

SUPPLEMENTARY INFORMATION

SUPPLEMENTARY FIGURES

Figure S1. Effect of assembly parameters on false positive SNP rate. Bar graph is a histogram of coverage as reported by Velvet for assembled data from a single lane Illumina dataset for strain HPAG1. Contig coverage is plotted on the x-axis. The histogram is weighted by the length of each contig, so that the left black axis represents the total number of nucleotides (sum of contig lengths) in each coverage bin on the x-axis. The pink line and right pink axis plot the integral of the coverage histogram: this represents the sum of the contig lengths for all contigs with coverage less than a certain cutoff (the cumulative assembly). The blue line and right blue axis plot the integral of the number of false positive SNPs, which is known because the HPAG1 genome has been fully sequenced (finished): this represents the cumulative number of SNPs that are present in the assembly plotted by the pink line for each coverage cutoff on the x-axis.

Figure S2. Growth of wild-type and isogenic $\Delta hopZ$ strains *in vitro*. Loss of HopZ does not produce a significant effect on growth in BHI broth at pH 7.0. (n=2 independent experiments)

Figure S3. Flowchart for identifying acid-regulated *hopZ*-dependent transcriptional responses in *H. pylori* strain HPAG1.

Figure S4. Loss of HopZ does not block invasion of cultured mGEPs as judged by a multilabel immunohistochemical assay. See *Experimental Procedures* for details about the assay.

SUPPLEMENTARY TABLES AND LEGENDS

Table S1. Assembly statistics for the 24 sequenced *H. pylori* genomes characterized in the present study.

Abbreviations: nd, no data due to poor assembly; Variable OGUs, OGUs that are not represented in all sequenced *H. pylori* genomes.

Table S2. SNPs identified from pairwise comparisons of *H. pylori* genomes.

Table S3. mGEP genes differentially expressed after infection by strains obtained from hosts with normal gastric histology (A), ChAG (B), or adenocarcinoma (C), compared to uninfected cells (fdr threshold 0.005).

Table S4. ChAG-associated signature response of mGEP cells: 695 transcripts that are differentially expressed upon infection with all 5 ChAG strains but not with the strain associated with normal gastric histology, or with heat-killed bacteria (fdr threshold 0.005).

Table S5. Shared ‘ChAG and cancer’ signature mGEP response.

A subset of 434 of the 695 transcripts shown in Table S4 are also differentially expressed after infecting mGEPs with the cancer-associated *H. pylori* isolate.

Table S6. IPA analysis of biological functions (A) and signaling/metabolic pathways (B) that were significantly over-represented in the 695-member ‘shared ChAG-signature’ mGEP response.

Table S7. IPA analysis of the biological functions (A) plus signaling and metabolic pathways (B) that were significantly over-represented in the 434-member ‘shared ChAG-cancer signature’ mGEP response.

Table S8. GeneChip based dataset of *H. pylori* HPAG1’s transcriptional responses to infection of mGEP cells (fdr threshold 0.05)

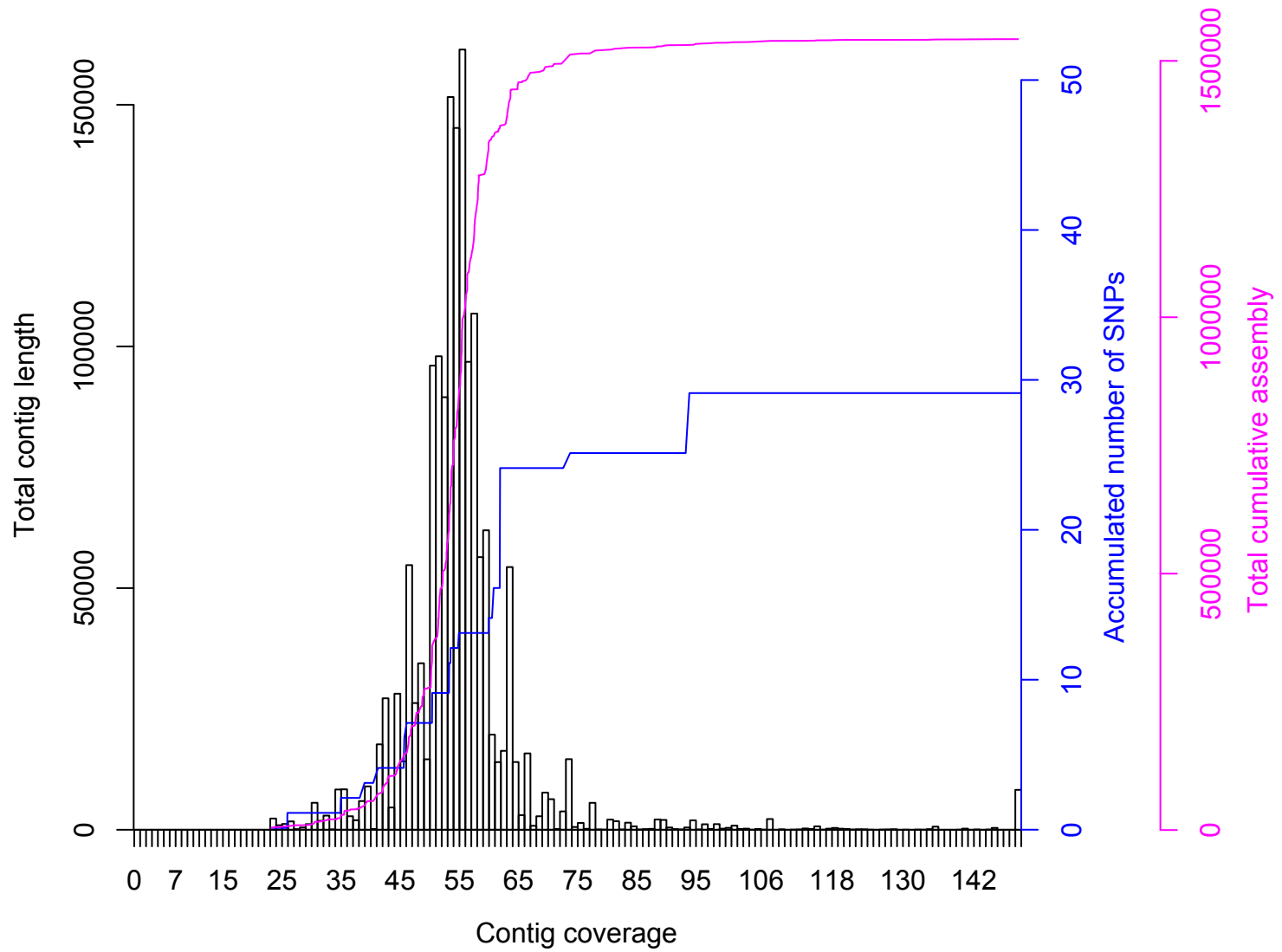
Table S9 – Genes in wild-type and isogenic Δ hopZ strains whose expression *in vitro* is pH-dependent.

Table S10. *H. pylori* strain HPAG1 genes whose expression *in vitro* are pH- and hopZ-dependent. Genes that are down- or up-regulated in the Δ hopZ compared to wild-type strain at pH 7.0 versus pH 5.0 are shown.

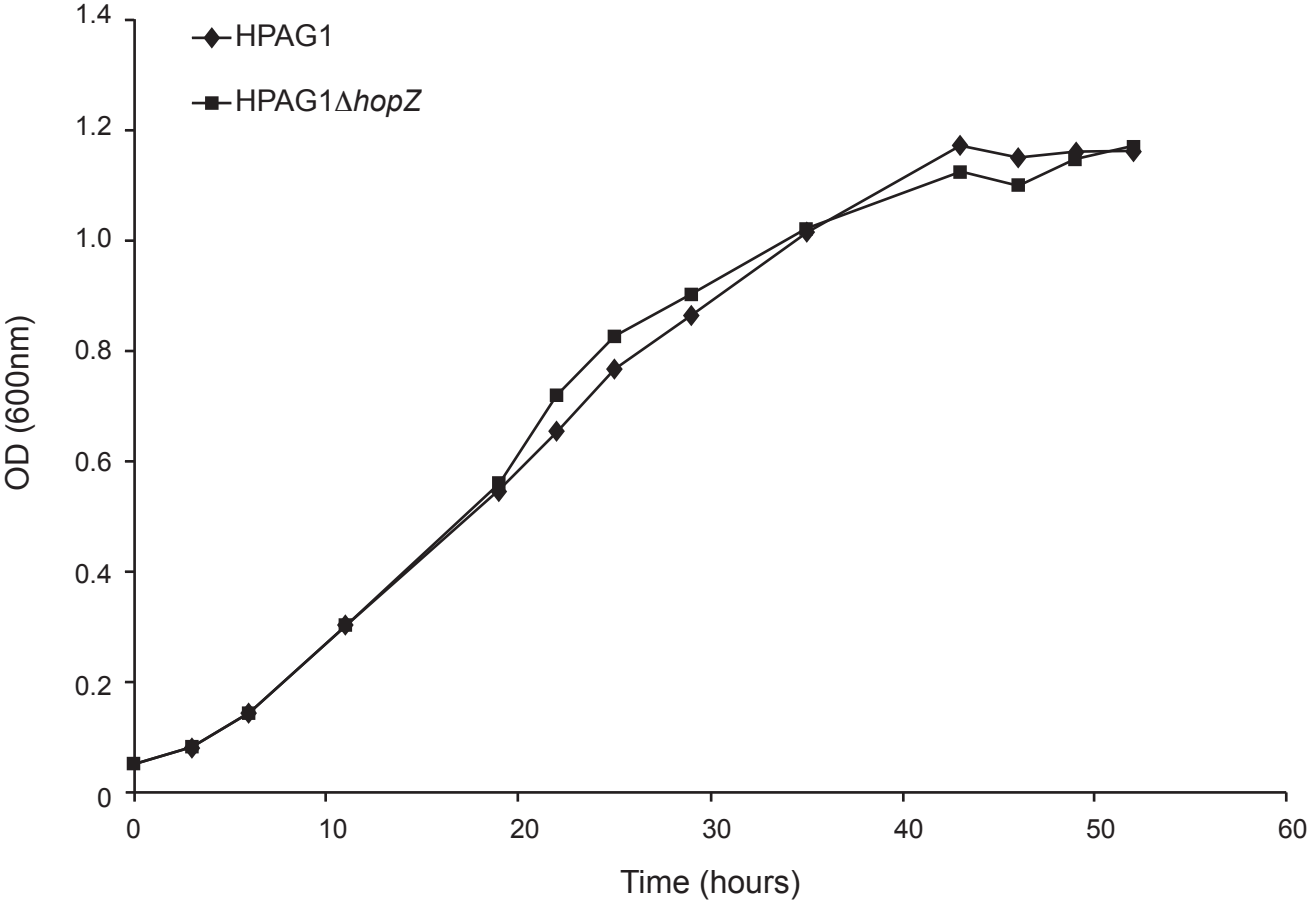
Table S11. PAML analysis of positive selection in *H. pylori* genes.

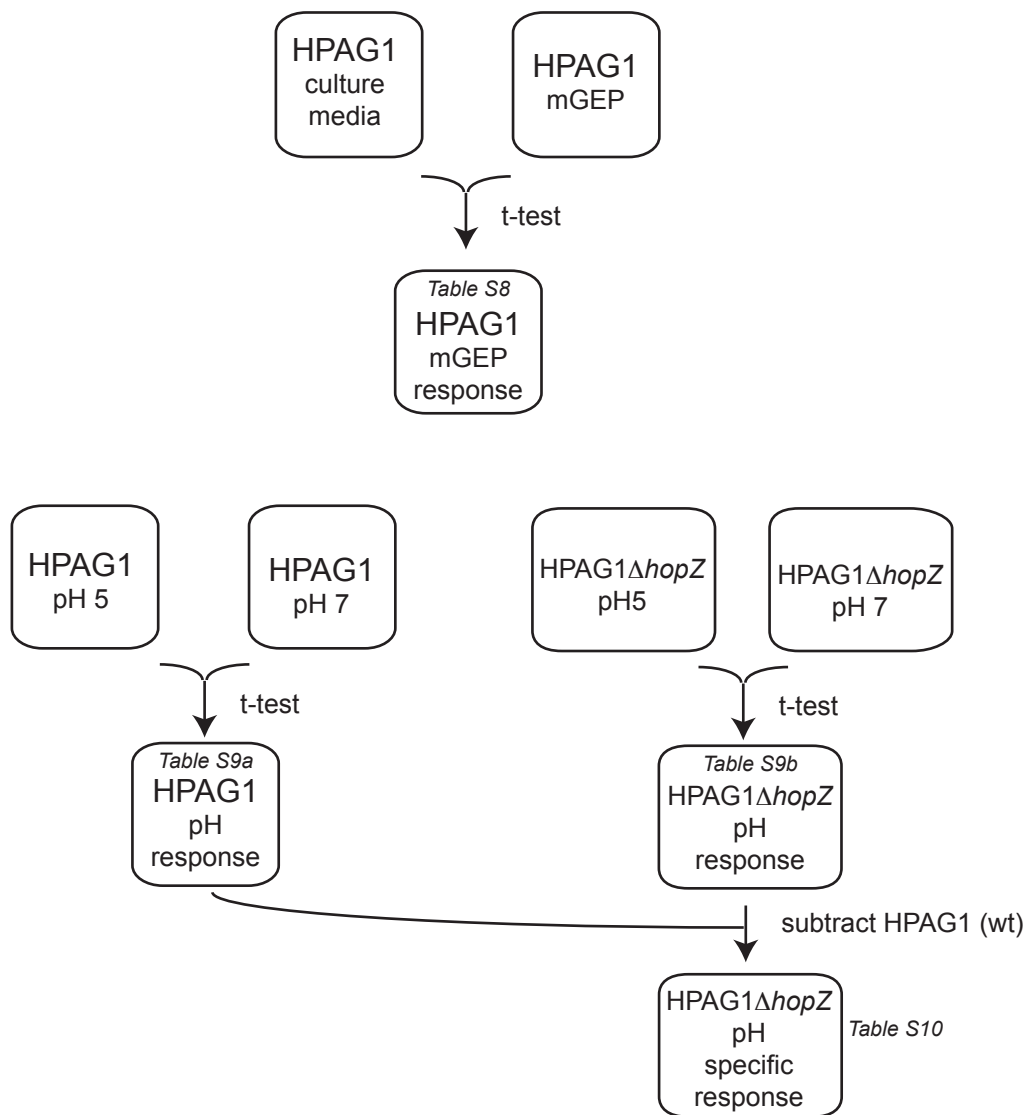
Genes are divided into four categories: (i) those encoding specific outer membrane proteins of interest, (ii) housekeeping genes, (iii) known virulence factors, and (iv) randomly chosen HPAG1 genes. The trivial gene name, HPAG1 systematic gene name, and HPAG1 annotation are given. Genes that had evidence for recombination ($p < 0.05$ according to GENECONV) were analyzed as fragments; resulting in multiple rows for several genes, which are shown in order from the 5' fragment to the 3' fragment. The amount of aligned sequence is shown for each ortholog set or fragment set. M1 lnL and M2 lnL are the logarithm (base e) of the likelihood reported by PAML for the respective evolutionary model. LRT is the likelihood ratio test p-value, indicating the amount of statistical support for rejecting the null hypothesis (of no positive selection). w is the dn/ds value and p is the proportion of codons under positive selection for those genes that had significant evidence of positive selection. Genes with significant evidence of positive selection are highlighted in bold type.

Giannakis *et al.*, Supplemental Figure 1



Giannakis *et al.*. Supplemental Figure 2





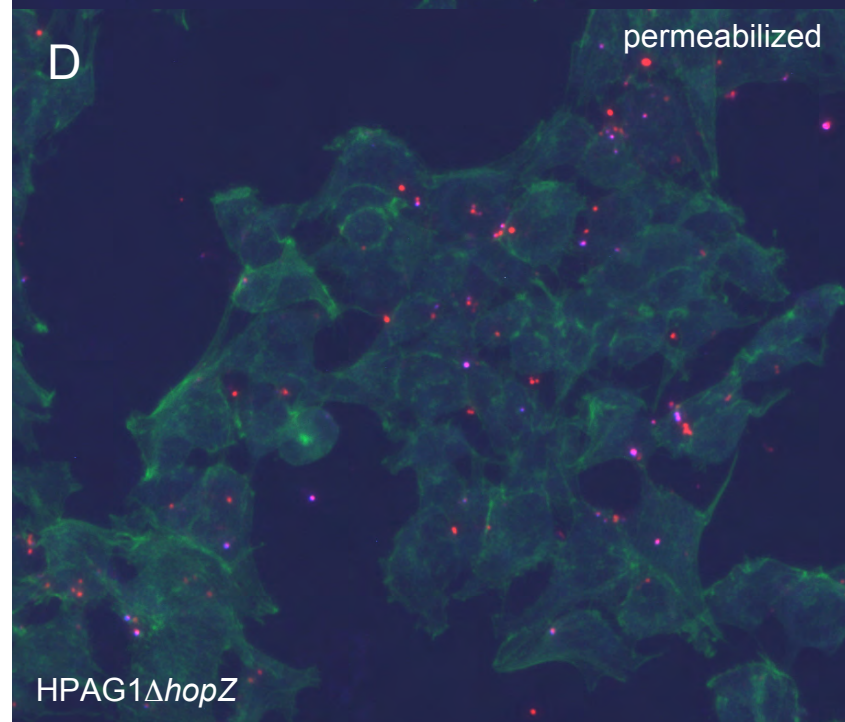
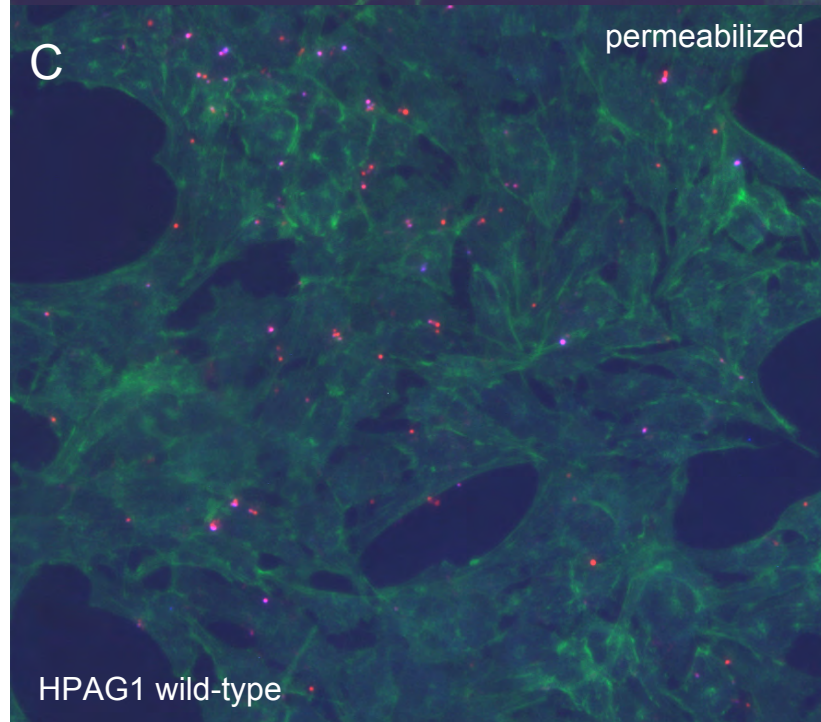
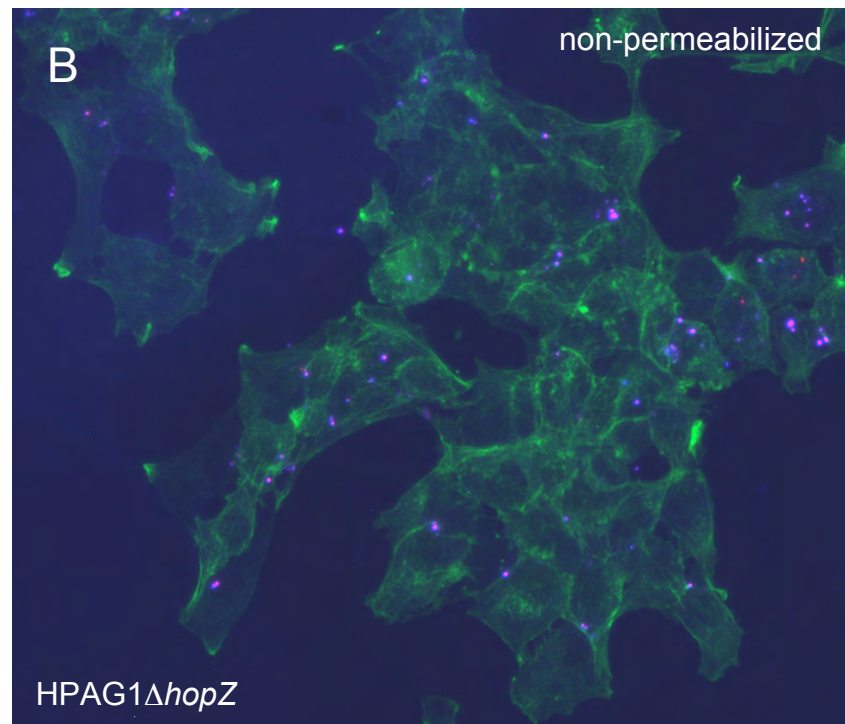
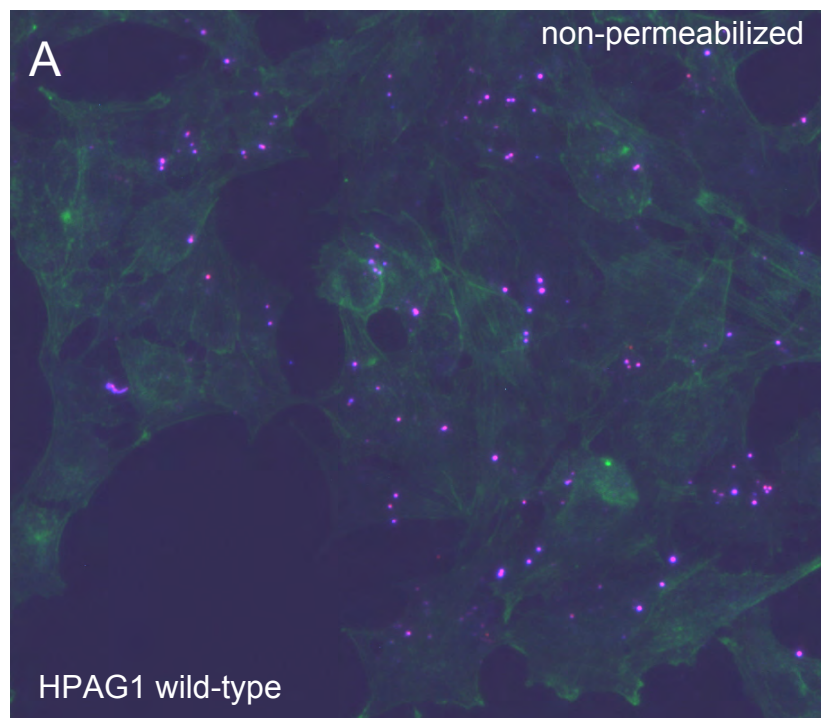


Table S1. Assembly statistics for the 24 sequenced *H. pylori* genomes characterized in the present study.

