014805	NM_146232	cDNA sequence BC014805	11.432	11.432	0
A_51_P358445	Dnase1	NM_010061	deoxyribonuclease I	16.044	16.044	0