Strain Name	Patient	Time-point (year)	Histology	# reads	Est. Coverage	Assembly length	N50 length	Raw Reads		Assembled data	
								Total OGUs	Variable OGUs	Total OGUs	Total OGUs > 300bp
HPKX_1259_NL0C1	1259	0	NL	4236655	102	1564210	1622	1714	641	1524	937
HPKX_1259_NL0C2	1259	0	NL	2986898	72	1559448	11755	1535	462	1511	1093
HPKX_1259_NL4C1	1259	4	NL	6445761	155	1565228	18624	1542	469	1592	1306
HPKX_1259_NL4C2	1259	4	NL	4815651	116	1578086	11202	1484	411	1091	1046
HPKX_1379_NL0C1	1379	0	NL	6181034	148	1591441	16319	1600	527	1560	1315
HPKX_1379_NL0C2	1379	0	NL	3658442	88	1593778	11397	1556	483	1556	1302
HPKX_1379_NL4C1	1379	4	NL	5052351	121	1592699	15256	1670	597	1585	1320
HPKX_1379_NL4C2	1379	4	NL	4378437	105	1577073	15720	1539	466	1551	1310
HPKX_345_NL0C1	345	0	NL	5782741	139	1600564	16123	1618	545	1590	1330
HPKX_345_NL0C2	345	0	NL	7697166	185	1593064	13524	1483	410	1571	1318
HPKX_345_AG4C1	345	4	ChAG	4543126	109	1610411	21425	1656	583	1626	1326
HPKX_345_AG4C2	345	4	ChAG	5552941	133	na	na	1288	215	na	na
HPKX_1039_AG0C1	1039	0	ChAG	6470769	155	1626929	20236	1673	600	1619	1355
HPKX_1039_AG0C2	1039	0	ChAG	4017530	96	1620862	9423	1563	490	1640	1328
HPKX_1039_AG4C1	1039	4	ChAG	6016174	144	1634524	17093	1647	574	1625	1357
HPKX_1039_AG4C2	1039	4	ChAG	4268333	102	1630496	12056	1553	480	1613	1334
HPKX_1172_AG0C1	1172	0	ChAG	6345857	152	1540507	15527	1518	445	1571	1262
HPKX_1172_AG0C2	1172	0	ChAG	5298755	127	1543511	2661	1334	261	1376	1013
HPKX_1172_AG4C1	1172	4	ChAG	6511354	156	1571948	9160	1440	367	1461	1092
HPKX_1172_AG4C2	1172	4	ChAG	4581562	110	1552345	15013	1474	401	1540	1286
HPKX_438_AG0C1	438	0	ChAG	5861462	141	1586508	5801	1708	635	1589	1327
HPKX_438_AG0C2	438	0	ChAG	3816020	92	1579980	8847	1572	499	1602	1287
HPKX_438_CA4C1	438	4	CA	6040342	145	1588991	6013	1639	566	1584	1326
HPKX_438_CA4C2	438	4	CA	2845094	68	1580313	7976	1568	495	1563	1289

Abbreviations: na, no data due to poor assembly; Variable OGUs, OGUs that are not represented in all sequenced *H. pylori* genomes.

Table S2. SNPs identified from pairwise comparisons of *H. pylori* genomes.

	HPKX_1259_NL0C1	HPKX_1259_NL0C2	HPKX_1259_NL4C1	HPKX_1259_NL4C2	HPKX_1379_NL0C1	HPKX_1379_NL0C2	HPKX_1379_NL4C1	HPKX_1379_NL4C2	HPKX_345_NL0C1	HPKX_345_NL0C2	HPKX_345_AG4C1	HPKX_1039_AG0C1	HPKX_1039_AG0C2
HPKX_1259_NL0C1	0/953650	521/805379	584/690655	660/810752	25809/708989	28713/779082	27661/749837	26214/714918	25370/712103	26181/741020	23579/659660	22200/648711	27310/814614
HPKX_1259_NL0C2	521/805379	0/115111	429/932013	263/1117539	32473/903422	35190/670192	34750/955745	33381/919274	30624/878458	33818/825980	28400/814327	28725/854382	34216/1036240
HPKX_1259_NL4C1	584/690655	429/932013	0/1008177	290/945420	29758/814463	31498/856595	30724/828992	29634/803920	28336/805087	28943/825980	26654/758701	26089/770140	30243/901582
HPKX_1259_NL4C2	660/810752	263/1117539	290/945420	0/1177053	33456/927381	36184/997621	35429/972764	34394/947179	31200/892667	32765/944583	28698/820987	29389/873370	34952/1054469
HPKX_1379_NL0C1	25809/708989	32473/903422	29758/814463	33456/927381	0/1094830	195/1009944	753/1023580	179/997736	31175/867461	32240/893285	29001/801094	26367/778629	31425/932254
HPKX_1379_NL0C2	28713/779082	35190/670192	31498/856595	36184/997621	195/1009944	0/1183314	817/1049524	205/1061594	33048/912235	33993/942071	30291/832383	27795/813529	33892/1002028
HPKX_1379_NL4C1	27661/749837	34750/955745	30724/828992	35429/972764	753/1023580	817/1049524	0/1131673	763/1044036	32696/898426	33913/934403	30373/829278	27367/799643	32709/962817
HPKX_1379_NL4C2	26214/714918	33381/919274	29634/803920	34394/947179	179/997736	205/1061594	763/1044036	0/1099250	31790/877678	32749/909870	29567/808420	27057/786714	31651/933971
HPKX_345_NL0C1	25370/712103	30624/878458	28336/805087	31200/892667	31175/867461	33048/912235	32696/898426	31790/877678	0/1064024	555/1038188	546/953755	29373/825960	32420/914549
HPKX_345_NL0C2	26181/741020	32272/932090	28943/825980	32765/944583	32240/893285	33993/942071	33913/934403	32749/909870	555/1038188	0/1191979	132/951376	30270/846399	34328/969059
HPKX_345_AG4C1	23579/659660	28400/814327	26654/758701	26654/758701	26698/820987	29001/801094	30291/832383	29567/808420	546/953755	132/951376	0/978059	27465/767679	29488/830165
HPKX_1039_AG0C1	22200/648711	28725/854382	26089/770140	29389/873370	26367/778629	27795/813529	27367/799643	27057/786714	29373/825960	30270/846399	27465/767679	0/973422	186/933240
HPKX_1039_AG0C2	27310/814614	34216/1036240	30243/901582	34952/1054469	31425/932254	33892/1002028	32709/962817	31651/933971	34328/969059	29488/830165	27465/767679	186/933240	0/1201463
HPKX_1039_AG4C1	22414/657987	29222/871550	26853/792765	29701/885529	26754/793475	27906/830036	28201/832123	27159/803482	28827/807236	30662/859460	27840/774533	2681/891680	2792/946472
HPKX_1039_AG4C2	26312/775893	33478/999242	30109/891031	34101/1012521	30302/910078	32400/873254	31904/949635	30856/922495	33057/927421	34891/979463	30299/843551	3068/937558	3529/1066647
HPKX_1172_AG0C1	23709/714191	30609/942843	27752/842577	31690/972019	32516/896668	34243/938489	33664/921298	33260/916397	31668/903491	33443/958277	29189/829214	28614/843064	32276/963382
HPKX_1172_AG0C2	26214/786862	31151/958590	27391/834823	31962/982931	31889/887346	34916/964630	33404/921331	32304/895474	30627/876444	32069/923425	28010/798148	27123/796385	33653/997431
HPKX_1172_AG4C1	28416/809175	34894/1014911	30080/872094	35300/1029936	35061/947924	37269/1004400	36259/972470	35320/954941	33302/940909	35344/1003155	30777/868518	30705/869400	36407/1038758
HPKX_1172_AG4C2	26061/773134	32835/1001715	30043/897745	33598/1023708	34069/941837	36612/1001944	35836/980922	35035/964105	33163/942615	34956/998868	30287/858771	30454/887183	35434/1040805
HPKX_438_AG0C1	25414/712411	31354/893735	28097/795300	31611/901843	30548/860004	32302/904345	31762/885830	30613/857288	29692/899051	30759/930565	28082/847502	29127/799601	33185/921242
HPKX_438_AG0C2	28552/804300	35277/1012592	31185/887931	36527/1044157	34660/963852	37639/1042378	35664/988245	35287/980041	31758/961147	33267/1013884	29119/884608	31230/861543	38114/1062284
HPKX_438_CA4C1	24000/678697	29753/856744	27106/773096	29953/863509	29195/828550	30277/855474	30461/857269	29281/822995	28093/860123	29056/886846	26426/803362	27048/753505	31004/871524
HPKX_438_CA4C2	29341/822010	35773/1025679	31267/890214	36829/1051931	34102/959512	37187/1032475	35714/994812	34850/972846	32031/964891	33431/1012644	29286/884110	31588/869245	38113/1063904
HPA61	36117/945482	42912/1141839	38090/994421	43998/1167570	41647/1079249	45624/1173583	43601/1119490	42087/1087648	40490/1059777	42447/1110803	37267/969396	37348/967286	45354/1191406
HP26695	22663/602556	29351/801232	26648/718634	29353/803539	28880/758288	29599/776320	28965/759340	26246/744927	27625/749079	28682/776364	26092/701574	26454/709875	28879/779121
HPJ99	32742/610030	41040/776975	37711/711027	42338/802308	40385/774094	42238/812101	41601/792361	40584/777188	39036/747130	40546/771876	36058/686889	37490/689049	42651/794695
HPG27	25658/636130	31961/817810	29042/734674	32487/830091	30317/774798	32686/833330	31437/800146	31280/798631	30493/772990	31923/811080	28278/717081	26703/675923	31372/800428
HPSh470	25484/595613	31950/758677	29173/685172	32687/777236	31468/709019	33493/761647	32129/723049	31506/714689	31246/725750	32278/746500	29048/668838	30006/714695	33100/789117
HP12	24297/611930	30723/783165	28055/708094	30683/785583	29410/754690	31254/798674	29909/761491	30370/774960	29442/760334	30278/781144	26988/691923	28181/710312	31211/794251

Numbers shown are: total number of SNPs/aligned length of genomes

HPKX_1039_AG4C1	HPKX_1039_AG4C2	HPKX_1172_AG0C1	HPKX_1172_AG0C2	HPKX_1172_AG4C1	HPKX_1172_AG4C2	HPKX_438_AG0C1	HPKX_438_AG0C2	HPKX_438_CA4C1	HPKX_438_CA4C2	HPAG1	HP26895	HPJ99	HPG27	HPSh470	HPP12
22414657987	26312/775893	23709714191	26214/786862	28416/809175	26061/773134	25414/712411	28552/804300	24000/678697	29341/822010	36117/945482	22663/602556	32742/610030	25658/636130	25484/595613	24297/611930
29222/871550	33478/999242	30609/942843	31151/958590	34894/1014911	32835/1001715	31354/893735	35277/1012592	29753/856744	35773/1025679	42912/1141839	29351/801232	41040/776975	31961/818710	31950/758677	30723/783165
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29701/885529	34101/11012521	31690/972019	31962/982931	35300/1029936	33598/1023708	31611/901843	36527/1044157	29953/863509	36829/1051931	43998/1167570	29353/803539	42338/802308	32487/830091	32687/777236	30683/785583
26754/793475	30302/910078	32516/896668	31889/887346	35061/947924	34069/941837	30548/860004	34660/963852	29195/828550	34102/959512	41647/1079249	28880/758288	40385/774094	30317/747798	31468/709019	29410/754690
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28201/832123	31904/949635	33664/921298	33404/921331	36259/972470	35836/980922	31762/885830	35664/988245	30461/857269	35714/994812	43601/1119490	28965/759340	41601/792361	31437/800146	32129/723049	29909/761491
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27840/774533	30299/843551	29189/829214	28010/798148	30777/868518	30287/858771	28082/847502	29119/884608	26426/803362	29286/884110	37267/969396	26092/701574	36058/686889	28278/717081	29048/688838	26988/691923
2681/891680	3068/937558	28614/843064	27123/798385	30705/869400	30454/887183	29127/799601	31230/861543	27048/753505	31588/869245	37348/967286	26454/709875	37490/689049	26703/675923	30006/714695	28181/710312
2792/946472	3529/1096647	32276/963382	33653/997431	36407/1038758	35434/1040805	33185/921242	38114/1062284	31004/871524	38113/1063904	45354/1191406	28879/779121	42651/794695	31372/800428	33100/789117	31211/794251
0/991964	152/968394	29473/864708	27497/812721	31169/880169	30860/899134	29617/813800	31520/872366	27227/756834	31617/875107	37592/979310	27058/729724	37964/695229	27612/698758	29896/702329	26880/676006
152/968394	0/1158607	32663/962006	32569/962687	35355/1004466	35112/1026540	33297/917695	37126/1021267	31092/869778	37460/1027541	43778/1144215	28441/769546	42534/790782	31420/98626	33119/775580	31583/802671
29473/864708	32663/962006	0/1099476	5383/925202	19547/994983	17280/1003592	0/1164885	17280/1003592	768/990128	30354/863451	35337/1002516	28516/820288	36313/1028456	43133/1150964	27510/742429	39238/747325
27497/812721	32569/962687	5383/925202	0/1164885	19547/994983	17280/1003592	0/1217716	18404/1054638	32958/914151	38402/1063097	30793/868062	38512/1072101	46546/1210075	30334/804816	42136/807188	30697/798097
31169/880169	35355/1004466	19547/994983	17280/1003592	0/1217716	18404/1054638	0/1183279	32967/921158	37318/1047580	31629/897784	36990/1043277	44690/1170290	30396/807906	42236/790326	32641/831596	32920/770978
30860/899134	35112/1026540	5999/1068105	768/990128	18404/1054638	0/1183279	32967/921158	0/1056609	264/972471	85/962004	358/987227	39655/1045775	27209/733558	36657/704140	30600/807091	31066/709180
29617/813800	33297/917695	31338/874796	30354/863451	32958/914151	32967/921158	0/1056609	264/972471	85/962004	358/987227	39655/1045775	27209/733558	36657/704140	30600/807091	31066/709180	29215/748475
31520/872366	37126/1021267	35196/988395	35337/1002516	38402/1063097	37318/1047580	264/972471	0/1212603	243/938312	211/1135614	45960/1207132	29237/789682	42548/816912	32268/828836	35286/805614	31376/803341
27227/756834	31092/869778	30102/853567	30102/853567	30793/868062	31629/897784	85/962004	243/938312	0/1004852	295/943139	0/1225678	45994/1219347	0/1508016	34588/893551	47006/891940	31039/737699
31617/875107	37460/1027541	34733/981479	36313/1028456	38512/1072101	36990/1043277	211/1135614	295/943139	0/1225678	45994/1219347	0/1508016	34588/893551	47006/891940	31039/737699	30311/696693	28826/745173
37592/979310	43778/1144215	41408/1085044	43133/1150964	46546/1210075	44690/1170290	39655/1045775	45960/1207132	37235/994828	45994/1219347	0/1508016	34588/893551	47006/891940	31039/737699	30311/696693	28826/745173
27058/729724	28441/769546	28995/781248	27510/742429	30334/804816	30396/807906	27209/733558	29237/789682	26810/730360	29131/794026	34588/893551	0/903139	33905/672396	27740/728296	29035/647567	26199/681952
37964/695229	42534/790782	41502/777170	39238/747325	42136/807188	42236/790326	36657/704140	42548/816912	36844/706514	41892/807442	47006/891940	33905/672396	0/905193	33138/658734	39077/664750	34945/690472
27612/698758	31420/798626	31476/802128	30254/776108	30697/798097	32641/831596	30600/807091	32268/828836	30039/737699	32847/841796	37657/933599	27740/728296	33138/658734	0/945802	30462/641176	28023/733911
29896/702329	33119/775850	32354/762597	30219/729287	33917/775406	32920/770978	31066/709180	35286/805614	30311/696693	33887/784370	41058/884118	29035/647567	39077/664750	30462/641176	0/897104	30499/653432
26880/676006	31583/802671	29350/758280	28264/741503	30832/790234	31464/811179	29215/748475	31376/803341	28826/745173	31459/810680	35045/891981	26199/681952	34945/690472	28023/733911	30499/653432	0/903217

Table S3. mGEP genes differentially expressed after infection by strains obtained from hosts with normal gastric histology (A), ChAG (B), or adenocarcinoma (C), compared to uninfected cells. (fdr threshold 0.005)

Table S3A.

Moe430_2 GeneChip probeset	fold-change	gene symbol	gene description
1419529_at	14.6	Il23a	interleukin 23, alpha subunit p19 chemokine (C-X-C motif) ligand 10 /// similar to Small inducible cytokine B10 precursor (CXCL10) (Interferon-gamma-induced protein CRG-2) (Gamma-IP10) (IP-10) (C7)
1418930_at	13.9	Cxcl10 /// LOC100045000	chemokine (C-X-C motif) ligand 10 /// similar to Small inducible cytokine B10 precursor (CXCL10) (Interferon-gamma-induced protein CRG-2) (Gamma-IP10) (IP-10) (C7)
1420991_at	10.1	Ankrd1	ankyrin repeat domain 1 (cardiac muscle)
1415989_at	9.7	Vcam1	vascular cell adhesion molecule 1
1450971_at	9.4	Gadd45b	growth arrest and DNA-damage-inducible 45 beta
1425519_a_at	8.9	Cd74	CD74 antigen (invariant polypeptide of major histocompatibility complex, class II antigen-associated)
1455197_at	8.7	Rnd1	Rho family GTPase 1
1449773_s_at	8.4	Gadd45b	growth arrest and DNA-damage-inducible 45 beta
1450295_s_at	8.3	Pvr	poliovirus receptor
1424735_at	8.1	Slc25a25	solute carrier family 25 (mitochondrial carrier, phosphate carrier), member 25
1450829_at	8.0	Tnfrsf3	tumor necrosis factor, alpha-induced protein 3
1416691_at	7.9	Gtpbp2	GTP binding protein 2
1426063_a_at	7.6	Gem	GTP binding protein (gene overexpressed in skeletal muscle)
1425155_x_at	7.2	Csf1	colony stimulating factor 1 (macrophage)
1420992_at	6.5	Ankrd1	ankyrin repeat domain 1 (cardiac muscle)
1450977_s_at	6.3	Ndrp1	N-myc downstream regulated gene 1
1450199_a_at	5.9	Stab1	stabilin 1
1434574_at	5.8	9430008C03Rik	RIKEN cDNA 9430008C03 gene
1424067_at	5.7	Icam1	intercellular adhesion molecule 1
1422018_at	5.6	Hivep2	human immunodeficiency virus type I enhancer binding protein 2
1450173_at	5.6	Ripk2	receptor (TNFRSF)-interacting serine-threonine kinase 2
1418280_at	5.6	Klf6	Kruppel-like factor 6
1444302_at	5.5	Glt8d4 /// LOC100048436	glycosyltransferase 8 domain containing 4 /// similar to CDNA sequence BC049816
1453589_a_at	5.4	6820431F20Rik	RIKEN cDNA 6820431F20 gene
1427646_a_at	5.4	Arhgef2	rho/rac guanine nucleotide exchange factor (GEF) 2
1448306_at	5.3	Nfkbia	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
1449731_s_at	5.2	Nfkbia	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
1435595_at	5.2	1810011O10Rik	RIKEN cDNA 1810011O10 gene
1460722_at	4.8	Soat2	sterol O-acyltransferase 2
1448886_at	4.8	Gata3	GATA binding protein 3
1453345_at	4.8	Npal1	NIPA-like domain containing 1
1416273_at	4.8	Tnfrsf2	tumor necrosis factor, alpha-induced protein 2
1425106_a_at	4.7	Wars	tryptophanyl-tRNA synthetase
1450957_a_at	4.6	Sqstm1	sequestosome 1
1425281_a_at	4.6	Tsc22d3	TSC22 domain family, member 3
1417487_at	4.5	Fosl1	fos-like antigen 1
1450582_at	4.5	H2-Q5	histocompatibility 2, Q region locus 5
1420089_at	4.4	Nfkbia	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha (Nfkbia), mRNA
1421042_at	4.4	Arhgef2	rho/rac guanine nucleotide exchange factor (GEF) 2
1431843_a_at	4.3	Nfkbie	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, epsilon
1420710_at	4.3	Rel	reticuloendotheliosis oncogene
1417408_at	4.2	F3	coagulation factor III
1433454_at	4.2	Abtb2	ankyrin repeat and BTB (POZ) domain containing 2
1421992_a_at	4.1	Igfbp4	insulin-like growth factor binding protein 4
1429040_at	4.1	6820431F20Rik	RIKEN cDNA 6820431F20 gene
1452418_at	4.1	1200016E24Rik	RIKEN cDNA 1200016E24 gene
1457042_at	4.1	AI256396	EST AI256396
1429412_at	4.0	Eny2	enhancer of yellow 2 homolog (Drosophila)
1419702_at	4.0	Taf1a	TATA box binding protein (Tbp)-associated factor, RNA polymerase I, A
1423903_at	3.9	Pvr	poliovirus receptor
1416268_at	3.9	Ets2	E26 avian leukemia oncogene 2, 3' domain
1450970_at	3.9	Got1	glutamate oxaloacetate transaminase 1, soluble
1453590_at	3.9	Arl5b	ADP-ribosylation factor-like 5B
1427540_at	3.9	Zwint	ZW10 interactor
1439029_at	3.9	Gpt2	glutamic pyruvate transaminase (alanine aminotransferase) 2
1425139_at	3.9	Sesn2	sestrin 2
1438148_at	3.8	Cxcl3	chemokine (C-X-C motif) ligand 3
1421392_a_at	3.8	Birc3	baculoviral IAP repeat-containing 3
1448136_at	3.8	Enpp2	ectonucleotide pyrophosphatase/phosphodiesterase 2
1435462_at	3.8	Plcxd2	phosphatidylinositol-specific phospholipase C, X domain containing 2
1437884_at	3.7	Arl5b	ADP-ribosylation factor-like 5B
1422573_at	3.7	Ampd3	adenosine monophosphate deaminase 3
1421308_at	3.7	Car13	carbonic anhydrase 13
1460465_at	3.7	A930038C07Rik	RIKEN cDNA A930038C07 gene
1433674_a_at	3.7	Snhg1	small nucleolar RNA host gene (non-protein coding) 1
1421236_at	3.6	Ripk2	receptor (TNFRSF)-interacting serine-threonine kinase 2
1455324_at	3.6	Plcxd2	phosphatidylinositol-specific phospholipase C, X domain containing 2
1427518_at	3.6	D10627	cDNA sequence D10627
1423156_at	3.6	Gnpat1	glucosamine-phosphate N-acetyltransferase 1
1427372_at	3.6	Cyp27b1	cytochrome P450, family 27, subfamily b, polypeptide 1
1455657_at	3.5	Smg1	SMG1 homolog, phosphatidylinositol 3-kinase-related kinase (C. elegans)
1451593_at	3.5	H2-K1	MRNA similar to histocompatibility 2, D region locus 1 (cDNA clone MGC:25703 IMAGE:3675316)
1429144_at	3.5	Prei4	preimplantation protein 4
1423685_at	3.4	Aars	alanyl-tRNA synthetase
1434015_at	3.4	Slc2a6	solute carrier family 2 (facilitated glucose transporter), member 6
1428365_a_at	3.4	Lonp1	lon peptidase 1, mitochondrial

1419148_at	3.4	Avil	advillin
1420088_at	3.4	Nfkbia	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
1437152_at	3.4	Mex3b	mex3 homolog B (C. elegans)
1449668_s_at	3.3	Fnip1	folliculin interacting protein 1
1415940_at	3.3	Zfand2a	zinc finger, AN1-type domain 2A
1434980_at	3.2	Pik3r5	phosphoinositide-3-kinase, regulatory subunit 5, p101
1421065_at	3.2	Jak2	Janus kinase 2
1448436_a_at	3.2	Irf1	interferon regulatory factor 1
1431035_at	3.2	Daam1	dishevelled associated activator of morphogenesis 1
1453823_a_at	3.1	Ccdc76	coiled-coil domain containing 76
1434130_at	3.0	Lhfp12	lipoma HMGIC fusion partner-like 2
1431252_a_at	3.0	Zfp655	zinc finger protein 655
1419697_at	3.0	Cxcl11 /// LOC630447	chemokine (C-X-C motif) ligand 11 /// similar to Small inducible cytokine B11 precursor (CXCL11) (Interferon-inducible T-cell alpha chemoattractant) (I-TAC)
1444021_at	3.0	Sqstm1	sequestosome 1
1426421_s_at	3.0	Rbm26	RNA binding motif protein 26
1434786_at	2.9	Ppp1r12b	protein phosphatase 1, regulatory (inhibitor) subunit 12B
1451018_at	2.9	Leprot11	leptin receptor overlapping transcript-like 1
1416186_at	2.9	Pnrc2	proline-rich nuclear receptor coactivator 2
1428666_at	2.9	Nars	asparaginyl-tRNA synthetase
1438045_at	2.9	Eea1	early endosome antigen 1
1437566_at	2.9	LOC633966	similar to guanine nucleotide binding protein-like 2 (nucleolar)
1437751_at	2.9	Ppargc1a	peroxisome proliferative activated receptor, gamma, coactivator 1 alpha
1428560_at	2.8	Xpo5	exportin 5
1421273_at	2.8	Socs4	suppressor of cytokine signaling 4
1442434_at	2.8	D8Ert82e	DNA segment, Chr 8, ERATO Doi 82, expressed
1426290_at	2.8	Dimt1	DIM1 dimethyladenosine transferase 1-like (S. cerevisiae)
1437696_at	2.8	BC049807	cDNA sequence BC049807
1422822_at	2.8	Stard5	StAR-related lipid transfer (START) domain containing 5
1434460_at	2.8	Bbs4	Bardet-Biedl syndrome 4 (human)
1450474_at	2.8	Serpinb9c	serine (or cysteine) peptidase inhibitor, clade B, member 9c
1451959_a_at	2.8	Vegfa	vascular endothelial growth factor A
1419210_at	2.8	Hrh1	histamine receptor H1
1433850_at	2.8	Ppp4r2	protein phosphatase 4, regulatory subunit 2
1448932_at	2.8	Krt16	keratin 16
1455823_at	2.7	Bbs4	Bardet-Biedl syndrome 4 (human)
1429337_at	2.7	Tmem87b	transmembrane protein 87B
1432249_a_at	2.7	Ercc8	excision repair cross-complementing rodent repair deficiency, complementation group 8
1437176_at	2.7	AI451557	expressed sequence AI451557
1421712_at	2.7	Sele	selectin, endothelial cell
1453727_at	2.7	Esf1	ESF1, nucleolar pre-rRNA processing protein, homolog (S. cerevisiae)
1437082_at	2.7	Akap9	A kinase (PRKA) anchor protein (yotiao) 9
1424533_a_at	2.7	Ccdc137	coiled-coil domain containing 137
1425356_at	2.7	Zfp142	zinc finger protein 142
1424866_at	2.7	Usp43	ubiquitin specific peptidase 43
1418504_at	2.7	Hspa9	heat shock protein 9
1424150_at	2.7	Gdpd5	glycerophosphodiester phosphodiesterase domain containing 5
1419536_a_at	2.6	Rela	v-rel reticuloendotheliosis viral oncogene homolog A (avian)
1422567_at	2.6	Fam129a	family with sequence similarity 129, member A
1426928_at	2.6	Ccdc93	coiled-coil domain containing 93
1427689_a_at	2.6	Tnip1	TNFAIP3 interacting protein 1
1448957_at	2.6	Rbpj	recombination signal binding protein for immunoglobulin kappa J region
1431351_at	2.6	Pvt1	plasmacytoma variant translocation 1
1426291_at	2.6	Dimt1	DIM1 dimethyladenosine transferase 1-like (S. cerevisiae)
1428674_at	2.6	Prpf38b	PRP38 pre-mRNA processing factor 38 (yeast) domain containing B
1451873_a_at	2.6	Smad5	MAD homolog 5 (Drosophila)
1451950_a_at	2.6	Cd80	CD80 antigen
1436074_at	2.6	Nfkbid	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, delta
1426533_at	2.5	Nol5a	nucleolar protein 5A
1426852_x_at	2.5	Nov	nephroblastoma overexpressed gene
1449670_x_at	2.5	Gpr137b /// LOC100044979	G protein-coupled receptor 137B /// similar to Gpr137b protein
1437476_at	2.5	Rrm2b	ribonucleotide reductase M2 B (TP53 inducible)
1430704_at	2.5	Irak3	interleukin-1 receptor-associated kinase 3
1460369_at	2.5	BC003267	cDNA sequence BC003267
1437495_at	2.5	LOC100047187 /// Mbtps2 /// Yy2	similar to zinc finger, X-linked, duplicated B /// membrane-bound transcription factor peptidase, site 2 /// Yy2 transcription factor
1419924_at	2.5	Fnip1	Folliculin interacting protein 1, mRNA (cDNA clone MGC:100017 IMAGE:30543296)
1438400_at	2.5	4632411B12Rik	RIKEN cDNA 4632411B12 gene
1442726_s_at	2.4	AI845619	expressed sequence AI845619
1430147_a_at	2.4	Taf1d	TATA box binding protein (Tbp)-associated factor, RNA polymerase I, D
1435155_at	2.4	Cgn	cingulin
1416998_at	2.4	Rrs1	RRS1 ribosome biogenesis regulator homolog (S. cerevisiae)
1438081_at	2.4	Mcc	mutated in colorectal cancers
1434364_at	2.4	Map3k14	mitogen-activated protein kinase kinase 14
1452154_at	2.4	Iars	isoleucine-tRNA synthetase
1427705_a_at	2.4	Nfkbl1	nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
1429527_a_at	2.4	Plscr1	phospholipid scramblase 1
1421153_at	2.4	Loxl4	lysyl oxidase-like 4
1426423_at	2.4	Shmt2	serine hydroxymethyltransferase 2 (mitochondrial)
1422286_a_at	2.4	Tgfb1	TGF-beta-induced factor homeobox 1
1455237_at	2.3	Usp36	ubiquitin specific peptidase 36
1437965_at	2.3	Heatr1	HEAT repeat containing 1
1457780_at	2.3	Stx11	syntaxin 11
1452858_at	2.3	Elav1	ELAV (embryonic lethal, abnormal vision, Drosophila)-like 1 (Hu antigen R)
1426459_s_at	2.3	AW549877	expressed sequence AW549877
1423991_at	2.3	Nop14	NOP14 nucleolar protein homolog (yeast)

1422847_a_at	2.3	Prkcd	protein kinase C, delta
1417675_a_at	2.3	Mdn1	midasin homolog (yeast)
1460323_at	2.3	Tars	threonyl-tRNA synthetase
1424030_at	2.3	Grhl1 /// LOC100043996	grainyhead-like 1 (Drosophila) /// similar to Grhl1 protein
1451468_s_at	2.3	Xpo5	exportin 5
1427322_at	2.3	Brwd1	bromodomain and WD repeat domain containing 1
1424043_at	2.3	Ppil4	peptidylprolyl isomerase (cyclophilin)-like 4
1447873_x_at	2.3	Bid	BH3 interacting domain death agonist
1421066_at	2.3	Jak2	Janus kinase 2
1458148_at	2.3	Nlr3	NLR family, CARD domain containing 3
1426420_at	2.3	Rbm26	RNA binding motif protein 26
1426827_at	2.3	Ythdc1	YTH domain containing 1
1444402_at	2.3	Zc3h12c	zinc finger CCCH type containing 12C
1451095_at	2.2	Asns	asparagine synthetase
1453504_at	2.2	Taf15	TAF15 RNA polymerase II, TATA box binding protein (TBP)-associated factor
1436897_at	2.2	Mfhas1	malignant fibrous histiocytoma amplified sequence 1
1419169_at	2.2	Mapk6	mitogen-activated protein kinase 6
1444086_at	2.2	E030049G20Rik	RIKEN cDNA E030049G20 gene
1425686_at	2.2	Cflar	CASP8 and FADD-like apoptosis regulator
1435240_at	2.2	Baz2b	bromodomain adjacent to zinc finger domain, 2B
1418960_at	2.2	Phf201	PHD finger protein 20-like 1
1418007_at	2.2	1810007M14Rik	RIKEN cDNA 1810007M14 gene
1421240_at	2.2	Em1	endoplasmic reticulum (ER) to nucleus signalling 1
1422054_a_at	2.2	Skil	SKI-like
1418661_at	2.2	Abhd2	abhydrolase domain containing 2
1425681_a_at	2.2	Prnd	prion protein dublet
1419105_at	2.2	Nr1h4	nuclear receptor subfamily 1, group H, member 4
1449314_at	2.2	Zfpm2	zinc finger protein, multitype 2
1415881_at	2.1	Ghitm	growth hormone inducible transmembrane protein
1434238_at	2.1	Taf2	TAF2 RNA polymerase II, TATA box binding protein (TBP)-associated factor
1433798_a_at	2.1	E330034G19Rik	RIKEN cDNA E330034G19 gene
1429774_a_at	2.1	Fam175a	family with sequence similarity 175, member A
1426083_a_at	2.1	Btg1 /// LOC100047353	B-cell translocation gene 1, anti-proliferative /// similar to myocardial vascular inhibition factor
1455567_at	2.1	Crks	CDC2-related kinase, arginine/serine-rich
1419208_at	2.1	Map3k8	mitogen-activated protein kinase kinase kinase 8
1454914_at	2.1	2610101N10Rik	RIKEN cDNA 2610101N10 gene
1425969_a_at	2.1	Htt	huntingtin
1418375_at	2.1	Mbd6	methyl-CpG binding domain protein 6
1437730_at	2.1	Ppp2r2a	protein phosphatase 2 (formerly 2A), regulatory subunit B (PR 52), alpha isoform
1416432_at	2.1	Pfkfb3	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 3
1432466_a_at	2.1	Apoe	apolipoprotein E
1416543_at	2.1	Nfe2l2	nuclear factor, erythroid derived 2, like 2
1426381_at	2.1	Pprc1	peroxisome proliferative activated receptor, gamma, coactivator-related 1
1427159_at	2.1	Pcf11	cleavage and polyadenylation factor subunit homolog (S. cerevisiae)
1417393_a_at	2.1	Fam132a	family with sequence similarity 132, member A
1424250_a_at	2.1	Arhgef3	Rho guanine nucleotide exchange factor (GEF) 3
1448855_at	2.1	Rassf1	Ras association (RalGDS/AF-6) domain family member 1
1440875_a_at	2.0	Rsad1	radical S-adenosyl methionine domain containing 1
1454648_s_at	2.0	D10Wsu102e	DNA segment, Chr 10, Wayne State University 102, expressed
1433555_at	2.0	Eaf1	ELL associated factor 1
1433926_at	2.0	Dync1li2	dynein, cytoplasmic 1 light intermediate chain 2
1416862_at	2.0	Stam	signal transducing adaptor molecule (SH3 domain and ITAM motif) 1
1418465_at	2.0	Nct4	neutrophil cytosolic factor 4
1457222_at	2.0	Creb5	cAMP responsive element binding protein 5
1425642_at	2.0	Cep290	centrosomal protein 290
1460483_at	2.0	2610034E01Rik	RIKEN cDNA 2610034E01 gene
1455153_at	2.0	Zfp236	zinc finger protein 236
1419558_at	2.0	Mdm4	transformed mouse 3T3 cell double minute 4
1420958_at	2.0	Sys1	SYS1 Golgi-localized integral membrane protein homolog (S. cerevisiae)
1435434_at	2.0	Braf	Braf transforming gene
1416126_at	2.0	Poir1b	polymerase (RNA) I polypeptide B
1434080_at	1.9	Aebp2	AE binding protein 2
1426671_a_at	1.9	Rbm39	RNA binding motif protein 39
1459910_at	1.9	Tnks	tankyrase, TRF1-interacting ankyrin-related ADP-ribose polymerase
1421148_a_at	1.9	Tial1	Tia1 cytotoxic granule-associated RNA binding protein-like 1
1434298_at	1.9	Zeb2	zinc finger E-box binding homeobox 2
1435904_at	1.9	Eif2c3	eukaryotic translation initiation factor 2C, 3
1429005_at	1.9	Mfhas1	malignant fibrous histiocytoma amplified sequence 1
1450651_at	1.9	Myo10	myosin X
1460435_at	1.9	1500002O20Rik	RIKEN cDNA 1500002O20 gene
1455218_at	1.9	6330503K22Rik	RIKEN cDNA 6330503K22 gene
1450703_at	1.9	Slc7a2	solute carrier family 7 (cationic amino acid transporter, y+ system), member 2
1451998_at	1.9	Tasp1	taspase, threonine aspartase 1
1440447_at	1.9	Abhd2	abhydrolase domain containing 2
1441513_at	1.9	Tank	TRAF family member-associated NF-kappa B activator
1429371_at	1.9	2810426N06Rik	RIKEN cDNA 2810426N06 gene
1427088_at	1.9	Ccnt2	cyclin T2
1417712_at	1.9	Eif2s2	eukaryotic translation initiation factor 2, subunit 2 (beta)
1428846_at	1.9	Ttc14	tetratricopeptide repeat domain 14
1449014_at	1.9	Lactb /// LOC677144	lactamase, beta /// similar to lactamase, beta
1428389_s_at	1.9	Wdr43	WD repeat domain 43
1428375_at	1.9	4932415G12Rik	RIKEN cDNA 4932415G12 gene
1455035_s_at	1.9	Nol5a	nucleolar protein 5A
1434082_at	1.9	Pctk2	PCTAIRE-motif protein kinase 2
1415911_at	1.9	Impact	imprinted and ancient
1418985_at	1.9	Ctnb2nl	CTTNBP2 N-terminal like

1448965_at	1.8	Ino80	INO80 homolog (S. cerevisiae)
1425495_at	1.8	Zfp62	zinc finger protein 62
1424594_at	1.8	Lgals7	lectin, galactose binding, soluble 7
1453048_at	1.8	Nhlrc2	NHL repeat containing 2
1425774_at	1.8	1500001A10Rik	RIKEN cDNA 1500001A10 gene
1455171_at	1.8	Suv420h1	suppressor of variegation 4-20 homolog 1 (Drosophila)
1423389_at	1.8	Smad7	MAD homolog 7 (Drosophila)
1434332_at	1.8	Zz3	zinc finger, ZZ domain containing 3
1428493_at	1.8	Sipa13	signal-induced proliferation-associated 1 like 3
1428366_at	1.8	1600027N09Rik	RIKEN cDNA 1600027N09 gene
1454074_a_at	1.8	Rsrc2	arginine/serine-rich coiled-coil 2
1439811_at	1.8	Mtr	5-methyltetrahydrofolate-homocysteine methyltransferase
1436562_at	1.8	Ddx58	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58
1451896_a_at	1.8	Cherp	calcium homeostasis endoplasmic reticulum protein
1427120_at	1.8	Zfp26	zinc finger protein 26
1454982_at	1.8	Arfgef2	ADP-ribosylation factor guanine nucleotide-exchange factor 2 (brefeldin A-inhibited)
1422945_a_at	1.8	Kif5c	kinesin family member 5C
1434036_at	1.8	Mtss1	metastasis suppressor 1
1426286_at	1.8	Noc3l	nucleolar complex associated 3 homolog (S. cerevisiae)
1440984_at	1.8	Baz2b	bromodomain adjacent to zinc finger domain, 2B
1453028_at	1.8	Pwwp2a	PWWP domain containing 2A
1440406_at	1.7	Gpatch3	G patch domain containing 3
1428616_at	1.7	LOC100040573 /// Zfp131	similar to putative transcription factor ZNF131 /// zinc finger protein 131
1419666_at	1.7	1600012F09Rik	RIKEN cDNA 1600012F09 gene
1440125_at	1.7	A530054K11Rik	RIKEN cDNA A530054K11 gene
1434904_at	1.7	Hivep2	human immunodeficiency virus type I enhancer binding protein 2
1417771_a_at	1.7	Psmc6	proteasome (prosome, macropain) 26S subunit, ATPase, 6
1433925_at	1.7	Dync1l12	dynein, cytoplasmic 1 light intermediate chain 2
1439483_at	1.7	A1506816	expressed sequence A1506816
1434453_at	1.7	Polr3a	polymerase (RNA) III (DNA directed) polypeptide A
1438016_at	1.7	Dkc1	dyskeratosis congenita 1, dyskerin homolog (human)
1428199_at	1.7	Adal	adenosine deaminase-like
1422027_a_at	1.7	Ets1	E26 avian leukemia oncogene 1, 5' domain
1457351_at	1.6	Taf2	TAF2 RNA polymerase II, TATA box binding protein (TBP)-associated factor
1435033_at	1.6	Arhgef4	Rho guanine nucleotide exchange factor (GEF) 4
1428084_at	1.6	Krr1	KRR1, small subunit (SSU) processome component, homolog (yeast)
1456405_at	1.6	Dido1	death inducer-obliterator 1
1423600_a_at	1.6	Tcof1	Treacher Collins Franceschetti syndrome 1, homolog
1435338_at	1.6	Cdk6	cyclin-dependent kinase 6
1423784_at	1.6	Gars	glycyl-tRNA synthetase
1442982_at	1.6	Ccdc66	coiled-coil domain containing 66
1451567_a_at	1.6	Ifi203	interferon activated gene 203
1438606_a_at	1.6	Clic4	chloride intracellular channel 4 (mitochondrial)
1452091_a_at	1.6	Rbm28	RNA binding motif protein 28
1457059_at	1.6	Zfp438	zinc finger protein 438
		EG634650 /// Gbp10 ///	
1447927_at	1.6	Mpa2l	predicted gene, EG634650 /// guanylate-binding protein 10 /// macrophage activation 2 like
1424498_at	1.6	Atf3	atlastin GTPase 3
1428737_s_at	1.5	Gramd3	GRAM domain containing 3
1428682_at	1.5	Zc3h6	zinc finger CCCH type containing 6
1433697_at	1.5	Pat1	protein associated with topoisomerase II homolog 1 (yeast)
1415730_at	1.5	573045316Rik	RIKEN cDNA 573045316 gene
		H3f3a /// H3f3b ///	
1455725_a_at	1.5	LOC100045490	H3 histone, family 3A /// H3 histone, family 3B /// similar to H3 histone, family 3A
1424532_at	1.4	Ylpm1	YLP motif containing 1
1457900_at	1.4	Ascc3	activating signal cointegrator 1 complex subunit 3
1455413_at	1.4	Zfp11	zinc finger protein 11
1437104_at	1.4	Arfgef1	ADP-ribosylation factor guanine nucleotide-exchange factor 1(brefeldin A-inhibited)
1434936_at	1.4	Hirip3	HIRA interacting protein 3
1444023_at	1.4	Ank2	ankyrin 2, brain
1422254_a_at	-1.3	Dyrk1b	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 1b
1429880_at	-1.3	4921531C22Rik	RIKEN cDNA 4921531C22 gene
1430123_a_at	-1.4	Akr1a4	aldo-keto reductase family 1, member A4 (aldehyde reductase)
1451209_at	-1.5	Lass5	LAG1 homolog, ceramide synthase 5
1447363_s_at	-1.5	Bub1b	budding uninhibited by benzimidazoles 1 homolog, beta (S. cerevisiae)
1437393_at	-1.6	Prkca	protein kinase C, alpha
1429887_at	-1.6	Nos1	nitric oxide synthase 1, neuronal
1434975_x_at	-1.6	4933439C20Rik	RIKEN cDNA 4933439C20 gene
1439377_x_at	-1.7	Cdc20	cell division cycle 20 homolog (S. cerevisiae)
1439394_x_at	-1.7	Cdc20	cell division cycle 20 homolog (S. cerevisiae)
1417732_at	-1.8	Anxa8	annexin A8
1417756_a_at	-1.8	Lsp1	lymphocyte specific 1
1438483_at	-1.8	Nos1	nitric oxide synthase 1, neuronal
1455019_x_at	-1.8	Ckap4	cytoskeleton-associated protein 4
1448392_at	-1.9	Sparc	secreted acidic cysteine rich glycoprotein
1455220_at	-1.9	Frat2	frequently rearranged in advanced T-cell lymphomas 2
1427049_s_at	-2.0	Smo	smoothened homolog (Drosophila)
1416589_at	-2.0	Sparc	secreted acidic cysteine rich glycoprotein
1437289_at	-2.1	Impad1	inositol monophosphatase domain containing 1
1460559_at	-2.1	Kank2	KN motif and ankyrin repeat domains 2
1427234_at	-2.3	Vangl1	vang-like 1 (van gogh, Drosophila)
1441137_at	-2.3	Bicc1	bicaudal C homolog 1 (Drosophila)
1453055_at	-2.5	Sema6d	sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6D
1423484_at	-2.5	4930533K18Rik /// Bicc1	RIKEN cDNA 4930533K18 gene /// bicaudal C homolog 1 (Drosophila)

Table S3B.

Moe430_2 GeneChip			
probeset	fold-change	gene symbol	gene description
1419149_at	24.3	Serpine1	serine (or cysteine) peptidase inhibitor, clade E, member 1
1449773_s_at	22.9	Gadd45b	growth arrest and DNA-damage-inducible 45 beta
1419529_at	19.4	Il23a	interleukin 23, alpha subunit p19
1417256_at	19.2	Mmp13	matrix metalloproteinase 13
1457644_s_at	19.1	Cxcl1	chemokine (C-X-C motif) ligand 1
1434015_at	16.1	Slc2a6	solute carrier family 2 (facilitated glucose transporter), member 6
1420197_at	16.1	Gadd45b	Growth arrest and DNA-damage-inducible 45 beta, mRNA (cDNA clone MGC:36156 IMAGE:5355150)
1427381_at	16.1	Irg1	immunoresponsive gene 1
1450971_at	14.5	Gadd45b	growth arrest and DNA-damage-inducible 45 beta
1449591_at	14.4	Casp4 /// LOC100044206	caspase 4, apoptosis-related cysteine peptidase /// hypothetical protein LOC100044206
1418930_at	14.4	Cxcl10 /// LOC100045000	chemokine (C-X-C motif) ligand 10 /// similar to Small inducible cytokine B10 precursor (CXCL10) (Interferon-gamma-induced protein CRG-2) (Gamma-IP10) (IP-10) (C7)
1455197_at	13.9	Rnd1	Rho family GTPase 1
1438148_at	13.4	Cxcl3	chemokine (C-X-C motif) ligand 3
1418536_at	13.4	H2-Q7	histocompatibility 2, Q region locus 7
1425519_a_at	12.2	Cd74	CD74 antigen (invariant polypeptide of major histocompatibility complex, class II antigen-associated)
1425412_at	11.3	Nlrp3	NLR family, pyrin domain containing 3
1450199_a_at	10.7	Stab1	stabilin 1
1423413_at	10.7	Ndrp1	N-myc downstream regulated gene 1
1452418_at	10.6	1200016E24Rik	RIKEN cDNA 1200016E24 gene
1460722_at	10.1	Soat2	sterol O-acyltransferase 2
1435462_at	9.9	Plcxd2	phosphatidylinositol-specific phospholipase C, X domain containing 2
1418829_a_at	9.8	Eno2	enolase 2, gamma neuronal
1419675_at	9.6	Ngf	nerve growth factor
1455324_at	9.5	Plicxd2	phosphatidylinositol-specific phospholipase C, X domain containing 2
1418936_at	9.4	Maff	v-maf musculoaponeurotic fibrosarcoma oncogene family, protein F (avian)
1449731_s_at	9.2	Nfkbia	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
1433453_a_at	9.1	Abtb2	ankyrin repeat and BTB (POZ) domain containing 2
1419697_at	9.0	Cxcl11 /// LOC630447	inducible T-cell alpha chemoattractant) (I-TAC)
1422573_at	9.0	Ampd3	adenosine monophosphate deaminase 3
1435595_at	8.9	1810011O10Rik	RIKEN cDNA 1810011O10 gene
1448485_at	8.8	Ggt1	gamma-glutamyltransferase 1
1448306_at	8.4	Nfkbia	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
1426063_a_at	8.4	Gem	GTP binding protein (gene overexpressed in skeletal muscle)
1420089_at	8.4	Nfkbia	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha (Nfkbia), mRNA
1448610_a_at	8.3	Sod2	superoxide dismutase 2, mitochondrial
1427372_at	8.2	Cyp27b1	cytochrome P450, family 27, subfamily b, polypeptide 1
1447612_x_at	8.1	Jmjd3	jumonji domain containing 3
1450582_at	8.1	H2-Q5	histocompatibility 2, Q region locus 5
1418188_a_at	8.0	Malat1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
1425155_x_at	7.8	Csf1	colony stimulating factor 1 (macrophage)
1417813_at	7.8	Ikake	inhibitor of kappaB kinase epsilon
1421207_at	7.7	Lif	leukemia inhibitory factor
1456014_s_at	7.5	Fermt3	fermitin family homolog 3 (Drosophila)
1438855_x_at	7.4	Tnfaip2	tumor necrosis factor, alpha-induced protein 2
1458802_at	7.4	Hivep3	human immunodeficiency virus type I enhancer binding protein 3
1451593_at	7.1	H2-K1	MRNA similar to histocompatibility 2, D region locus 1 (cDNA clone MGC:25703 IMAGE:3675316)
1424735_at	6.9	Slc25a25	solute carrier family 25 (mitochondrial carrier, phosphate carrier), member 25
1423904_a_at	6.8	Pvr	poliovirus receptor
1438157_s_at	6.8	Nfkbia	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
1422053_at	6.6	Inhba	inhibin beta-A
1416273_at	6.5	Tnfaip2	tumor necrosis factor, alpha-induced protein 2
1418105_at	6.4	Stmn4	stathmin-like 4
1439787_at	6.4	P2rx7	purinergic receptor P2X, ligand-gated ion channel, 7
1454976_at	6.3	Sod2	superoxide dismutase 2, mitochondrial
1421392_a_at	6.2	Birc3	baculoviral IAP repeat-containing 3
1450829_at	6.1	Tnfaip3	tumor necrosis factor, alpha-induced protein 3
1434980_at	5.9	Pik3r5	phosphoinositide-3-kinase, regulatory subunit 5, p101
1420515_a_at	5.8	Pglyrp2	peptidoglycan recognition protein 2
1420330_at	5.8	Clec4e	C-type lectin domain family 4, member e
1419853_a_at	5.7	P2rx7	purinergic receptor P2X, ligand-gated ion channel, 7
1420088_at	5.7	Nfkbia	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
1433454_at	5.7	Abtb2	ankyrin repeat and BTB (POZ) domain containing 2
1420450_at	5.6	Mmp10	matrix metalloproteinase 10
1418133_at	5.6	Bcl3	B-cell leukemia/lymphoma 3
1453589_a_at	5.5	6820431F20Rik	RIKEN cDNA 6820431F20 gene
1422018_at	5.5	Hivep2	human immunodeficiency virus type I enhancer binding protein 2
1460602_at	5.5	Dlc1	deleted in liver cancer 1
1438494_at	5.4	Hrh1 /// LOC100041871	histamine receptor H1 /// similar to histamine receptor H1
1438707_at	5.4	Atp13a4 /// LOC637970	ATPase type 13A4 /// similar to type V P-type ATPase isoform 4
1451160_s_at	5.4	Pvr	poliovirus receptor
1422748_at	5.4	Zeb2	zinc finger E-box binding homeobox 2
1424067_at	5.4	Icam1	intercellular adhesion molecule 1
1417487_at	5.3	Fosl1	fos-like antigen 1
1423903_at	5.2	Pvr	poliovirus receptor
1436173_at	5.2	Dlc1	deleted in liver cancer 1
1435540_at	5.2	Irgq	immunity-related GTPase family, Q
1434574_at	5.1	9430008C03Rik	RIKEN cDNA 9430008C03 gene
1450977_s_at	5.1	Ndrp1	N-myc downstream regulated gene 1
1450173_at	5.0	Ripk2	receptor (TNFRSF)-interacting serine-threonine kinase 2
1415989_at	5.0	Vcam1	vascular cell adhesion molecule 1

1435108_at	4.9	Arhgap22	Rho GTPase activating protein 22
1420382_at	4.9	Apob48r	apolipoprotein B48 receptor
1421066_at	4.9	Jak2	Janus kinase 2
1424959_at	4.9	Anxa13	annexin A13
1434350_at	4.8	Axud1	AXIN1 up-regulated 1
1460336_at	4.8	Ppargc1a	peroxisome proliferator activated receptor, gamma, coactivator 1 alpha
1429040_at	4.8	6820431F20Rik	RIKEN cDNA 6820431F20 gene
1432059_x_at	4.7	5031425E22Rik	RIKEN cDNA 5031425E22 gene
1417408_at	4.7	F3	coagulation factor III
1448136_at	4.7	Enpp2	ectonucleotide pyrophosphatase/phosphodiesterase 2
1440346_at	4.7	Jmj3d3	Jumonji domain containing 3, mRNA (cDNA clone IMAGE:1378940)
1420992_at	4.6	Ankrd1	ankyrin repeat domain 1 (cardiac muscle)
1447870_x_at	4.6	1110002E22Rik	RIKEN cDNA 1110002E22 gene
1420710_at	4.6	Rel	reticuloendotheliosis oncogene
1428909_at	4.6	A130040M12Rik	RIKEN cDNA A130040M12 gene
1443883_at	4.5	Sys1	SYS1 Golgi-localized integral membrane protein homolog (S. cerevisiae)
1437247_at	4.5	Fosl2 /// LOC634417	fos-like antigen 2 /// similar to fos-like antigen 2
1448436_a_at	4.5	Irf1	interferon regulatory factor 1
1426464_at	4.5	Nr1d1	nuclear receptor subfamily 1, group D, member 1
1427540_at	4.4	Zwint	ZW10 interactor
1455029_at	4.4	Kif21a	kinesin family member 21A
1427689_a_at	4.4	Tnip1	TNFAIP3 interacting protein 1
		Fbx110 ///	
1459861_s_at	4.4	OTTMUSG00000006609	F-box and leucine-rich repeat protein 10 /// predicted gene, OTTMUSG00000006609
1424408_at	4.4	Lims2	LIM and senescent cell antigen like domains 2
1437884_at	4.3	Arl5b	ADP-ribosylation factor-like 5B
		1200015M12Rik ///	
		1200016E24Rik ///	
		A130040M12Rik ///	RIKEN cDNA 1200015M12 gene /// RIKEN cDNA 1200016E24 gene /// RIKEN cDNA A130040M12 gene ///
1435137_s_at	4.3	E430024C06Rik	RIKEN cDNA E430024C06 gene
1445843_at	4.2	Chd2	chromodomain helicase DNA binding protein 2
1421756_a_at	4.2	Gpr19	G protein-coupled receptor 19
1449851_at	4.2	Per1	period homolog 1 (Drosophila)
1454865_at	4.2	Slc9a8	solute carrier family 9 (sodium/hydrogen exchanger), member 8
1422028_a_at	4.2	Ets1	E26 avian leukemia oncogene 1, 5' domain
1416432_at	4.1	Pfkfb3	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 3
1434786_at	4.1	Ppp1r12b	protein phosphatase 1, regulatory (inhibitor) subunit 12B
1436074_at	4.1	Nfkbid	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, delta
1426526_s_at	4.1	Ovgp1	oviductal glycoprotein 1
1449702_at	4.1	Zfand2a	zinc finger, AN1-type domain 2A
1438796_at	4.1	Nr4a3	nuclear receptor subfamily 4, group A, member 3
1428691_at	4.1	Chd2	chromodomain helicase DNA binding protein 2
1418714_at	4.1	Dusp8	dual specificity phosphatase 8
1429588_at	4.1	2810474O19Rik	RIKEN cDNA 2810474O19 gene
1420591_at	4.1	Gpr84	G protein-coupled receptor 84
1416268_at	4.0	Ets2	E26 avian leukemia oncogene 2, 3' domain
1450957_a_at	4.0	Sqstm1	sequestosome 1
1415941_s_at	4.0	Zfand2a	zinc finger, AN1-type domain 2A
1450295_s_at	4.0	Pvr	poliovirus receptor
1421236_at	3.9	Ripk2	receptor (TNFRSF)-interacting serine-threonine kinase 2
1434054_at	3.9	Mafg	v-maf musculoaponeurotic fibrosarcoma oncogene family, protein G (avian)
1435458_at	3.9	Pim1	proviral integration site 1
1427160_at	3.9	Pcf11	cleavage and polyadenylation factor subunit homolog (S. cerevisiae)
1437100_x_at	3.9	Pim3	proviral integration site 3
1450430_at	3.9	Mrc1	mannose receptor, C type 1
1450414_at	3.9	Pdgfb	platelet derived growth factor, B polypeptide
1448026_at	3.9	Chd7	chromodomain helicase DNA binding protein 7
1429412_at	3.9	Eny2	enhancer of yellow 2 homolog (Drosophila)
1453345_at	3.8	Npal1	NIPA-like domain containing 1
1453228_at	3.8	Stx11	syntaxin 11
1422473_at	3.7	Pde4b	phosphodiesterase 4B, cAMP specific
1421065_at	3.6	Jak2	Janus kinase 2
1435470_at	3.6	LOC547150	similar to p47 protein
1454102_at	3.6	5031425E22Rik	RIKEN cDNA 5031425E22 gene
1429527_a_at	3.6	Plscr1	phospholipid scramblase 1
1452397_at	3.6	2810474O19Rik	RIKEN cDNA 2810474O19 gene
1453181_x_at	3.6	Plscr1	phospholipid scramblase 1
1457042_at	3.6	AI256396	EST AI256396
1428365_a_at	3.6	Lonp1	lon peptidase 1, mitochondrial
1455266_at	3.6	Kif5c	kinesin family member 5C
1417612_at	3.6	Ier5	immediate early response 5
1455166_at	3.5	Arl5b	ADP-ribosylation factor-like 5B
1436094_at	3.5	Vgf	VEGF nerve growth factor inducible
1434774_at	3.5	Rhbdf2	rhomoid 5 homolog 2 (Drosophila)
1419029_at	3.5	Ero1l	ERO1-like (S. cerevisiae)
1422474_at	3.5	Pde4b	phosphodiesterase 4B, cAMP specific
1441737_s_at	3.5	Rassf1	Ras association (RalGDS/AF-6) domain family member 1
1424866_at	3.5	Usp43	ubiquitin specific peptidase 43
1436897_at	3.5	Mfhas1	malignant fibrous histiocytoma amplified sequence 1
1452214_at	3.5	Skil	SKI-like
1416600_a_at	3.5	Rcan1	regulator of calcineurin 1
1437111_at	3.4	Zc3h12c	zinc finger CCCH type containing 12C
1425020_at	3.4	EG621629 /// Ubxn2a	predicted gene, EG621629 /// UB domain protein 2A
1425319_s_at	3.4	Snrnp48	small nuclear ribonucleoprotein 48 (U11/U12)
1416224_at	3.4	Zbtb17	zinc finger and BTB domain containing 17

1449168_a_at	3.4	Akap2 /// Palm2 /// Palm2-	A kinase (PRKA) anchor protein 2 /// paralemmin 2 /// Palm2-Akap2 protein
1421031_a_at	3.4	akap2	RIKEN cDNA 2310016C08 gene
1425536_at	3.4	Stx3	syntaxin 3
1426726_at	3.4	LOC677319 /// Ppp1r10	similar to protein phosphatase 1, regulatory subunit 10 /// protein phosphatase 1, regulatory subunit 10
1448596_at	3.4	Slc6a8	solute carrier family 6 (neurotransmitter transporter, creatine), member 8
1418808_at	3.4	Rdh5	retinol dehydrogenase 5
1419766_at	3.4	Sik1	salt inducible kinase 1
1420618_at	3.4	Cpeb4	cytoplasmic polyadenylation element binding protein 4
1437176_at	3.4	AI451557	expressed sequence AI451557
1427364_a_at	3.3	Odc1	ornithine decarboxylase, structural 1
1427143_at	3.3	Jarid1b	jumonji, AT rich interactive domain 1B (Rbp2 like)
1447923_at	3.3	1810026B05Rik	PREDICTED: Mus musculus RIKEN cDNA 1810026B05 gene, transcript variant 2 (1810026B05Rik), mRNA
1426700_a_at	3.3	Usp52	ubiquitin specific peptidase 52
1437751_at	3.3	Ppargc1a	peroxisome proliferative activated receptor, gamma, coactivator 1 alpha
1453590_at	3.3	Arl5b	ADP-ribosylation factor-like 5B
1455567_at	3.3	Crkr5	CDC2-related kinase, arginine/serine-rich
1429005_at	3.2	Mfhas1	malignant fibrous histiocytoma amplified sequence 1
1439488_at	3.2	Dot1l	DOT1-like, histone H3 methyltransferase (S. cerevisiae)
1427005_at	3.2	Plk2	polo-like kinase 2 (Drosophila)
1434405_at	3.2	Fnip1	folliculin interacting protein 1
1418189_s_at	3.2	Malat1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
1457780_at	3.2	Stx11	syntaxin 11
1418203_at	3.2	Pmaip1	phorbol-12-myristate-13-acetate-induced protein 1
1421365_at	3.2	Fst	folllistatin
1449164_at	3.1	Cd68	CD68 antigen
1421712_at	3.1	Sele	selectin, endothelial cell
1447685_x_at	3.1	Ets2	E26 avian leukemia oncogene 2, 3' domain
1418835_at	3.1	Phlda1	pleckstrin homology-like domain, family A, member 1
1428674_at	3.1	Prpf38b	PRP38 pre-mRNA processing factor 38 (yeast) domain containing B
1427988_s_at	3.1	Safb2	scaffold attachment factor B2
1423173_at	3.1	Napb	N-ethylmaleimide sensitive fusion protein attachment protein beta
1433963_a_at	3.1	Fermt3	fermitin family homolog 3 (Drosophila)
1418422_at	3.1	Serpinc9g	serine (or cysteine) peptidase inhibitor, clade B, member 9g
1451123_at	3.0	C330016O10Rik	RIKEN cDNA C330016O10 gene
1427159_at	3.0	Pcf11	cleavage and polyadenylation factor subunit homolog (S. cerevisiae)
1435055_a_at	3.0	EG545878 /// Tom1	predicted gene, EG545878 /// target of myb1 homolog (chicken)
1434904_at	3.0	Hivep2	human immunodeficiency virus type I enhancer binding protein 2
1419203_at	3.0	Gtlf3a	gene trap locus F3a
1448855_at	3.0	Rassf1	Ras association (RalGDS/AF-6) domain family member 1
1419427_at	3.0	Csf3	colony stimulating factor 3 (granulocyte)
1428982_at	3.0	Atad2b	ATPase family, AAA domain containing 2B
1456699_s_at	3.0	Ythdc1	YTH domain containing 1
1441107_at	3.0	Dmrt2	doublesex and mab-3 related transcription factor like family A2
1424384_a_at	3.0	Znrf1	zinc and ring finger 1
1423685_at	2.9	Aars	alanyl-tRNA synthetase
1449668_s_at	2.9	Fnip1	folliculin interacting protein 1
1424861_at	2.9	D930016D06Rik	RIKEN cDNA D930016D06 gene
1447927_at	2.9	EG634650 /// Gbp10 ///	predicted gene, EG634650 /// guanylate-binding protein 10 /// macrophage activation 2 like
1432466_a_at	2.9	Mpa2l	apolipoprotein E
1430353_at	2.9	ApoE	GLIS family zinc finger 3
1457268_at	2.9	Glis3	DOT1-like, histone H3 methyltransferase (S. cerevisiae)
1452406_x_at	2.9	Dot1l	erythroid differentiation regulator 1
1427410_at	2.9	Erdr1	deleted in lymphocytic leukemia, 2
1434184_s_at	2.9	Dleu2	mitogen-activated protein kinase kinase kinase kinase 4
1422931_at	2.9	Map4k4	fos-like antigen 2
1435155_at	2.9	Fosl2	cingulin
1449603_at	2.9	Cgn	expressed sequence AI594671
1425241_a_at	2.9	AI594671	WD repeat and SOCS box-containing 1
1448239_at	2.9	Wsb1	heme oxygenase (decycling) 1
1439221_s_at	2.9	Hmox1	CD40 antigen
1417393_a_at	2.9	Cd40	family with sequence similarity 132, member A
1419105_at	2.9	Fam132a	nuclear receptor subfamily 1, group H, member 4
1448957_at	2.9	Nr1h4	recombination signal binding protein for immunoglobulin kappa J region
1427521_a_at	2.9	Rbpj	RIKEN cDNA 9930023K05 gene
1435402_at	2.8	9930023K05Rik	GRAM domain containing 1B
1454929_s_at	2.8	Gramd1b	scaffold attachment factor B
1453285_at	2.8	Safb	transmembrane protein 88
1415940_at	2.8	Tmem88	zinc finger, AN1-type domain 2A
1427047_at	2.8	Zfand2a	nucleoporin 188
1419536_a_at	2.8	Nup188	v-rel reticuloendotheliosis viral oncogene homolog A (avian)
1438676_at	2.8	Rela	macrophage activation 2 like
1429262_at	2.8	Mpa2l	Ras association (RalGDS/AF-6) domain family member 6
1449173_at	2.8	Rassf6	membrane protein, palmitoylated 2 (MAGUK p55 subfamily member 2)
1418465_at	2.8	Mpp2	neutrophil cytosolic factor 4
1436549_a_at	2.8	Ncf4	heterogeneous nuclear ribonucleoprotein A1
1433798_a_at	2.8	Hnrnpa1	RIKEN cDNA E330034G19 gene
1434830_at	2.8	E330034G19Rik	MAX dimerization protein 1
1422033_a_at	2.8	Mxd1	ciliary neurotrophic factor /// zinc finger protein 91 /// zinc finger protein 91, ciliary neurotrophic factor transcription unit
1453294_at	2.8	Cntf /// Zfp91 /// Zfp91-cntf	RIKEN cDNA 1700012B15 gene
1435597_at	2.8	1700012B15Rik	ATPase family, AAA domain containing 5
1422864_at	2.7	Atad5	runt related transcription factor 1
1419924_at	2.7	Runx1	Folliculin interacting protein 1, mRNA (cDNA clone MGC:100017 IMAGE:30543296)
1440789_at	2.7	Fnip1	neogenin
		Neo1	

1449234_at	2.7	Car15	carbonic anhydrase 15
1432103_a_at	2.7	Sh3gl3	SH3-domain GRB2-like 3
1421499_a_at	2.7	Ptpn14	protein tyrosine phosphatase, non-receptor type 14
1439892_at	2.7	Brsk1	BR serine/threonine kinase 1
1433850_at	2.7	Ppp4r2	protein phosphatase 4, regulatory subunit 2
1418540_a_at	2.7	Ptpre	protein tyrosine phosphatase, receptor type, E
1455046_a_at	2.7	Pogz	pogo transposable element with ZNF domain
1427705_a_at	2.7	Nfkb1	nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
1448263_a_at	2.7	Cndp2	CNDP dipeptidase 2 (metallopeptidase M20 family)
1428560_at	2.7	Xpo5	exportin 5
1453101_at	2.7	Klhl25	kelch-like 25 (Drosophila)
1426827_at	2.7	Ythdc1	YTH domain containing 1
1434726_at	2.7	Tmem146	transmembrane protein 146
1434036_at	2.6	Mtss1	metastasis suppressor 1
1427283_at	2.6	Mll1	myeloid/lymphoid or mixed-lineage leukemia 1
1432001_at	2.6	Zmynd17	zinc finger, MYND domain containing 17
1421992_a_at	2.6	Igfbp4	insulin-like growth factor binding protein 4
1423389_at	2.6	Smad7	MAD homolog 7 (Drosophila)
1431035_at	2.6	Daam1	dishevelled associated activator of morphogenesis 1
1429556_at	2.6	2610024B07Rik	RIKEN cDNA 2610024B07 gene
		EG627245 /// EG666231 ///	
		EG668343 /// LOC677259 ///	predicted gene, EG627245 /// predicted gene, EG666231 /// predicted gene, EG668343 /// similar to Ornithine
1438761_a_at	2.6	Odc1	decarboxylase (ODC) /// ornithine decarboxylase, structural 1
1454655_at	2.6	Dgkd	diacylglycerol kinase, delta
1418322_at	2.6	Crem	cAMP responsive element modulator
1448932_at	2.6	Krt16	keratin 16
1427128_at	2.6	Ptpn23	protein tyrosine phosphatase, non-receptor type 23
1435062_at	2.6	1500001A10Rik	RIKEN cDNA 1500001A10 gene
1449473_s_at	2.6	Cd40	CD40 antigen
1425969_a_at	2.6	Htt	huntingtin
1424892_at	2.6	Zkscan5	zinc finger with KRAB and SCAN domains 5
1419241_a_at	2.6	Aire	autoimmune regulator (autoimmune polyendocrinopathy candidiasis ectodermal dystrophy)
1421045_at	2.5	Mrc2	mannose receptor, C type 2
1460556_at	2.5	Micall1	microtubule associated monooxygenase, calponin and LIM domain containing -like 1
1435240_at	2.5	Baz2b	bromodomain adjacent to zinc finger domain, 2B
1437696_at	2.5	BC049807	cDNA sequence BC049807
1422027_a_at	2.5	Ets1	E26 avian leukemia oncogene 1, 5' domain
1434687_at	2.5	C730026J16	hypothetical protein C730026J16
1424043_at	2.5	Ppil4	peptidylprolyl isomerase (cyclophilin)-like 4
1418872_at	2.5	Abcb1b	ATP-binding cassette, sub-family B (MDR/TAP), member 1B
1435091_at	2.5	Zfp568	zinc finger protein 568
1444086_at	2.5	E030049G20Rik	RIKEN cDNA E030049G20 gene
1422054_a_at	2.5	Skil	SKI-like
1426725_s_at	2.5	Ets1	E26 avian leukemia oncogene 1, 5' domain
1426528_at	2.5	Nrp2 /// Pard3b	neuropilin 2 /// par-3 partitioning defective 3 homolog B (C. elegans)
1426928_at	2.5	Ccdc93	coiled-coil domain containing 93
1435249_at	2.4	Btaf1	BTAF1 RNA polymerase II, B-TFIIID transcription factor-associated, (Mot1 homolog, S. cerevisiae)
1451485_at	2.4	3300001P08Rik	RIKEN cDNA 3300001P08 gene
1424393_s_at	2.4	Adhfe1	alcohol dehydrogenase, iron containing, 1
1451496_at	2.4	Mtss1	metastasis suppressor 1
1418504_at	2.4	Hspa9	heat shock protein 9
1450474_at	2.4	Serpinb9c	serine (or cysteine) peptidase inhibitor, clade B, member 9c
1434238_at	2.4	Taf2	TAF2 RNA polymerase II, TATA box binding protein (TBP)-associated factor
1426806_at	2.4	Obfc2a	oligonucleotide/oligosaccharide-binding fold containing 2A
1424030_at	2.4	Grl1 /// LOC100043996	grainyhead-like 1 (Drosophila) /// similar to Grl1 protein
1418375_at	2.4	Mbd6	methyl-CpG binding domain protein 6
1434873_a_at	2.4	Centb1 /// LOC100045877	centaurin, beta 1 /// similar to Centaurin, beta 1
1438684_at	2.4	Nuak1	NUAK family, SNF1-like kinase, 1
1436562_at	2.4	Ddx58	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58
1416225_at	2.4	Adh1	alcohol dehydrogenase 1 (class I)
1421446_at	2.4	Prkcc	protein kinase C, gamma
1455104_at	2.3	Mxd1	MAX dimerization protein 1
1449217_at	2.3	Casp8ap2	caspase 8 associated protein 2
1454923_at	2.3	Iws1	IWS1 homolog (S. cerevisiae)
1435341_at	2.3	Ppig	peptidyl-prolyl isomerase G (cyclophilin G)
1420361_at	2.3	Slc11a1	solute carrier family 11 (proton-coupled divalent metal ion transporters), member 1
1428493_at	2.3	Sipa113	signal-induced proliferation-associated 1 like 3
1444402_at	2.3	Zc3h12c	zinc finger CCCH type containing 12C
1426421_s_at	2.3	Rbm26	RNA binding motif protein 26
1419208_at	2.3	Map3k8	mitogen-activated protein kinase kinase kinase 8
1434746_at	2.3	Mga	MAX gene associated
1418960_at	2.3	Phf2011	PHD finger protein 20-like 1
1416274_at	2.3	Ctns	cystinosis, nephropathic
1418305_s_at	2.3	Gar1	GAR1 ribonucleoprotein homolog (yeast)
1448135_at	2.3	Atf4	activating transcription factor 4
1419380_at	2.3	Zfp423	zinc finger protein 423
1442038_at	2.3	Rbm26	RNA binding motif protein 26
1434832_at	2.3	Foxo3	forkhead box O3
1429907_at	2.3	1700094D03Rik	RIKEN cDNA 1700094D03 gene
1455241_at	2.3	BC037703	cDNA sequence BC037703
1460369_at	2.3	BC003267	cDNA sequence BC003267
1455308_at	2.2	Ano6	anoctamin 6
1420331_at	2.2	Clec4e	C-type lectin domain family 4, member e
1438405_at	2.2	Fgf7	fibroblast growth factor 7
1426361_at	2.2	Zc3h11a	zinc finger CCCH type containing 11A
1460315_s_at	2.2	Tbk1	TANK-binding kinase 1

1419148_at	2.2	Avil	advillin
1437730_at	2.2	Ppp2r2a	protein phosphatase 2 (formerly 2A), regulatory subunit B (PR 52), alpha isoform
1440686_at	2.2	LOC100048538 /// Prss27	similar to protease, serine 27 /// protease, serine 27
1451959_a_at	2.2	Vegfa	vascular endothelial growth factor A
1429400_at	2.2	Clcn5	chloride channel 5
1452858_at	2.2	Elavl1	ELAV (embryonic lethal, abnormal vision, Drosophila)-like 1 (Hu antigen R)
1417249_at	2.2	Polm	polymerase (DNA directed), mu
1425686_at	2.2	Cflar	CASP8 and FADD-like apoptosis regulator
1455187_at	2.2	LOC638050 /// Zbtb40	similar to zinc finger and BTB domain containing 40 /// zinc finger and BTB domain containing 40
1456865_x_at	2.2	Rrs1	RRS1 ribosome biogenesis regulator homolog (S. cerevisiae)
1438045_at	2.2	Eea1	early endosome antigen 1
1416419_s_at	2.2	Gabarapl1	gamma-aminobutyric acid (GABA(A)) receptor-associated protein-like 1
1458148_at	2.2	Nlrc3	NLR family, CARD domain containing 3
1438967_x_at	2.2	Amhr2	anti-Mullerian hormone type 2 receptor
1452257_at	2.2	Bdh1	3-hydroxybutyrate dehydrogenase, type 1
1450711_at	2.2	Brd4	bromodomain containing 4
1434513_at	2.2	Atp13a3	ATPase type 13A3
1418661_at	2.2	Abhd2	abhydrolase domain containing 2
1424632_a_at	2.2	Rev3l	REV3-like, catalytic subunit of DNA polymerase zeta RAD54 like (S. cerevisiae)
1435007_s_at	2.2	Al132487	expressed sequence Al132487
1435904_at	2.2	Eif2c3	eukaryotic translation initiation factor 2C, 3
1455239_at	2.2	6330512M04Rik	RIKEN cDNA 6330512M04 gene
1437495_at	2.2	LOC100047187 /// Mbtps2 /// Yy2	similar to zinc finger, X-linked, duplicated B /// membrane-bound transcription factor peptidase, site 2 /// Yy2 transcription factor
1434092_at	2.2	Atg9b	ATG9 autophagy related 9 homolog B (S. cerevisiae)
1432129_a_at	2.2	Prrx1	paired related homeobox 1
1453775_at	2.2	4921505C17Rik	RIKEN cDNA 4921505C17 gene
1435039_a_at	2.1	Pip5k1a	phosphatidylinositol-4-phosphate 5-kinase, type 1 alpha
1440615_at	2.1	Dusp16	dual specificity phosphatase 16
1416187_s_at	2.1	Pnrc2	proline-rich nuclear receptor coactivator 2
1455269_a_at	2.1	Coro1a	coronin, actin binding protein 1A
1435596_at	2.1	Pion	pigeon homolog (Drosophila)
1417671_at	2.1	Scly	selenocysteine lyase
1456389_at	2.1	Zeb2	zinc finger E-box binding homeobox 2
1424250_a_at	2.1	Arhgef3	Rho guanine nucleotide exchange factor (GEF) 3
1453202_at	2.1	E330016A19Rik	RIKEN cDNA E330016A19 gene
1433523_at	2.1	D930005D10Rik	RIKEN cDNA D930005D10 gene
1416998_at	2.1	Rrs1	RRS1 ribosome biogenesis regulator homolog (S. cerevisiae)
1419169_at	2.1	Mapk6	mitogen-activated protein kinase 6
1428366_at	2.1	1600027N09Rik	RIKEN cDNA 1600027N09 gene
1427484_at	2.1	Erm15	echinoderm microtubule associated protein like 5
1454774_at	2.1	Zfp445	zinc finger protein 445
1444228_s_at	2.1	Herc2	hect (homologous to the E6-AP (UBE3A) carboxyl terminus) domain and RCC1 (CHC1)-like domain (RLD) 2
1434080_at	2.1	Aebp2	AE binding protein 2
1434364_at	2.1	Map3k14	mitogen-activated protein kinase kinase kinase 14
1437635_at	2.1	Dcblid2	discoidin, CUB and LCCL domain containing 2
1425774_at	2.1	1500001A10Rik	RIKEN cDNA 1500001A10 gene
1436651_at	2.1	Prdm11	PR domain containing 11
1420394_s_at	2.0	Gp49a /// Il1rb4	glycoprotein 49 A /// leukocyte immunoglobulin-like receptor, subfamily B, member 4
1437851_x_at	2.0	Rnps1	ribonucleic acid binding protein S1
1455309_at	2.0	Ano6	anoctamin 6
1455430_at	2.0	Prr8	proline rich 8
1453038_at	2.0	4930422G04Rik	RIKEN cDNA 4930422G04 gene
1435732_x_at	2.0	Atp6v0c /// Atp6v0c-ps2	ATPase, H+ transporting, lysosomal V0 subunit C /// ATPase, H+ transporting, lysosomal V0 subunit C, pseudogene 2
1416072_at	2.0	Cd34	CD34 antigen
1419354_at	2.0	Klf7	Kruppel-like factor 7 (ubiquitous)
1450703_at	2.0	Slc7a2	solute carrier family 7 (cationic amino acid transporter, y+ system), member 2
1444226_at	2.0	Foxo3	forkhead box O3
1457473_at	2.0	Chd1	chromodomain helicase DNA binding protein 1
1425125_at	2.0	Oit3	oncprotein induced transcript 3
1417964_at	2.0	Ap3d1	adaptor-related protein complex 3, delta 1 subunit
1456422_at	2.0	Dennd5b	DENN/MADD domain containing 5B
1450651_at	2.0	Myo10	myosin X
1449061_a_at	2.0	Prim1	DNA primase, p49 subunit
1420296_at	2.0	Clcn5	Chloride channel 5, mRNA (cDNA clone MGC:35965 IMAGE:3989812)
1438925_x_at	2.0	Atp6v0c /// Atp6v0c-ps2	ATPase, H+ transporting, lysosomal V0 subunit C /// ATPase, H+ transporting, lysosomal V0 subunit C, pseudogene 2
1448681_at	2.0	Il15ra	interleukin 15 receptor, alpha chain
1423799_at	2.0	Eif1	eukaryotic translation initiation factor 1
1426083_a_at	2.0	Btg1 /// LOC100047353	B-cell translocation gene 1, anti-proliferative /// similar to myocardial vascular inhibition factor
1421219_at	2.0	Til13	tubulin tyrosine ligase-like family, member 3
1422469_at	1.9	Tbk1	TANK-binding kinase 1
1455295_at	1.9	Slc38a7	solute carrier family 38, member 7
1427322_at	1.9	Brwd1	bromodomain and WD repeat domain containing 1
1419400_at	1.9	Mtp	microsomal triglyceride transfer protein
1454914_at	1.9	2610101N10Rik	RIKEN cDNA 2610101N10 gene
1455110_at	1.9	Gabpb2	GA repeat binding protein, beta 2
1440868_at	1.9	Gabpb2	GA repeat binding protein, beta 2
1460323_at	1.9	Tars	threonyl-tRNA synthetase
1443954_at	1.9	Rad18	RAD18 homolog (S. cerevisiae), mRNA (cDNA clone MGC:19000 IMAGE:4014013)
1437152_at	1.9	Mex3b	mex3 homolog B (C. elegans)
1434298_at	1.9	Zeb2	zinc finger E-box binding homeobox 2
1422945_a_at	1.9	Kif5c	kinesin family member 5C
1438081_at	1.9	Mcc	mutated in colorectal cancers
1440645_at	1.9	BB114814	expressed sequence BB114814

1448838_at	1.9	Topors	topoisomerase I binding, arginine/serine-rich
1423309_at	1.9	Tgln1	trans-golgi network protein
1433697_at	1.9	Pat1	protein associated with topoisomerase II homolog 1 (yeast)
1445576_at	1.9	Rsph10b2	radial spoke head 10 homolog B (Chlamydomonas)
1455549_at	1.9	Sestd1	SEC14 and spectrin domains 1
1435434_at	1.9	Braf	Braf transforming gene
1416303_at	1.9	Litaf	LPS-induced TN factor
1417022_at	1.9	Slc7a3	solute carrier family 7 (cationic amino acid transporter, y+ system), member 3
1415881_at	1.9	Ghitm	growth hormone inducible transmembrane protein
1427120_at	1.9	Zfp26	zinc finger protein 26
1427285_s_at	1.9	Malat1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
1455765_a_at	1.9	Abcc8	ATP-binding cassette, sub-family C (CFTR/MRP), member 8
1436604_at	1.9	Tll3	tubulin tyrosine ligase-like family, member 3
1457262_at	1.9	Smg1	SMG1 homolog, phosphatidylinositol 3-kinase-related kinase (C. elegans)
1433599_at	1.8	Baz1a	bromodomain adjacent to zinc finger domain 1A
1439983_a_at	1.8	Accn3	amiloride-sensitive cation channel 3
1429124_s_at	1.8	Rexo1	REX1, RNA exonuclease 1 homolog (S. cerevisiae)
1440447_at	1.8	Abhd2	abhydrolase domain containing 2
1456405_at	1.8	Dido1	death inducer-obliterator 1
1449705_x_at	1.8	LOC100045677 /// Mcm3	similar to DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3) /// minichromosome maintenance deficient 3 (S. cerevisiae)
1451225_at	1.8	Ptpn11	protein tyrosine phosphatase, non-receptor type 11
1439501_at	1.8	Cbara1	calcium binding atopy-related autoantigen 1
1455096_at	1.8	Flrt2	fibronectin leucine rich transmembrane protein 2
1436885_a_at	1.8	Cherp	calcium homeostasis endoplasmic reticulum protein
1423798_a_at	1.8	Eif1	eukaryotic translation initiation factor 1
1424788_at	1.8	Kri1	KRI1 homolog (S. cerevisiae)
1454074_a_at	1.8	Rsrc2	arginine/serine-rich coiled-coil 2
1443664_s_at	1.8	Cd164I2	CD164 sialomucin-like 2
1454982_at	1.8	Arfgef2	ADP-ribosylation factor guanine nucleotide-exchange factor 2 (brefeldin A-inhibited)
1424645_at	1.8	Tnrc6c	trinucleotide repeat containing 6C
1437980_at	1.8	9130230N09Rik	RIKEN cDNA 9130230N09 gene
1437984_x_at	1.8	Bat1a	HLA-B-associated transcript 1A
1427970_at	1.8	Zfp689	zinc finger protein 689
1442726_s_at	1.8	AI845619	expressed sequence AI845619
1442992_at	1.8	130004C03	hypothetical LOC403343
1429085_at	1.8	Vezf1	vascular endothelial zinc finger 1
1420958_at	1.7	Sys1	SYS1 Golgi-localized integral membrane protein homolog (S. cerevisiae)
1436174_at	1.7	Atad2	ATPase family, AAA domain containing 2
1434005_at	1.7	Rbms1	RNA binding motif, single stranded interacting protein 1
1419558_at	1.7	Mdm4	transformed mouse 3T3 cell double minute 4
1437646_at	1.7	LOC631806 /// Znrf3	similar to Goliath homolog precursor (Ring finger protein 130) (R-goliath) /// zinc and ring finger 3
1433944_at	1.7	Hectd2	HECT domain containing 2
1418007_at	1.7	1810007M14Rik	RIKEN cDNA 1810007M14 gene
1444021_at	1.7	Sqstm1	sequestosome 1
1433517_at	1.7	Myeov2	myeloma overexpressed 2
1453048_at	1.7	Nhlrc2	NHL repeat containing 2
1428682_at	1.7	Zc3h6	zinc finger CCCH type containing 6
1443531_at	1.7	A930005I04Rik	RIKEN cDNA A930005I04 gene, mRNA (cDNA clone MGC:151305 IMAGE:40126247)
1432356_at	1.7	1700056N10Rik	RIKEN cDNA 1700056N10 gene
1460597_at	1.7	Asxl2	additional sex combs like 2 (Drosophila)
1460318_at	1.7	Csrp3	cysteine and glycine-rich protein 3
1458685_at	1.7	Garnl1	GTPase activating RANGAP domain-like 1
1446337_at	1.7	Htt	huntingtin
1457222_at	1.7	Creb5	cAMP responsive element binding protein 5
1434824_at	1.7	Baz1b	bromodomain adjacent to zinc finger domain, 1B
1458163_at	1.7	BC066028	cDNA sequence BC066028
1434753_at	1.7	Nfrkb	nuclear factor related to kappa B binding protein
1459765_s_at	1.7	Sf1	splicing factor 1
1455389_s_at	1.7	2310051F07Rik	RIKEN cDNA 2310051F07 gene
1459622_at	1.7	Gm22	gene model 22, (NCBI)
1457059_at	1.7	Zfp438	zinc finger protein 438
1438606_a_at	1.7	Clic4	chloride intracellular channel 4 (mitochondrial)
1441216_at	1.7	St3gal1	ST3 beta-galactoside alpha-2,3-sialyltransferase 1
1455261_at	1.7	Luc7l	Luc7 homolog (S. cerevisiae)-like
1455943_at	1.7	Zfp451	zinc finger protein 451
1450314_at	1.7	Dqx1	DEAQ RNA-dependent ATPase
1419920_s_at	1.7	Usp7	ubiquitin specific peptidase 7
1430135_at	1.7	Dnase2a	deoxyribonuclease II alpha
1455668_at	1.6	Whsc11	Wolf-Hirschhorn syndrome candidate 1-like 1 (human)
1427411_s_at	1.6	Dleu2	deleted in lymphocytic leukemia, 2
1455148_at	1.6	Tmem130	transmembrane protein 130
1449158_at	1.6	Kcnk2	potassium channel, subfamily K, member 2
1456844_at	1.6	Camk2d	calcium/calmodulin-dependent protein kinase II, delta
1427534_at	1.6	4930535I16Rik	RIKEN cDNA 4930535I16 gene
1427088_at	1.6	Ccnt2	cyclin T2
1458087_at	1.6	Stac3	SH3 and cysteine rich domain 3
1451567_a_at	1.6	Ifi203	interferon activated gene 203
1417771_a_at	1.6	Psmc6	proteasome (prosome, macropain) 26S subunit, ATPase, 6
1454944_at	1.6	Hic2	hypermethylated in cancer 2
1459815_at	1.6	LOC100045751 /// Zmynd12	similar to zinc finger, MYND domain containing 12 /// zinc finger, MYND domain containing 12
1452614_at	1.5	Bcl2l15	BCL2-like 15
1430594_at	1.5	Rab11fip1	RAB11 family interacting protein 1 (class I)
1439620_at	1.5	Car13	carbonic anhydrase 13
1452243_at	1.5	Kcnj14	potassium inwardly-rectifying channel, subfamily J, member 14
1441409_at	1.5	BC030307	cDNA sequence BC030307

1437779_at	1.5	Foxh1	forkhead box H1
1437304_at	1.5	Cblb	Casitas B-lineage lymphoma b
1433910_at	1.5	Zcchc6	zinc finger, CCHC domain containing 6
1433450_at	1.5	Cdk5r1	cyclin-dependent kinase 5, regulatory subunit 1 (p35)
1450611_at	1.5	Orm3	orosomucoid 3
1460042_at	1.5	Slc23a3	solute carrier family 23 (nucleobase transporters), member 3
1415730_at	1.5	573045316Rik	RIKEN cDNA 573045316 gene
1455675_a_at	1.5	Tial1	Tia1 cytotoxic granule-associated RNA binding protein-like 1
1455502_at	1.5	Madd	MAP-kinase activating death domain
1436454_x_at	1.5	Fen1	flap structure specific endonuclease 1
1455676_x_at	1.5	Tial1	Tia1 cytotoxic granule-associated RNA binding protein-like 1
1453334_at	1.5	B230216N24Rik	RIKEN cDNA B230216N24 gene
1434082_at	1.5	Pctk2	PCTAIRE-motif protein kinase 2
1446509_at	1.5	Smox	spermine oxidase
1452091_a_at	1.4	Rbm28	RNA binding motif protein 28
1444419_at	1.4	LOC100048394 /// Prcp	hypothetical protein LOC100048394 /// prolylcarboxypeptidase (angiotensinase C)
1457900_at	1.4	Asc3	activating signal cointegrator 1 complex subunit 3
1433933_s_at	1.4	Slco2b1	solute carrier organic anion transporter family, member 2b1
1444023_at	1.4	Ank2	ankyrin 2, brain
1441039_at	1.4	4930532J02Rik	RIKEN cDNA 4930532J02 gene
		H3f3a /// H3f3b ///	
1455725_a_at	1.4	LOC100045490	H3 histone, family 3A /// H3 histone, family 3B /// similar to H3 histone, family 3A
1456052_at	1.4	Cdk13	cyclin-dependent kinase-like 3
1454200_at	1.4	Zeb2	zinc finger E-box binding homeobox 2
1439618_at	1.3	Pde10a	phosphodiesterase 10A
1431180_at	1.3	Zfp433	RIKEN cDNA 1700123A16 gene
1448641_at	1.3	Mbtd1	mbt domain containing 1
1428611_at	1.3	Atg7	autophagy-related 7 (yeast)
1447997_s_at	1.2	Timm8a2	translocase of inner mitochondrial membrane 8 homolog a2 (yeast)
		LOC100046668 ///	
		OTTMUSG00000022083 ///	similar to yeast ribosomal protein S28 homologue /// predicted gene, OTTMUSG00000022083 /// ribosomal
1460175_at	-1.3	Rps23	protein S23
1456497_x_at	-1.3	Rps10	ribosomal protein S10
1438723_a_at	-1.3	Rps10	ribosomal protein S10
1456308_x_at	-1.4	Trim28	tripartite motif-containing 28
		ENSMUSG00000045799 ///	
1423455_at	-1.4	Ptma	predicted gene, ENSMUSG00000045799 /// prothymosin alpha
1424000_a_at	-1.4	Rps11	ribosomal protein S11
1416054_at	-1.4	Rps5	ribosomal protein S5
1435151_a_at	-1.4	Rps3	ribosomal protein S3
1415701_x_at	-1.4	Rpl23	ribosomal protein L23
1452167_at	-1.4	2810407C02Rik	RIKEN cDNA 2810407C02 gene
1434588_x_at	-1.4	EG620313 /// Tbca	predicted gene, EG620313 /// tubulin cofactor a
1453467_s_at	-1.4	Rps15a	ribosomal protein S15a
1439443_x_at	-1.4	Tkt	transketolase
1439069_a_at	-1.4	4933439C20Rik	RIKEN cDNA 4933439C20 gene
1415979_x_at	-1.4	Rpl7	ribosomal protein L7
1455578_x_at	-1.5	Rpl41	ribosomal protein L41
1416089_at	-1.5	Rps15	ribosomal protein S15
1430123_a_at	-1.5	Akr1a4	aldo-keto reductase family 1, member A4 (aldehyde reductase)
		EG667682 ///	
		ENSMUSG00000066956 ///	predicted gene, EG667682 /// predicted gene, ENSMUSG00000066956 /// ERO1-like (S. cerevisiae) ///
1460008_x_at	-1.5	Ero11 /// Rpl31	ribosomal protein L31
		100041509 ///	
		ENSMUSG00000058443 ///	
		LOC100048223 ///	
		LOC100048462 ///	
		OTTMUSG00000015005 ///	predicted gene, 100041509 /// predicted gene, ENSMUSG00000058443 /// similar to QM protein /// similar to
1448157_s_at	-1.5	Rpl10	QM protein /// predicted gene, OTTMUSG00000015005 /// ribosomal protein 10
1423429_at	-1.5	Rhox5	reproductive homeobox 5
1416300_a_at	-1.5	Slc25a3	solute carrier family 25 (mitochondrial carrier, phosphate carrier), member 3
1419441_at	-1.5	Rplp0	ribosomal protein, large, P0
1452984_at	-1.5	LOC100044842	similar to cyclin fold protein 1
1422623_x_at	-1.5	Rpl41	ribosomal protein L41
		100041163 /// 100041478 ///	
		ENSMUSG00000063556 ///	
		ENSMUSG00000071532 ///	predicted gene, 100041163 /// predicted gene, 100041478 /// predicted gene, ENSMUSG00000063556 ///
1426660_x_at	-1.5	LOC100046821 /// Rpl23a	predicted gene, ENSMUSG00000071532 /// similar to ribosomal protein L23a /// ribosomal protein L23a
		EG665562 /// EG667682 ///	
		EG668850 ///	
		ENSMUSG00000066956 ///	
		Ero11 /// LOC638399 ///	predicted gene, EG665562 /// predicted gene, EG667682 /// predicted gene, EG668850 /// predicted gene,
		LOC673582 /// LOC675018	ENSMUSG00000066956 /// ERO1-like (S. cerevisiae) /// similar to ribosomal protein L31 /// similar to ribosomal
		/// OTTMUSG00000009823	/// similar to ribosomal protein L31 /// predicted gene, OTTMUSG00000009823 /// ribosomal protein
		/// Rpl31	L31
1436924_x_at	-1.5	Bub1b	budding uninhibited by benzimidazoles 1 homolog, beta (S. cerevisiae)
1447363_s_at	-1.5	Timp2	tissue inhibitor of metalloproteinase 2
1460287_at	-1.5	LOC100039355 /// Rps16	similar to Rps16 protein /// ribosomal protein S16
1416404_s_at	-1.5	Sec61a1	Sec61 alpha 1 subunit (S. cerevisiae)
1448242_at	-1.5	Nos1	nitric oxide synthase 1, neuronal
1429887_at	-1.6	Anapc5	anaphase-promoting complex subunit 5
1433822_x_at	-1.6	EG665562 /// EG667682 ///	
		ENSMUSG00000066956 ///	predicted gene, EG665562 /// predicted gene, EG667682 /// predicted gene, ENSMUSG00000066956 /// similar
		LOC638399 /// LOC673582	to ribosomal protein L31 /// similar to ribosomal protein L31 /// similar to ribosomal protein L31 /// ribosomal
1428212_x_at	-1.6	/// LOC675018 /// Rpl31	protein L31
1416415_a_at	-1.6	H2afz	H2A histone family, member Z

1436883_at	-1.6	Mbtps2	membrane-bound transcription factor peptidase, site 2
1433645_at	-1.6	Slc44a1	solute carrier family 44, member 1
1448252_a_at	-1.6	Eef1b2	eukaryotic translation elongation factor 1 beta 2
1417451_a_at	-1.6	Ppia	peptidylprolyl isomerase A
1441866_s_at	-1.6	LOC674712 /// Ptdss1	similar to phosphatidylserine synthase 1 /// phosphatidylserine synthase 1
1426904_s_at	-1.6	Dnajc10 /// LOC100047007	DnaJ (Hsp40) homolog, subfamily C, member 10 /// similar to DnaJ (Hsp40) homolog, subfamily C, member 10
1448322_a_at	-1.6	Cox4i1	cytochrome c oxidase subunit IV isoform 1
		OTTMUSG00000016246 ///	
1415833_x_at	-1.6	Rps29	predicted gene, OTTMUSG00000016246 /// ribosomal protein S29
			potassium voltage gated channel, Shab-related subfamily, member 1 /// protein kinase C and casein kinase substrate in neurons 2
1417810_a_at	-1.6	Kcnb1 /// Pacsin2	
1460680_a_at	-1.6	LOC100044627 /// Rpl23	similar to HL23 ribosomal protein /// ribosomal protein L23
1455019_x_at	-1.6	Ckap4	cytoskeleton-associated protein 4
1417323_at	-1.6	Psrc1	proline/serine-rich coiled-coil 1
1435910_at	-1.6	Fads3	fatty acid desaturase 3
1420880_a_at	-1.7	Ywhab	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, beta polypeptide
1453034_at	-1.7	Zfp251	zinc finger protein 251
1436079_s_at	-1.7	Vapb	vesicle-associated membrane protein, associated protein B and C
1437389_x_at	-1.7	Khdrbs1	KH domain containing, RNA binding, signal transduction associated 1
		100041163 /// 100041478 ///	
		ENSMUSG00000063556 ///	predicted gene, 100041163 /// predicted gene, 100041478 /// predicted gene, ENSMUSG00000063556 ///
1426659_a_at	-1.7	LOC100046821 /// Rpl23a	similar to ribosomal protein L23a /// ribosomal protein L23a
1415821_at	-1.7	Nptn	neuroplastin
1456128_at	-1.7	Atp5g2	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit c (subunit 9), isoform 2
1448504_a_at	-1.7	Cbx3 /// LOC633016	chromobox homolog 3 (Drosophila HP1 gamma) /// similar to chromobox homolog 3
1453729_a_at	-1.7	Rpl37	ribosomal protein L37
1430288_x_at	-1.7	Rps21	ribosomal protein S21
1428152_a_at	-1.7	Rpl18a	ribosomal protein L18A
1434731_x_at	-1.7	Prdx1	peroxiredoxin 1
1451002_at	-1.7	Aco2	aconitase 2, mitochondrial
1452830_s_at	-1.7	Cad	carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase
1416539_at	-1.7	Siae	sialic acid acetyltransferase
1439394_x_at	-1.7	Cdc20	cell division cycle 20 homolog (S. cerevisiae)
1428884_at	-1.7	Tmem57	transmembrane protein 57
		4933439C20Rik ///	RIKEN cDNA 4933439C20 gene /// phosphatidylserine decarboxylase pseudogene /// phosphatidylserine decarboxylase
1426387_x_at	-1.7	LOC236604 /// Pisd	
1426809_at	-1.8	C430004E15Rik	RIKEN cDNA C430004E15 gene
		100038991 /// 100043296 ///	
		ENSMUSG00000069439 ///	predicted gene, 100038991 /// predicted gene, 100043296 /// predicted gene, ENSMUSG00000069439 ///
1416243_a_at	-1.8	Rpl35	ribosomal protein L35
1437393_at	-1.8	Prkca	protein kinase C, alpha
1439060_s_at	-1.8	Wipi1	WD repeat domain, phosphoinositide interacting 1
1415741_at	-1.8	Tmem165	transmembrane protein 165
1416996_at	-1.8	Tbc1d8	TBC1 domain family, member 8
		EG668144 ///	
		ENSMUSG00000062611 ///	
1422475_a_at	-1.8	Rps3a	predicted gene, EG668144 /// predicted gene, ENSMUSG00000062611 /// ribosomal protein S3a
		100041163 /// 100042634 ///	
		EG385336 /// EG664936 ///	
		EG666548 ///	
		ENSMUSG00000063556 ///	predicted gene, 100041163 /// predicted gene, 100042634 /// predicted gene, EG385336 /// predicted gene, EG664936 /// predicted gene, EG666548 /// predicted gene, ENSMUSG00000063556 /// predicted gene, ENSMUSG00000071532 ///
		LOC100042058 ///	ENSMUSG00000071532 /// similar to ribosomal protein L23a /// similar to ribosomal protein L23a /// ribosomal protein L23a
1437975_a_at	-1.8	LOC100046821 /// Rpl23a	
1416276_a_at	-1.8	Rps4x	ribosomal protein S4, X-linked
1448103_s_at	-1.8	Nono	non-POU-domain-containing, octamer binding protein
1435612_at	-1.8	Opcml	opioid binding protein/cell adhesion molecule-like
1426576_at	-1.8	Sgms1	sphingomyelin synthase 1
1416546_a_at	-1.8	Rpl6	ribosomal protein L6
1424635_at	-1.8	Eef1a1	eukaryotic translation elongation factor 1 alpha 1
1416961_at	-1.8	Bub1b	budding uninhibited by benzimidazoles 1 homolog, beta (S. cerevisiae)
1434091_at	-1.8	Faah	fatty acid amide hydrolase
1426680_at	-1.8	Sepr1	selenoprotein N, 1
1437159_at	-1.8	Glb1	galactosidase, beta 1
1436691_x_at	-1.8	Prdx1	peroxiredoxin 1
1455022_at	-1.9	Strn	striatin, calmodulin binding protein
1417615_a_at	-1.9	Rpl11	ribosomal protein L11
1449183_at	-1.9	Comt1	catechol-O-methyltransferase 1
1438159_x_at	-1.9	Ndufv2	NADH dehydrogenase (ubiquinone) flavoprotein 2
1456695_x_at	-1.9	Anapc5	anaphase-promoting complex subunit 5
1416105_at	-1.9	Nnt	nicotinamide nucleotide transhydrogenase
1437807_x_at	-1.9	Ctnna1	catenin (cadherin associated protein), alpha 1
1448449_at	-1.9	Ripk3	receptor-interacting serine-threonine kinase 3
1421870_at	-1.9	Trim44	tripartite motif-containing 44
1423677_at	-1.9	Fkbp9	FK506 binding protein 9
1435880_at	-1.9	Ankrd50	ankyrin repeat domain 50
1451516_at	-1.9	Rhebl1	Ras homolog enriched in brain like 1
1426342_at	-1.9	Stt3b	STT3, subunit of the oligosaccharyltransferase complex, homolog B (S. cerevisiae)
1435178_x_at	-1.9	Anapc5	anaphase-promoting complex subunit 5
1436499_at	-1.9	Sgms1	sphingomyelin synthase 1
1424052_at	-1.9	Thap4	THAP domain containing 4
1417842_at	-1.9	Cam1	calcium modulating ligand
1460387_a_at	-1.9	Siae	sialic acid acetyltransferase
1418101_a_at	-1.9	Rtn3	reticulon 3
		Gm1604A /// Gm1604b ///	
1452734_at	-1.9	Rnaset2a /// Rnaset2b	gene model 1604A, (NCBI) /// gene model 1604B, (NCBI) /// ribonuclease T2A /// ribonuclease T2B

1451209_at	-2.0	Lass5	LAG1 homolog, ceramide synthase 5
1455164_at	-2.0	Cdgap	CDC42 GTPase-activating protein
1424005_at	-2.0	B230219D22Rik	RIKEN cDNA B230219D22 gene
1428600_at	-2.0	Nin	ninein
1424987_at	-2.0	5430435G22Rik	RIKEN cDNA 5430435G22 gene
1422780_at	-2.0	Pxmp4	peroxisomal membrane protein 4
1416058_s_at	-2.0	Atp5c1	ATP synthase, H+ transporting, mitochondrial F1 complex, gamma polypeptide 1
1423680_at	-2.0	Fads1	fatty acid desaturase 1
1421375_a_at	-2.0	S100a6	S100 calcium binding protein A6 (calcyclin)
1456475_s_at	-2.0	Prkar2b	protein kinase, cAMP dependent regulatory, type II beta
1423030_at	-2.0	Vcp	valosin containing protein
1450686_at	-2.0	Pon2	paraoxonase 2
1423071_x_at	-2.0	6720475J19Rik	RIKEN cDNA 6720475J19 gene
1451015_at	-2.0	Tkt	transketolase
1416836_at	-2.0	Lrp10	low-density lipoprotein receptor-related protein 10
1429019_s_at	-2.0	Pon2	paraoxonase 2
1418066_at	-2.0	Cfil2	cofilin 2, muscle
1452147_at	-2.0	Sec24c	Sec24 related gene family, member C (S. cerevisiae)
1434897_a_at	-2.0	Slc25a4	solute carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 4
1455350_at	-2.0	Tmem62	transmembrane protein 62
1435074_at	-2.0	Tmem106b	transmembrane protein 106B
1433805_at	-2.0	Jak1	Janus kinase 1
1435157_at	-2.0	Hook3	hook homolog 3 (Drosophila)
1448526_at	-2.0	Kpnb1	karyopherin (importin) beta 1
1416119_at	-2.0	Txn1	thioredoxin 1
1448149_at	-2.1	Ctnna1	catenin (cadherin associated protein), alpha 1
1437185_s_at	-2.1	ENSMUSG00000050347 ///	predicted gene, ENSMUSG00000050347 /// similar to thymosin, beta 10 /// thymosin, beta 10
1422747_at	-2.1	LOC100048142 /// Tmsb10	CHK2 checkpoint homolog (S. pombe)
1427049_s_at	-2.1	Chek2	CHK2 checkpoint homolog (S. pombe)
1429304_at	-2.1	Smo	smoothened homolog (Drosophila)
1428270_at	-2.1	Ankrd10	ankyrin repeat domain 10
1415751_at	-2.1	Git8d1	glycosyltransferase 8 domain containing 1
1428382_at	-2.1	Hp1bp3	heterochromatin protein 1, binding protein 3
1428103_at	-2.1	Smarcc2	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c, member 2
1426350_at	-2.1	Adam10	a disintegrin and metallopeptidase domain 10
1434383_at	-2.1	Mgat2	mannoside acetylglucosaminyltransferase 2
1428535_at	-2.1	Pja2	praja 2, RING-H2 motif containing
1448619_at	-2.1	9430020K01Rik	RIKEN cDNA 9430020K01 gene
1434478_at	-2.1	Dhcr7	7-dehydrocholesterol reductase
1448474_at	-2.1	Heca	headcase homolog (Drosophila)
1418506_a_at	-2.1	Nek7	NIMA (never in mitosis gene a)-related expressed kinase 7
1417028_a_at	-2.2	Prdx2	peroxiredoxin 2
1439184_s_at	-2.2	Trim2	tripartite motif-containing 2
		Txndc17	thioredoxin domain containing 17
		EG629732 /// LOC100042180	
		/// LOC100048094 ///	
		OTTMUSG00000000623 ///	
		OTTMUSG00000016616 ///	predicted gene, EG629732 /// ribosomal protein S8 pseudogene /// similar to ribosomal protein S8 /// predicted
		OTTMUSG00000022847 ///	gene, OTTMUSG00000000623 /// predicted gene, OTTMUSG00000016616 /// predicted gene,
1436760_a_at	-2.2	Rps8	OTTMUSG00000022847 /// ribosomal protein S8
1434395_at	-2.2	Man1a2	mannosidase, alpha, class 1A, member 2
1417090_at	-2.2	Rcn1	reticulocalbin 1
1433779_at	-2.2	Casc4	cancer susceptibility candidate 4
1455419_at	-2.2	D630045J12Rik	RIKEN cDNA D630045J12 gene
1427048_at	-2.2	Smo	smoothened homolog (Drosophila)
1455220_at	-2.2	Frat2	frequently rearranged in advanced T-cell lymphomas 2
1428412_at	-2.2	Tm9sf3	transmembrane 9 superfamily member 3
1448661_at	-2.2	Plcb3	phospholipase C, beta 3
1417012_at	-2.2	Sdc2	syndecan 2
1443978_at	-2.2	Ankle1	ankyrin repeat and LEM domain containing 1
1417893_at	-2.2	Sfxn3	sideroflexin 3
		100041509 /// EG234703 ///	
		EG665071 ///	
		ENSMUSG000000058443 ///	
		LOC100048223 ///	
		LOC100048462 ///	predicted gene, 100041509 /// predicted gene, EG234703 /// predicted gene, EG665071 /// predicted gene,
		OTTMUSG00000015005 ///	ENSMUSG000000058443 /// similar to QM protein /// similar to QM protein /// predicted gene,
1415942_at	-2.2	Rpl10	OTTMUSG00000015005 /// ribosomal protein 10
1460559_at	-2.2	Kank2	KN motif and ankyrin repeat domains 2
		100042986 ///	
		OTTMUSG00000015874 ///	
1460543_x_at	-2.2	Rpl37a	predicted gene, 100042986 /// predicted gene, OTTMUSG00000015874 /// ribosomal protein L37a
1454649_at	-2.3	Srd5a1	steroid 5 alpha-reductase 1
1433908_a_at	-2.3	Ctnn	cortactin
1424906_at	-2.3	Pq1c3	PQ loop repeat containing
1427234_at	-2.3	Vangl1	vang-like 1 (van gogh, Drosophila)
1452155_a_at	-2.3	Ddx17	DEAD (Asp-Glu-Ala-Asp) box polypeptide 17
1435666_at	-2.3	Mast3	microtubule associated serine/threonine kinase 3
1448486_at	-2.3	Mut	methylmalonyl-Coenzyme A mutase
1434975_x_at	-2.3	4933439C20Rik	RIKEN cDNA 4933439C20 gene
1418000_a_at	-2.3	Itm2b	integral membrane protein 2B
1424438_a_at	-2.3	Leprot	leptin receptor overlapping transcript
1416372_at	-2.3	LOC674712 /// Ptdss1	similar to phosphatidylserine synthase 1 /// phosphatidylserine synthase 1
1428875_at	-2.3	Golim4	golgi integral membrane protein 4
1451068_s_at	-2.3	Rps25	ribosomal protein S25

1451175_at	-2.3	Spcc3	signal peptidase complex subunit 3 homolog (S. cerevisiae)
1428853_at	-2.3	Ptch1	patched homolog 1
1425985_s_at	-2.3	Masp1	mannan-binding lectin serine peptidase 1
1433887_at	-2.3	Dnajc3	DnaJ (Hsp40) homolog, subfamily C, member 3
1420895_at	-2.3	Tgfbr1	transforming growth factor, beta receptor I
1451359_at	-2.3	Lpcat1	lysophosphatidylcholine acyltransferase 1
1437290_at	-2.4	Impad1	inositol monophosphatase domain containing 1
1421824_at	-2.4	Bace1	beta-site APP cleaving enzyme 1
1418483_a_at	-2.4	Ggta1	glycoprotein galactosyltransferase alpha 1, 3
1429425_at	-2.4	Rnf139	ring finger protein 139
1418238_at	-2.4	Ivd	isovaleryl coenzyme A dehydrogenase
1432360_a_at	-2.4	Tmtc4	transmembrane and tetratricopeptide repeat containing 4
1423120_at	-2.4	Ide	insulin degrading enzyme
1423846_x_at	-2.4	Tuba1b	tubulin, alpha 1B
1416440_at	-2.4	Cd164	CD164 antigen
1416664_at	-2.4	Cdc20	cell division cycle 20 homolog (S. cerevisiae)
1434891_at	-2.4	Ptgrn	prostaglandin F2 receptor negative regulator
1435737_a_at	-2.4	Nde1	nuclear distribution gene E homolog 1 (A nidulans)
1429896_at	-2.4	5830408B19Rik	RIKEN cDNA 5830408B19 gene
1415707_at	-2.4	Anapc2	anaphase promoting complex subunit 2
1450431_a_at	-2.5	Nedd4	neural precursor cell expressed, developmentally down-regulated 4
1438602_s_at	-2.5	Masp1	mannan-binding lectin serine peptidase 1
1448253_at	-2.5	Glud1	glutamate dehydrogenase 1
1454709_at	-2.5	Tmem64	transmembrane protein 64
1417404_at	-2.5	Elovl6	ELOVL family member 6, elongation of long chain fatty acids (yeast)
1438847_at	-2.5	Mxd3	Max dimerization protein 3
1428624_at	-2.5	2810482107Rik	RIKEN cDNA 2810482107 gene
1416750_at	-2.5	Sigmar1	sigma non-opioid intracellular receptor 1
1436747_at	-2.5	Fam100b	family with sequence similarity 100, member B
1437289_at	-2.5	Impad1	inositol monophosphatase domain containing 1
1448592_at	-2.5	Crtap	cartilage associated protein
1448241_at	-2.5	Gm2a	GM2 ganglioside activator protein
1415698_at	-2.5	Golm1	golgi membrane protein 1
1448647_at	-2.5	Man2a1	mannosidase 2, alpha 1
1448960_at	-2.6	Cxxc5	CXXC finger 5
1427177_at	-2.6	Fycy1	FYVE and coiled-coil domain containing 1
1438976_x_at	-2.6	Mat2a	methionine adenosyltransferase II, alpha
1435395_s_at	-2.6	Atp5j2	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit f, isoform 2
1449125_at	-2.6	Tnfrsf81	tumor necrosis factor, alpha-induced protein 8-like 1
1448498_at	-2.6	Rps6ka4	ribosomal protein S6 kinase, polypeptide 4
1429189_at	-2.6	Arsb	arylsulfatase B
1439815_at	-2.6	Heatr5b	HEAT repeat containing 5B
1419259_at	-2.6	Rsu1	Ras suppressor protein 1
1417420_at	-2.6	Ccnd1	cyclin D1
1423917_a_at	-2.6	Ctnn	cortactin
1416536_at	-2.6	Mum1	melanoma associated antigen (mutated) 1
1449303_at	-2.6	Sestr3	Sestrin 3, mRNA (cDNA clone IMAGE:3481673)
1435649_at	-2.7	Nexn	nexilin
1426015_s_at	-2.7	Asph	aspartate-beta-hydroxylase
1424707_at	-2.7	Tmed10	transmembrane emp24-like trafficking protein 10 (yeast)
1416364_at	-2.7	Hsp90ab1	heat shock protein 90 alpha (cytosolic), class B member 1
1453572_a_at	-2.7	Plp2	proteolipid protein 2
1424828_a_at	-2.7	Fh1	fumarate hydratase 1
1430700_a_at	-2.7	Pla2g7	phospholipase A2, group VII (platelet-activating factor acetylhydrolase, plasma)
1425506_at	-2.7	Mylk	myosin, light polypeptide kinase
1434037_s_at	-2.7	Kat2b	K(lysine) acetyltransferase 2B
1422438_at	-2.7	Ephx1	epoxide hydrolase 1, microsomal
1428647_at	-2.7	LOC676870 /// Pbx1	leukemia transcription factor 1
1434123_at	-2.7	Fut11	fucosyltransferase 11
1436824_x_at	-2.7	Rnf26	ring finger protein 26
1446618_at	-2.7	LOC432971	hypothetical gene supported by AK038224
1429739_a_at	-2.7	Patz1	POZ (BTB) and AT hook containing zinc finger 1
1435652_a_at	-2.7	Gnai2	guanine nucleotide binding protein (G protein), alpha inhibiting 2
1418318_at	-2.7	Rnf128	ring finger protein 128
1434518_at	-2.8	Phka2	phosphorylase kinase alpha 2
1460732_a_at	-2.8	Ppl	periplakin
		100042986 ///	
		OTTMUSG00000015874 ///	
1416217_a_at	-2.8	Rpl37a	predicted gene, 100042986 /// predicted gene, OTTMUSG00000015874 /// ribosomal protein L37a
1426690_a_at	-2.8	Sreb1	sterol regulatory element binding transcription factor 1
1435727_s_at	-2.8	Lima1	LIM domain and actin binding 1
1424093_x_at	-2.8	Cd151	CD151 antigen
1450862_at	-2.8	Rad54l	RAD54 like (S. cerevisiae)
1428431_at	-2.8	Zcchc24	zinc finger, CCHC domain containing 24
1428432_at	-2.8	Zcchc24	zinc finger, CCHC domain containing 24
1438055_at	-2.8	Rarres1	retinoic acid receptor responder (tazarotene induced) 1
1438200_at	-2.8	Sulf1	sulfatase 1
		4933439C20Rik ///	RIKEN cDNA 4933439C20 gene /// phosphatidylserine decarboxylase pseudogene /// phosphatidylserine
1436944_x_at	-2.9	LOC236604 /// Pisd	decarboxylase
1450388_s_at	-2.9	Twsg1	twisted gastrulation homolog 1 (Drosophila)
1460409_at	-2.9	Cpt1a	carntine palmitoyltransferase 1a, liver
1416529_at	-2.9	Emp1	epithelial membrane protein 1
1426778_at	-2.9	Dag1	dystroglycan 1
1416365_at	-2.9	Hsp90ab1	heat shock protein 90 alpha (cytosolic), class B member 1
1431375_s_at	-2.9	Parva	parvin, alpha

1454843_at	-2.9	Prps2	phosphoribosyl pyrophosphate synthetase 2
1449056_at	-2.9	E330009J07Rik	RIKEN cDNA E330009J07 gene
1438634_x_at	-2.9	Lasp1	LIM and SH3 protein 1
1423667_at	-2.9	Mat2a	methionine adenosyltransferase II, alpha
1428891_at	-3.0	9130213B05Rik	RIKEN cDNA 9130213B05 gene
1417027_at	-3.0	Trim2	tripartite motif-containing 2
1453634_a_at	-3.0	Erp29	endoplasmic reticulum protein 29
1416041_at	-3.0	Sgk1	serum/glucocorticoid regulated kinase 1
1455481_at	-3.0	Ids	iduronate 2-sulfatase
1455789_x_at	-3.0	Hspa8	heat shock protein 8
1421654_a_at	-3.0	Lmna	lamin A
1449147_at	-3.1	Chst1	carbohydrate (keratan sulfate Gal-6) sulfotransferase 1
1422445_at	-3.1	Itga6	integrin alpha 6
1416000_a_at	-3.1	Prdx1	peroxiredoxin 1
1438386_x_at	-3.1	Mat2a	methionine adenosyltransferase II, alpha
1437308_s_at	-3.1	F2r	coagulation factor II (thrombin) receptor
1434642_at	-3.1	Hsd17b11	hydroxysteroid (17-beta) dehydrogenase 11
		1190002N15Rik ///	
1433582_at	-3.1	LOC100044725	RIKEN cDNA 1190002N15 gene /// hypothetical protein LOC100044725
1415855_at	-3.2	Kitl	kit ligand
1455470_x_at	-3.2	Lasp1	LIM and SH3 protein 1
1450852_s_at	-3.2	F2r	coagulation factor II (thrombin) receptor
1451339_at	-3.2	Suox	sulfite oxidase
1428789_at	-3.2	Ralgps2	CDNA clone IMAGE:6828107
1434105_at	-3.2	Epm2aip1	EPM2A (laforin) interacting protein 1
1454677_at	-3.2	Timp2	tissue inhibitor of metalloproteinase 2
1423732_at	-3.2	Tram1	translocating chain-associating membrane protein 1
1422906_at	-3.2	Abcg2	ATP-binding cassette, sub-family G (WHITE), member 2
1428801_at	-3.3	Mgat3	mannoside acetylglucosaminyltransferase 3
1420836_at	-3.3	Slc25a30	solute carrier family 25, member 30
1438630_x_at	-3.4	Mat2a	methionine adenosyltransferase II, alpha
1449145_a_at	-3.4	Cav1	caveolin 1, caveolae protein
1448433_a_at	-3.4	Pcolce	procollagen C-endopeptidase enhancer protein
1423484_at	-3.5	4930533K18Rik ///	RIKEN cDNA 4930533K18 gene /// bicaudal C homolog 1 (Drosophila)
1456292_a_at	-3.5	Vim	vimentin
1453304_s_at	-3.5	Ly6e	lymphocyte antigen 6 complex, locus E
1416269_at	-3.5	Atp5j2	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit f, isoform 2
1448354_at	-3.5	G6pdx	glucose-6-phosphate dehydrogenase X-linked
1417056_at	-3.5	Psme1	proteasome (prosome, macropain) 28 subunit, alpha
1429089_s_at	-3.5	2900026A02Rik	RIKEN cDNA 2900026A02 gene
1418157_at	-3.5	LOC100046044 ///	similar to COUP-TF1 /// nuclear receptor subfamily 2, group F, member 1
1457446_at	-3.5	Opcml	opioid binding protein/cell adhesion molecule-like
1433576_at	-3.6	Mat2a	methionine adenosyltransferase II, alpha
1415984_at	-3.6	Acadm	acyl-Coenzyme A dehydrogenase, medium chain
1428082_at	-3.6	Acsf5	acyl-CoA synthetase long-chain family member 5
1452037_at	-3.6	Mgat2	mannoside acetylglucosaminyltransferase 2
1443832_s_at	-3.6	Sdpr	serum deprivation response
1448533_at	-3.6	Tbcb	tubulin folding cofactor B
1416868_at	-3.6	Cdkn2c	cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)
1415770_at	-3.7	Wdr6	WD repeat domain 6
1415818_at	-3.7	Anxa6	annexin A6
1423712_a_at	-3.7	Qars	glutamyl-tRNA synthetase
1433504_at	-3.7	Pygb	brain glycogen phosphorylase
1428795_at	-3.7	1110021L09Rik	RIKEN cDNA 1110021L09 gene
1433770_at	-3.7	Dpysl2	dihydropyrimidinase-like 2
1424829_at	-3.8	A830007P12Rik	RIKEN cDNA A830007P12 gene
1424157_at	-3.8	Ehd2	EH-domain containing 2
1437760_at	-3.8	Galnt12	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 12
1423790_at	-3.8	Dap	death-associated protein
1429390_at	-3.8	Acpl2	acid phosphatase-like 2
1460173_at	-3.9	Lasp1	LIM and SH3 protein 1
1416167_at	-3.9	Prdx4	peroxiredoxin 4
		1190002N15Rik ///	
1433581_at	-3.9	LOC100044725	RIKEN cDNA 1190002N15 gene /// hypothetical protein LOC100044725
1436029_at	-4.0	Bicc1	bicaudal C homolog 1 (Drosophila)
1435972_at	-4.1	Cast	calpastatin
1456735_x_at	-4.1	Acpl2	acid phosphatase-like 2
		1420416_at	hypothetical protein LOC100044161 /// sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3A
1441137_at	-4.1	Bicc1	bicaudal C homolog 1 (Drosophila)
1416256_a_at	-4.1	Tubb5	tubulin, beta 5
1416044_at	-4.1	Flii	flightless I homolog (Drosophila)
1416779_at	-4.2	Sdpr	serum deprivation response
1435785_at	-4.3	Ehd2	EH-domain containing 2
1433751_at	-4.3	Slc39a10	solute carrier family 39 (zinc transporter), member 10
1452861_at	-4.3	2010300C02Rik	RIKEN cDNA 2010300C02 gene
1424130_a_at	-4.3	Ptfr	polymerase I and transcript release factor
1450641_at	-4.4	Vim	vimentin
1416589_at	-4.4	Sparc	secreted acidic cysteine rich glycoprotein
1450920_at	-4.5	Ccnb2	cyclin B2
1455627_at	-4.6	Col8a1	collagen, type VIII, alpha 1
1433825_at	-4.6	Ntrk3	neurotrophic tyrosine kinase, receptor, type 3
1455160_at	-4.6	2610203C20Rik	RIKEN cDNA 2610203C20 gene
1418840_at	-4.7	Pdcd4	programmed cell death 4
1426369_at	-4.8	Far1	fatty acyl CoA reductase 1
1450062_a_at	-4.8	Maged1	melanoma antigen, family D, 1

1449865_at	-4.8	LOC100044161 /// Sema3a	hypothetical protein LOC100044161 /// sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3A
1416967_at	-4.9	Sox2	SRY-box containing gene 2
1453055_at	-5.0	Sema6d	sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6D
1448392_at	-5.0	Sparc	secreted acidic cysteine rich glycoprotein
1460184_at	-5.3	Hadh	hydroxyacyl-Coenzyme A dehydrogenase
1415822_at	-5.4	Scd2	stearoyl-Coenzyme A desaturase 2
1455940_x_at	-5.5	Wdr6	WD repeat domain 6
1455972_x_at	-5.6	Hadh	hydroxyacyl-Coenzyme A dehydrogenase
1459823_at	-5.8	Ehd2	EH-domain containing 2
1420622_a_at	-6.1	Hspa8	heat shock protein 8
1420623_x_at	-6.2	Hspa8	heat shock protein 8
1456393_at	-6.3	2310002J21Rik	RIKEN cDNA 2310002J21 gene
1423642_at	-6.6	Tubb2c	tubulin, beta 2c
1438195_at	-7.0	Gpd1l	glycerol-3-phosphate dehydrogenase 1-like
1417852_x_at	-7.1	Clca1	chloride channel calcium activated 1
1460259_s_at	-7.7	Clca1 /// Clca2	chloride channel calcium activated 1 /// chloride channel calcium activated 2
1455719_at	-7.7	Tubb5	tubulin, beta 5
1417732_at	-8.0	Anxa8	annexin A8
1436528_at	-9.0	Kazald1	Kazal-type serine peptidase inhibitor domain 1
1425789_s_at	-11.1	Anxa8	annexin A8
1416326_at	-23.2	Crip1	cysteine-rich protein 1 (intestinal)

Table S3C.

Moe430_2 GeneChip probeset	fold-change	gene symbol	gene description
1449773_s_at	27.6	1110021L09Rik	RIKEN cDNA 1110021L09 gene
1435462_at	21.9	Maged1	melanoma antigen, family D, 1
1455324_at	20.6	Sparc	secreted acidic cysteine rich glycoprotein
1455197_at	20.5	5530400B01Rik	RIKEN cDNA 5530400B01 gene
1450971_at	16.4	Pde3b	phosphodiesterase 3B, cGMP-inhibited
1449591_at	15.8	2810482I07Rik	RIKEN cDNA 2810482I07 gene
1420197_at	15.5	Racgap1	Rac GTPase-activating protein 1
1460722_at	15.5	Dlc1	deleted in liver cancer 1
1425155_x_at	15.0	Fyco1	FYVE and coiled-coil domain containing 1
1420991_at	14.3	Xpnpep1	X-prolyl aminopeptidase (aminopeptidase P) 1, soluble
1422573_at	13.9	Cd44	CD44 antigen
1420992_at	13.0	Cpox	coproporphyrinogen oxidase
1418930_at	12.8	P2rx7	purinergic receptor P2X, ligand-gated ion channel, 7
1437110_at	12.4	Creld2	cysteine-rich with EGF-like domains 2
1418829_a_at	11.8	Fig4	FIG4 homolog (S. cerevisiae)
1419149_at	10.8	Cpeb4	cytoplasmic polyadenylation element binding protein 4
1450829_at	10.8	2810055G20Rik	RIKEN cDNA 2810055G20 gene
1435955_at	10.2	Sqstm1	sequestosome 1
1419697_at	9.5	Ripk2	receptor (TNFRSF)-interacting serine-threonine kinase 2
1425837_a_at	9.0	Chuk	conserved helix-loop-helix ubiquitous kinase
1453589_a_at	9.0	D030029J20Rik	RIKEN cDNA D030029J20 gene
1422612_at	8.8	Prkcdpb	protein kinase C, delta binding protein
1418188_a_at	8.7	Foxa1 /// LOC100047556	forkhead box A1 /// similar to Hepatocyte nuclear factor 3-alpha (HNF-3A) (Forkhead box protein A1)
1427334_s_at	8.7	D19Wsu162e	DNA segment, Chr 19, Wayne State University 162, expressed
1439787_at	8.7	Aco1	aconitase 1
1447870_x_at	8.5	Gtlf3a	gene trap locus F3a
1425519_a_at	8.3	Tnip1	TNFAIP3 interacting protein 1
1449731_s_at	8.3	Ralgps2	CDNA clone IMAGE:6828107
1419675_at	8.1	Loxl4	lysyl oxidase-like 4
1434574_at	8.0	Dctn6	dynactin 6
1429040_at	7.9	Cd109	CD109 antigen
1440346_at	7.8	Ehd2	EH-domain containing 2
1424735_at	7.8	Obfc2a	oligonucleotide/oligosaccharide-binding fold containing 2A
1423904_a_at	7.7	Btg1 /// LOC100047353	B-cell translocation gene 1, anti-proliferative /// similar to myocardial vascular inhibition factor
1434015_at	7.1	Urod	uroporphyrinogen decarboxylase
1445381_at	7.0	Bpgm	2,3-bisphosphoglycerate mutase
1420089_at	7.0	Ptpn14	protein tyrosine phosphatase, non-receptor type 14
1429588_at	6.9	Wipf1	WAS/WASL interacting protein family, member 1
1433453_a_at	6.9	Cnbp	cellular nucleic acid binding protein
1417408_at	6.6	Psmc6	proteasome (prosome, macropain) 26S subunit, ATPase, 6
1458802_at	6.5	Tsr1	TSR1, 20S rRNA accumulation, homolog (yeast)
1417487_at	6.4	Sfxn3	sideroflexin 3
1427372_at	6.3	Slc39a10	solute carrier family 39 (zinc transporter), member 10
1419853_a_at	6.3	Ern1	endoplasmic reticulum (ER) to nucleus signalling 1
1448306_at	6.2	Mobk1b	MOB1, Mps One Binder kinase activator-like 1B (yeast)
1448961_at	6.2	Zmpste24	zinc metallopeptidase, STE24 homolog (S. cerevisiae)
1450199_a_at	6.1	2900026A02Rik	RIKEN cDNA 2900026A02 gene
1450474_at	6.0	2610024B07Rik	RIKEN cDNA 2610024B07 gene
1419030_at	6.0	Pglyrp2	peptidoglycan recognition protein 2
1426063_a_at	5.9	Acbd5	acyl-Coenzyme A binding domain containing 5
1446894_at	5.9	Cd81	CD81 antigen
1434405_at	5.9	Ddx21	DEAD (Asp-Glu-Ala-Asp) box polypeptide 21
1416067_at	5.8	Fkbp5	FK506 binding protein 5
1434786_at	5.8	Rps6ka4	ribosomal protein S6 kinase, polypeptide 4
1447923_at	5.8	Hdlbp	high density lipoprotein (HDL) binding protein
1416268_at	5.7	Man2b1	mannosidase 2, alpha B1
1433694_at	5.7	Nuak1	NUAK family, SNF1-like kinase, 1
1451006_at	5.7	4732418C07Rik	RIKEN cDNA 4732418C07 gene

1437247_at	5.6	Nhlrc2	NHL repeat containing 2
1423156_at	5.5	Thap4	THAP domain containing 4
1419529_at	5.4	St6gal1	beta galactoside alpha 2,6 sialyltransferase 1
1427540_at	5.4	Jak1	Janus kinase 1
1425020_at	5.3	Pcf11	cleavage and polyadenylation factor subunit homolog (S. cerevisiae)
1420088_at	5.2	Stat5a	signal transducer and activator of transcription 5A
1447612_x_at	5.2	Slc12a7	solute carrier family 12, member 7
1456395_at	5.2	Zfp445	zinc finger protein 445
1460336_at	5.1	Camk2d	calcium/calmodulin-dependent protein kinase II, delta
1451160_s_at	5.1	Epm2aip1	EPM2A (laforin) interacting protein 1
1438157_s_at	5.1	Ttc21b	tetratricopeptide repeat domain 21B
1451338_at	5.1	Nrip1	nuclear receptor interacting protein 1
1419029_at	5.1	Dab2	disabled homolog 2 (Drosophila)
1452397_at	5.0	1810011O10Rik	RIKEN cDNA 1810011O10 gene
1450295_s_at	5.0	Wdr68	WD repeat domain 68
1421392_a_at	5.0	Rnf5	ring finger protein 5
1424892_at	4.9	Trim33	tripartite motif-containing 33
1437751_at	4.9	Ehmt1	euchromatic histone methyltransferase 1
1454862_at	4.9	Map3k5	mitogen-activated protein kinase kinase kinase 5
1448855_at	4.9	Vangl1	vang-like 1 (van gogh, Drosophila)
1455816_a_at	4.9	Fam20b	family with sequence similarity 20, member B
1444302_at	4.9	Arfgef1	ADP-ribosylation factor guanine nucleotide-exchange factor 1(brefeldin A-inhibited)
1428691_at	4.9	Msi2	Musashi homolog 2 (Drosophila)
1441737_s_at	4.9	Sptlc2	serine palmitoyltransferase, long chain base subunit 2
1435595_at	4.8	Twsg1	twisted gastrulation homolog 1 (Drosophila)
1420617_at	4.8	Bace1	beta-site APP cleaving enzyme 1
1423903_at	4.8	Gem	GTP binding protein (gene overexpressed in skeletal muscle)
1448610_a_at	4.7	Fam129b	family with sequence similarity 129, member B
1427005_at	4.7	Pygb	brain glycogen phosphorylase
1448957_at	4.7	Cyp27b1	cytochrome P450, family 27, subfamily b, polypeptide 1
1416691_at	4.6	Cdkn2c	cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)
1450173_at	4.6	Malat1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
1428365_a_at	4.5	Phka2	phosphorylase kinase alpha 2
1439837_at	4.5	Phf201l	PHD finger protein 20-like 1
1452214_at	4.5	Btaf1	BTAf1 RNA polymerase II, B-TFIID transcription factor-associated, (Mot1 homolog, S. cerevisiae)
1451593_at	4.5	C730026J16	hypothetical protein C730026J16
1418536_at	4.5	Aire	autoimmune regulator (autoimmune polyendocrinopathy candidiasis ectodermal dystrophy)
1422492_at	4.4	Edem2	ER degradation enhancer, mannosidase alpha-like 2
		100041163 /// 100041478 ///	
		ENSMUSG00000063556 ///	predicted gene, 100041163 /// predicted gene, 100041478 /// predicted gene, ENSMUSG00000063556 ///
1424408_at	4.4	LOC100046821 /// Rpl23a	similar to ribosomal protein L23a /// ribosomal protein L23a
1420618_at	4.4	Abca1	ATP-binding cassette, sub-family A (ABC1), member 1
1436897_at	4.3	Tex2	testis expressed gene 2
1439399_a_at	4.3	Zeb2	zinc finger E-box binding homeobox 2
1433454_at	4.3	Rnps1	ribonucleic acid binding protein S1
1448485_at	4.3	Dimt1	DIM1 dimethyladenosine transferase 1-like (S. cerevisiae)
1428279_a_at	4.3	Itfg3	integrin alpha FG-GAP repeat containing 3
1456880_at	4.2	Cdgap	CDC42 GTPase-activating protein
1455688_at	4.2	H2-Q5	histocompatibility 2, Q region locus 5
		Raet1a /// Raet1b /// Raet1c	retinoic acid early transcript 1, alpha /// retinoic acid early transcript beta /// retinoic acid early transcript gamma
1419105_at	4.2	/// Raet1d /// Raet1e	/// retinoic acid early transcript delta /// retinoic acid early transcript 1E
1436173_at	4.2	Slc9a3r1	solute carrier family 9 (sodium/hydrogen exchanger), member 3 regulator 1
1454731_at	4.2	Mxd3	Max dimerization protein 3
1421066_at	4.2	Myo10	myosin X
1426464_at	4.2	Ptms	parathyrosin
1415941_s_at	4.1	Acadm	acyl-Coenzyme A dehydrogenase, medium chain
		ENSMUSG00000074460 ///	
1429060_at	4.1	Tmed2	predicted gene, ENSMUSG00000074460 /// transmembrane emp24 domain trafficking protein 2
1450957_a_at	4.1	5730593F17Rik	RIKEN cDNA 5730593F17 gene
1433798_a_at	4.0	Lasp1	LIM and SH3 protein 1
1434350_at	4.0	Hmox1	heme oxygenase (decycling) 1
1457042_at	4.0	Rnd1	Rho family GTPase 1
1435108_at	4.0	Nipsnap3a	nipsnap homolog 3A (C. elegans)
1452997_at	3.9	Kazald1	Kazal-type serine peptidase inhibitor domain 1
1419203_at	3.9	Aes	amino-terminal enhancer of split
1434980_at	3.9	Ubqln4	ubiquilin 4
1449668_s_at	3.9	1500001M20Rik	RIKEN cDNA 1500001M20 gene
1449702_at	3.9	Chd2	chromodomain helicase DNA binding protein 2
1434184_s_at	3.9	Gusb	glucuronidase, beta
1456871_a_at	3.9	2610203C20Rik	RIKEN cDNA 2610203C20 gene
1418835_at	3.8	4833420G17Rik	RIKEN cDNA 4833420G17 gene
1433850_at	3.8	Incenp	inner centromere protein
1425241_a_at	3.8	Itgb4	integrin beta 4
1418960_at	3.8	Maf1	MAF1 homolog (S. cerevisiae)
1441691_at	3.7	St3gal5	ST3 beta-galactoside alpha-2,3-sialyltransferase 5
1428674_at	3.7	Gramd1b	GRAM domain containing 1B
1429527_a_at	3.7	Nav1	neuron navigator 1
1447685_x_at	3.7	H2-Q7	histocompatibility 2, Q region locus 7
1423434_at	3.7	Gclc	glutamate-cysteine ligase, catalytic subunit
1422018_at	3.7	4930533K18Rik /// Bicc1	RIKEN cDNA 4930533K18 gene /// bicaudal C homolog 1 (Drosophila)
1445758_at	3.7	Pnrc2	proline-rich nuclear receptor coactivator 2
1433674_a_at	3.7	Lasp1	LIM and SH3 protein 1
1434025_at	3.6	E030049G20Rik	RIKEN cDNA E030049G20 gene
		D14Etd449e ///	
		ENSMUSG00000021867 ///	DNA segment, Chr 14, ERATO Doi 449, expressed /// predicted gene, ENSMUSG00000021867 /// predicted
1426526_s_at	3.6	ENSMUSG00000072676	gene, ENSMUSG00000072676

1421065_at	3.6	Atp5k	ATP synthase, H+ transporting, mitochondrial F1F0 complex, subunit e
1430062_at	3.6	Pdik1l	PDLIM1 interacting kinase 1 like
1455029_at	3.6	D2Ertfd750e	DNA segment, Chr 2, ERATO Doi 750, expressed, mRNA (cDNA clone MGC:30961 IMAGE:4021550)
1427159_at	3.6	Plscr4	phospholipid scramblase 4
1423685_at	3.6	Ptprd	protein tyrosine phosphatase, receptor type, D
1429412_at	3.6	Mfhas1	malignant fibrous histiocytoma amplified sequence 1
1421043_s_at	3.6	Parp1	poly (ADP-ribose) polymerase family, member 1
1453119_at	3.6	Mbtps2	membrane-bound transcription factor peptidase, site 2
1418105_at	3.6	Kif5b	kinesin family member 5B
1431293_a_at	3.6	Lrrc45	leucine rich repeat containing 45
1426725_s_at	3.5	Rassf6	Ras association (RalGDS/AF-6) domain family member 6
1421640_a_at	3.5	Atp1b3	ATPase, Na+/K+ transporting, beta 3 polypeptide
1452833_at	3.5	A630007B06Rik	RIKEN cDNA A630007B06 gene
1428982_at	3.5	Atad2	ATPase family, AAA domain containing 2
1438707_at	3.5	Wdr6	WD repeat domain 6
1438045_at	3.5	Nol5a	nucleolar protein 5A
1443966_at	3.5	LOC100044627 /// Rpl23	similar to HL23 ribosomal protein /// ribosomal protein L23
		4933439C20Rik ///	RIKEN cDNA 4933439C20 gene /// phosphatidylserine decarboxylase pseudogene /// phosphatidylserine
		LOC236604 /// Pisd	decarboxylase
1429556_at	3.5	E330034G19Rik	RIKEN cDNA E330034G19 gene
1450977_s_at	3.5	Lonp1	lon peptidase 1, mitochondrial
1426290_at	3.5	Eif1	eukaryotic translation initiation factor 1
1422804_at	3.5	Mgea5	meningioma expressed antigen 5 (hyaluronidase)
1427160_at	3.5	Ndufa4	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 4
1423173_at	3.4	Atrx	Alpha thalassemia/mental retardation syndrome X-linked homolog (human) (Atrx), mRNA
1454725_at	3.4	1700058M13Rik	RIKEN cDNA 1700058M13 gene
1450700_at	3.4	4933439C20Rik ///	RIKEN cDNA 4933439C20 gene /// phosphatidylserine decarboxylase pseudogene /// phosphatidylserine
		LOC236604 /// Pisd	decarboxylase
1424043_at	3.4	Oaz1	ornithine decarboxylase antizyme 1
1429005_at	3.4	Impad1	inositol monophosphatase domain containing 1
1453260_a_at	3.4	2610028A01Rik	RIKEN cDNA 2610028A01 gene
1419650_at	3.4	Marcks	myristoylated alanine rich protein kinase C substrate
1415940_at	3.4	Rbms1	RNA binding motif, single stranded interacting protein 1
1451083_s_at	3.4	Pdcd4	programmed cell death 4
1418423_s_at	3.4	Htt	huntingtin
1423848_at	3.4	Ide	insulin degrading enzyme
1452163_at	3.4	Lmna	lamin A
1448436_a_at	3.3	Nr3c1	nuclear receptor subfamily 3, group C, member 1
1441836_x_at	3.3	H47	histocompatibility 47
1452418_at	3.3	Cgn	cingulin
1452207_at	3.3	Ampd3	adenosine monophosphate deaminase 3
1421089_a_at	3.3	Cc2d2a	coiled-coil and C2 domain containing 2A
1429041_at	3.3	Aplp2	amyloid beta (A4) precursor-like protein 2
1422544_at	3.3	Asph	aspartate-beta-hydroxylase
1419543_a_at	3.3	Cdc42ep4	CDC42 effector protein (Rho GTPase binding) 4
1429262_at	3.3	Gnpnat1	glucosamine-phosphate N-acetyltransferase 1
1421756_a_at	3.3	Ech1	enoyl coenzyme A hydratase 1, peroxisomal
1434746_at	3.3	Fam168a	family with sequence similarity 168, member A
1451316_a_at	3.2	Serpinh6b	serine (or cysteine) peptidase inhibitor, clade B, member 6b
1421308_at	3.2	Parp1	poly (ADP-ribose) polymerase family, member 1
1421058_at	3.2	Glb1	galactosidase, beta 1
1453181_x_at	3.2	Fam108a	family with sequence similarity 108, member A
1415747_s_at	3.2	Snhg1	small nucleolar RNA host gene (non-protein coding) 1
1450970_at	3.2	9430029L20Rik	RIKEN cDNA 9430029L20 gene
1452869_at	3.2	Tbc1d2b	TBC1 domain family, member 2B
1449314_at	3.2	Git2	G protein-coupled receptor kinase-interactor 2
1428909_at	3.1	Igfbp4	insulin-like growth factor binding protein 4
1431035_at	3.1	Sec24c	Sec24 related gene family, member C (S. cerevisiae)
1436811_at	3.1	Smarca2	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 2
1426827_at	3.1	Pvr	poliovirus receptor
1435540_at	3.1	Gsta4	glutathione S-transferase, alpha 4
1416273_at	3.1	Ccdc93	coiled-coil domain containing 93
1424861_at	3.1	Actr1b	ARP1 actin-related protein 1 homolog B, contractin beta (yeast)
1455191_x_at	3.1	Tra2a	transformer 2 alpha homolog (Drosophila)
1437696_at	3.1	Traf3ip1	TNF receptor-associated factor 3 interacting protein 1
1456026_at	3.1	Erp29	endoplasmic reticulum protein 29
1437406_x_at	3.1	Bat1a	HLA-B-associated transcript 1A
1434348_at	3.1	Elov5	ELOVL family member 5, elongation of long chain fatty acids (yeast)
1430271_x_at	3.0	Cpeb4	cytoplasmic polyadenylation element binding protein 4
1419148_at	3.0	Spp1	secreted phosphoprotein 1
1435248_a_at	3.0	6330577E15Rik	RIKEN cDNA 6330577E15 gene
1423760_at	3.0	Zfpm2	zinc finger protein, multitype 2
1435249_at	3.0	Cugbp2	CUG triplet repeat, RNA binding protein 2
1435470_at	3.0	Sigmar1	sigma non-opioid intracellular receptor 1
1416563_at	3.0	Pvr	poliovirus receptor
1423044_at	3.0	Lactb /// LOC677144	lactamase, beta /// similar to lactamase, beta
1435137_s_at	3.0	Ets2	E26 avian leukemia oncogene 2, 3' domain
1434054_at	3.0	Cd9	CD9 antigen
1416029_at	3.0	Ppp4r2	protein phosphatase 4, regulatory subunit 2
1427689_a_at	3.0	Car13	carbonic anhydrase 13
1448239_at	3.0	Taf1d	TATA box binding protein (Tbp)-associated factor, RNA polymerase I, D
1426810_at	2.9	Ptfr	polymerase I and transcript release factor
1423389_at	2.9	Anapc5	anaphase-promoting complex subunit 5
1427578_a_at	2.9	Acp12	acid phosphatase-like 2
1426750_at	2.9		

		EG667682 ///	
		ENSMUSG00000066956 ///	predicted gene, EG667682 /// predicted gene, ENSMUSG00000066956 /// ERO1-like (S. cerevisiae) ///
1440686_at	2.9	Ero11 /// Rpl31	ribosomal protein L31
1415971_at	2.9	Tspan3	tetraspanin 3
1418189_s_at	2.9	Hspa9	heat shock protein 9
1427432_a_at	2.9	Dpysl2	dihydropyrimidinase-like 2
1415881_at	2.9	Cpe /// LOC100046434	carboxypeptidase E /// similar to carboxypeptidase E
1428585_at	2.9	LOC100045795 /// Rsb1	similar to mKIAA3002 protein /// rosin, round spermatid basic protein 1
1437495_at	2.9	Trim35	tripartite motif-containing 35
		EG665562 /// EG667682 ///	
		EG668850 ///	
		ENSMUSG00000066956 ///	
		Ero11 /// LOC638399 ///	predicted gene, EG665562 /// predicted gene, EG667682 /// predicted gene, EG668850 /// predicted gene,
		LOC673582 /// LOC675018	ENSMUSG00000066956 /// ERO1-like (S. cerevisiae) /// similar to ribosomal protein L31 /// similar to ribosomal
		/// OTTMUSG00000009823	protein L31 /// similar to ribosomal protein L31 /// predicted gene, OTTMUSG00000009823 /// ribosomal protein
1429555_at	2.9	/// Rpl31	L31
1449061_a_at	2.9	Acaa2	acetyl-Coenzyme A acyltransferase 2 (mitochondrial 3-oxoacyl-Coenzyme A thiolase)
1459681_at	2.9	Ddr2	discoidin domain receptor family, member 2
1433656_a_at	2.9	Mat2a	methionine adenosyltransferase II, alpha
1452406_x_at	2.9	Mast3	microtubule associated serine/threonine kinase 3
1426533_at	2.9	Golim4	golgi integral membrane protein 4
1443558_s_at	2.9	Ralgds	ral guanine nucleotide dissociation stimulator
1452270_s_at	2.9	Cercam	cerebral endothelial cell adhesion molecule
1439488_at	2.9	Eif2s2	eukaryotic translation initiation factor 2, subunit 2 (beta)
1418227_at	2.9	Ptpre	protein tyrosine phosphatase, receptor type, E
1419536_a_at	2.9	Eya3	eyes absent 3 homolog (Drosophila)
1438684_at	2.9	C1qbp	complement component 1, q subcomponent binding protein
1448263_a_at	2.9	Prosc	proline synthetase co-transcribed
1436505_at	2.9	Yipf3	Yip1 domain family, member 3
1424959_at	2.8	Mapk3	mitogen-activated protein kinase 3
1448135_at	2.8	Gadd45b	Growth arrest and DNA-damage-inducible 45 beta, mRNA (cDNA clone MGC:36156 IMAGE:5355150)
1458148_at	2.8	6330403M23Rik	RIKEN cDNA 6330403M23 gene
1460177_at	2.8	Nsmce1	Non-SMC element 1 homolog (S. cerevisiae), mRNA (cDNA clone MGC:25737 IMAGE:3984224)
1426806_at	2.8	Akr1a4	aldo-keto reductase family 1, member A4 (aldehyde reductase)
1435402_at	2.8	Map3k6	mitogen-activated protein kinase kinase kinase 6
1426726_at	2.8	Psm1	proteasome (prosome, macropain) 26S subunit, non-ATPase, 1
1456389_at	2.8	Mib1	mindbomb homolog 1 (Drosophila)
1422864_at	2.8	Fasn	fatty acid synthase
		100042986 ///	
		OTTMUSG00000015874 ///	
1416187_s_at	2.8	Rpl37a	predicted gene, 100042986 /// predicted gene, OTTMUSG00000015874 /// ribosomal protein L37a
		LOC100045332 ///	similar to 37kDa oncofetal antigen /// similar to 40S ribosomal protein SA (p40) (34/67 kDa laminin receptor) ///
1434384_at	2.8	LOC636901 /// Rpsa	ribosomal protein SA
1438081_at	2.8	Gabpb2	GA repeat binding protein, beta 2
1434298_at	2.8	Mat2b	methionine adenosyltransferase II, beta
1418422_at	2.8	Phlda1	pleckstrin homology-like domain, family A, member 1
1436513_at	2.8	Picalm	phosphatidylinositol binding clathrin assembly protein
1422027_a_at	2.7	Mgat1	mannoside acetylglucosaminyltransferase 1
1424533_a_at	2.7	Tdrd7	tudor domain containing 7
1426528_at	2.7	Mgat3	mannoside acetylglucosaminyltransferase 3
1426404_a_at	2.7	Tmem41b	transmembrane protein 41B
1426459_s_at	2.7	Prpf38b	PRP38 pre-mRNA processing factor 38 (yeast) domain containing B
1426705_s_at	2.7	Vezf1	vascular endothelial zinc finger 1
1418504_at	2.7	Ero11	ERO1-like (S. cerevisiae)
1435341_at	2.7	Casp4 /// LOC100044206	caspace 4, apoptosis-related cysteine peptidase /// hypothetical protein LOC100044206
1420710_at	2.7	Igf1	insulin-like growth factor binding protein 4
1437635_at	2.7	Ivbl	ivB (bacterial acetolactate synthase)-like
1430786_at	2.7	Igf1	insulin-like growth factor 1
1419924_at	2.7	Birc3	baculoviral IAP repeat-containing 3
1416272_at	2.7	Hsp90ab1	heat shock protein 90 alpha (cytosolic), class B member 1
1442038_at	2.7	Ppargc1a	peroxisome proliferative activated receptor, gamma, coactivator 1 alpha
1435062_at	2.6	Hdac6	histone deacetylase 6
1420515_a_at	2.6	Gpr19	G protein-coupled receptor 19
1417612_at	2.6	Itm2b	integral membrane protein 2B
1421992_a_at	2.6	Rab11b	RAB11B, member RAS oncogene family
1437176_at	2.6	Prpf38b	PRP38 pre-mRNA processing factor 38 (yeast) domain containing B
1456699_s_at	2.6	Cspp1	centrosome and spindle pole associated protein 1
1456778_at	2.6	Angptl2	angiopoietin-like 2
		LOC100044161 /// Sema3a	hypothetical protein LOC100044161 /// sema domain, immunoglobulin domain (Ig), short basic domain,
1435400_at	2.6	LOC100044161 /// Sema3a	secreted, (semaphorin) 3A
1434513_at	2.6	Usp5	ubiquitin specific peptidase 5 (isopeptidase T)
1437730_at	2.6	Tmem164	transmembrane protein 164
1455430_at	2.6	Rnf128	ring finger protein 128
1421236_at	2.6	Hk2	hexokinase 2
1426421_s_at	2.5	Nfkbil2	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor-like 2
1434896_at	2.5	Crtap	cartilage associated protein
1428919_at	2.5	Grip1	glutamate receptor interacting protein 1
1447856_x_at	2.5	Avil	adwillin
1428560_at	2.5	Arhgap22	Rho GTPase activating protein 22
1448008_at	2.5	Fnip1	Folliculin interacting protein 1, mRNA (cDNA clone MGC:100017 IMAGE:30543296)
		H3f3a /// H3f3b ///	
1438562_a_at	2.5	LOC100045490	H3 histone, family 3A /// H3 histone, family 3B /// similar to H3 histone, family 3A
1418540_a_at	2.5	Htra3	HtrA serine peptidase 3
1453294_at	2.5	Impad1	inositol monophosphatase domain containing 1
1450582_at	2.5	2700049A03Rik	RIKEN cDNA 2700049A03 gene
1435597_at	2.5	Psen1	presenilin 1

1435155_at	2.5	Lrba	LPS-responsive beige-like anchor
1416602_a_at	2.5	Pfkfb3	phosphofructokinase, muscle
1452154_at	2.5	Sypl1	synaptophysin-like protein
1436562_at	2.5	Antxr1	anthrax toxin receptor 1
1418369_at	2.5	Pnkd	paroxysmal nonkinesinogenic dyskinesia
1427705_a_at	2.5	Espl1	extra spindle poles-like 1 (<i>S. cerevisiae</i>)
1416303_at	2.5	M6pr	mannose-6-phosphate receptor, cation dependent
1434238_at	2.5	Ctnna1	catenin (cadherin associated protein), alpha 1
1428861_at	2.4	Lima1	LIM domain and actin binding 1
1440325_at	2.4	Map3k4	mitogen-activated protein kinase kinase 4
1455567_at	2.4	Gadd45b	growth arrest and DNA-damage-inducible 45 beta
1429618_at	2.4	Brd3	bromodomain containing 3
1447728_x_at	2.4	Tuba1a	tubulin, alpha 1A
		1500003O03Rik ///	
1419400_at	2.4	LOC100048622	RIKEN cDNA 1500003O03 gene /// similar to EF-hand Ca ²⁺ binding protein p22
1426419_at	2.4	Mrp141	mitochondrial ribosomal protein L41
1416186_at	2.4	Sipa1	signal-induced proliferation associated gene 1
1444086_at	2.4	Soat2	sterol O-acyltransferase 2
1458439_a_at	2.4	Crkrs	CDC2-related kinase, arginine/serine-rich
1430147_a_at	2.4	Lrw1	leucine-rich repeats and WD repeat domain containing 1
1440868_at	2.4	Cndp2	CNDP dipeptidase 2 (metallopeptidase M20 family)
1452967_at	2.4	Tanc2	tetratricopeptide repeat, ankyrin repeat and coiled-coil containing 2
1434660_at	2.4	Pcolce	procollagen C-endopeptidase enhancer protein
1444644_x_at	2.4	Fry1	furry homolog-like (<i>Drosophila</i>)
1434005_at	2.4	Lrp8	low density lipoprotein receptor-related protein 8, apolipoprotein e receptor
1429907_at	2.4	Gsn	gelsolin
1428666_at	2.4	Atp5j2	ATP synthase, H ⁺ transporting, mitochondrial F0 complex, subunit f, isoform 2
1422033_a_at	2.4	Tubb2c	tubulin, beta 2c
1456791_at	2.4	Ddx46	DEAD (Asp-Glu-Ala-Asp) box polypeptide 46
1419354_at	2.4	Rel	reticuloendotheliosis oncogene
1436350_at	2.4	Pias3	protein inhibitor of activated STAT 3
1436073_at	2.4	Gadd45b	growth arrest and DNA-damage-inducible 45 beta
1449217_at	2.4	Zcchc24	zinc finger, CCHC domain containing 24
1421499_a_at	2.4	Vcp	valosin containing protein
1424752_x_at	2.4	Jmjd1a	jumonji domain containing 1A
1434687_at	2.4	Ripk3	receptor-interacting serine-threonine kinase 3
1427521_a_at	2.3	Cldn12	claudin 12
1420673_a_at	2.3	Trim44	tripartite motif-containing 44
1448801_a_at	2.3	Pcf11	cleavage and polyadenylation factor subunit homolog (<i>S. cerevisiae</i>)
1425969_a_at	2.3	1600012H06Rik	RIKEN cDNA 1600012H06 gene
1433555_at	2.3	Slc9a3r1	solute carrier family 9 (sodium/hydrogen exchanger), member 3 regulator 1
1435546_a_at	2.3	Capp	capping protein (actin filament), gelsolin-like
		ENSMUSG00000050347 ///	
1429491_s_at	2.3	Tmsb10	predicted gene, ENSMUSG00000050347 /// thymosin, beta 10
1416432_at	2.3	Rad52	RAD52 homolog (<i>S. cerevisiae</i>)
1429085_at	2.3	Sgms1	sphingomyelin synthase 1
1434938_at	2.3	Dhcr7	7-dehydrocholesterol reductase
1425681_a_at	2.3	Mycbp	c-myc binding protein
1427057_at	2.3	Scap	SREBF chaperone
1432161_a_at	2.3	Pitpmn1	phosphatidylinositol transfer protein, membrane-associated 1
1436180_at	2.2	Mboat7	membrane bound O-acyltransferase domain containing 7
		EG664868 ///	
		OTTMUSG00000009978 ///	
1426990_at	2.2	Rpl38	predicted gene, EG664868 /// predicted gene, OTTMUSG00000009978 /// ribosomal protein L38
1421344_a_at	2.2	Foxa2	forkhead box A2
1434941_s_at	2.2	Ralbp1	ralA binding protein 1
1417393_a_at	2.2	Scly	selenocysteine lyase
1434530_at	2.2	G6pdx	glucose-6-phosphate dehydrogenase X-linked
1430416_at	2.2	Cblb	Casitas B-lineage lymphoma b
1452866_at	2.2	Dnajc5	DnaJ (Hsp40) homolog, subfamily C, member 5
1427120_at	2.2	Mat2a	methionine adenosyltransferase II, alpha
1419241_a_at	2.2	Hspa8	heat shock protein 8
1437850_a_at	2.2	Serf1	small EDRK-rich factor 1
1428390_at	2.2	Hsd17b11	hydroxysteroid (17-beta) dehydrogenase 11
1432103_a_at	2.2	Kif22	kinesin family member 22
1453198_at	2.2	AI451557	expressed sequence AI451557
1424124_at	2.2	Sh3glb2	SH3-domain GRB2-like endophilin B2
1418661_at	2.2	Rela	v-rel reticuloendotheliosis viral oncogene homolog A (avian) chemokine (C-X-C motif) ligand 10 /// similar to Small inducible cytokine B10 precursor (CXCL10) (Interferon- gamma-induced protein CRG-2) (Gamma-IP10) (IP-10) (C7)
1418465_at	2.2	Cxcl10 /// LOC100045000	
1426291_at	2.2	Arhgap21	Rho GTPase activating protein 21
1427470_s_at	2.2	Casc4	cancer susceptibility candidate 4
1428389_s_at	2.2	Rhpn2	rhopilin, Rho GTPase binding protein 2
1439497_at	2.2	Anapc5	anaphase-promoting complex subunit 5
1428438_s_at	2.2	4933439C20Rik	RIKEN cDNA 4933439C20 gene
1423991_at	2.2	Ski	ski sarcoma viral oncogene homolog (avian)
1455046_a_at	2.2	Ms4a2	membrane-spanning 4-domains, subfamily A, member 2
1426954_at	2.2	Abtb2	ankyrin repeat and BTB (POZ) domain containing 2
1426928_at	2.2	Pigs	phosphatidylinositol glycan anchor biosynthesis, class S
1441266_at	2.2	Msln	mesothelin
1456865_x_at	2.2	Lsm14b	LSM14 homolog B (SCD6, <i>S. cerevisiae</i>)
1450703_at	2.2	1110002E22Rik	RIKEN cDNA 1110002E22 gene
1416419_s_at	2.2	Mum1	melanoma associated antigen (mutated) 1
1440815_x_at	2.1	Lasp1	LIM and SH3 protein 1
1444076_at	2.1	Svil	supervillin
1417964_at	2.1	Loxl3	lysyl oxidase-like 3

1435240_at	2.1	Casp8ap2	caspase 8 associated protein 2
1418255_s_at	2.1	Clu	clusterin
1451225_at	2.1	Taf2	TAF2 RNA polymerase II, TATA box binding protein (TBP)-associated factor
1437563_at	2.1	Dgkd	diacylglycerol kinase, delta
1415799_at	2.1	Nptn	neuroplastin
1456844_at	2.1	Tmem130	transmembrane protein 130
1454953_at	2.1	EG666481 /// LOC624112	predicted gene, EG666481 /// hypothetical protein LOC624112
1450934_at	2.1	Baz1a	bromodomain adjacent to zinc finger domain 1A
1454982_at	2.1	Bicc1	bicaudal C homolog 1 (Drosophila)
1455643_s_at	2.1	Serpib9c	serine (or cysteine) peptidase inhibitor, clade B, member 9c
1450790_at	2.1	Zfp433	RIKEN cDNA 1700123A16 gene
1435091_at	2.1	Plscr2	phospholipid scramblase 2
1416861_at	2.1	Efemp2	epidermal growth factor-containing fibulin-like extracellular matrix protein 2
1417712_at	2.1	Stmn4	stathmin-like 4
1426083_a_at	2.1	Ankrd16	ankyrin repeat domain 16
1423799_at	2.1	Prnd	prion protein dublet
1418429_at	2.1	Fanca	Fanconi anemia, complementation group A
1416749_at	2.1	Bub1b	budding uninhibited by benzimidazoles 1 homolog, beta (S. cerevisiae)
1435039_a_at	2.1	Rassf1	Ras association (RalGDS/AF-6) domain family member 1
1456284_at	2.0	B230216N24Rik	RIKEN cDNA B230216N24 gene
1422054_a_at	2.0	Pdia6	protein disulfide isomerase associated 6
1455988_a_at	2.0	Cad	carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase
1436129_at	2.0	Dvl1	dishevelled, dsh homolog 1 (Drosophila)
1455314_at	2.0	1810026B05Rik	PREDICTED: Mus musculus RIKEN cDNA 1810026B05 gene, transcript variant 2 (1810026B05Rik), mRNA
1431424_at	2.0	Cd151	CD151 antigen
1454655_at	2.0	Gpd1l	glycerol-3-phosphate dehydrogenase 1-like
1423798_a_at	2.0	Ccdc23	coiled-coil domain containing 23
1435434_at	2.0	Fzd7	frizzled homolog 7 (Drosophila)
1428366_at	2.0	Bola2	bolA-like 2 (E. coli)
1416274_at	2.0	LOC674712 /// Ptdss1	similar to phosphatidylserine synthase 1 /// phosphatidylserine synthase 1
1421153_at	2.0	Rnase4	ribonuclease, RNase A family 4
1447346_s_at	2.0	Sox2	SRY-box containing gene 2
1433926_at	2.0	Rabep2	rabaptin, RAB GTPase binding effector protein 2
1453048_at	2.0	Sfxn5	sideroflexin 5
1435875_at	2.0	F2r	coagulation factor II (thrombin) receptor
1440020_at	2.0	BC066028	cDNA sequence BC066028
1424886_at	2.0	Arhgap18	Rho GTPase activating protein 18
1419010_x_at	2.0	Kif3a	kinesin family member 3A
1433599_at	2.0	Htra1	HtrA serine peptidase 1
1435224_at	1.9	St3gal5	ST3 beta-galactoside alpha-2,3-sialyltransferase 5
1420220_x_at	1.9	Sytl2	synaptotagmin-like 2
1454074_a_at	1.9	H2afz	H2A histone family, member Z
1449014_at	1.9	Adam10	a disintegrin and metallopeptidase domain 10
1433782_at	1.9	Abhd4	abhydrolase domain containing 4
1426365_at	1.9	Lsm14a	LSM14 homolog A (SCD6, S. cerevisiae)
1417671_at	1.9	Rtn3	reticulon 3
1457200_at	1.9	Abcg1	ATP-binding cassette, sub-family G (WHITE), member 1
1439620_at	1.9	Qars	glutamyl-tRNA synthetase
1450978_at	1.9	Ntrk3	neurotrophic tyrosine kinase, receptor, type 3
1455765_a_at	1.9	Lpcat1	lysophosphatidylcholine acyltransferase 1
1427285_s_at	1.9	Ermp1	endoplasmic reticulum metallopeptidase 1
1460547_a_at	1.9	H60a	histocompatibility 60a
1456711_at	1.9	Ckap4	cytoskeleton-associated protein 4
1436885_a_at	1.9	Ckap4	cytoskeleton-associated protein 4
1435174_at	1.9	Chst1	carbohydrate (keratan sulfate Gal-6) sulfotransferase 1
1460404_at	1.9	Serpib9d	serine (or cysteine) peptidase inhibitor, clade B, member 9d
1448270_at	1.9	6720475J19Rik	RIKEN cDNA 6720475J19 gene
1459765_s_at	1.9	Tubb5	tubulin, beta 5
1424769_s_at	1.9	Jup	junction plakoglobin
1448190_at	1.9	Sys1	SYS1 Golgi-localized integral membrane protein homolog (S. cerevisiae)
1438251_x_at	1.9	Ids	iduronate 2-sulfatase
1428210_s_at	1.9	Zfp664	zinc finger protein 664
1436764_at	1.9	Mgat2	mannoside acetylglucosaminyltransferase 2
1455261_at	1.9	1110002E22Rik	RIKEN cDNA 1110002E22 gene
1429400_at	1.9	Cherp	calcium homeostasis endoplasmic reticulum protein
1456700_x_at	1.9	Stard4	StAR-related lipid transfer (START) domain containing 4
1434080_at	1.9	Mcm6	minichromosome maintenance deficient 6 (MIS5 homolog, S. pombe) (S. cerevisiae)
1447779_x_at	1.8	Phf201l	PHD finger protein 20-like 1
1428138_s_at	1.8	Kat2b	K(lysine) acetyltransferase 2B
1419558_at	1.8	Ankrd1	ankyrin repeat domain 1 (cardiac muscle)
1416998_at	1.8	Fam114a1	family with sequence similarity 114, member A1
1425774_at	1.8	Rnft1	ring finger protein, transmembrane 1
1428137_at	1.8	Zfp692	zinc finger protein 692
1426420_at	1.8	LOC100040573 /// Zfp131	similar to putative transcription factor ZNF131 /// zinc finger protein 131
1437984_x_at	1.8	Kif21a	kinesin family member 21A
1429774_a_at	1.8	EG637273 /// Prdx1	predicted gene, EG637273 /// peroxiredoxin 1
1426671_a_at	1.8	Pon2	paraoxonase 2
1425495_at	1.8	9930023K05Rik	RIKEN cDNA 9930023K05 gene
1455821_x_at	1.8	Nisch	nischarin
1437851_x_at	1.8	Tacc1	transforming, acidic coiled-coil containing protein 1
1436174_at	1.8	Tkt	transketolase
1457473_at	1.8	Itgb3	integrin beta 3
1448221_at	1.8	Arhgef2	rho/rac guanine nucleotide exchange factor (GEF) 2
1450711_at	1.8	Entpd7	ectonucleoside triphosphate diphosphohydrolase 7
1460315_s_at	1.8	Mrip	myosin phosphatase Rho interacting protein
1459804_at	1.8	Slc29a3	solute carrier family 29 (nucleoside transporters), member 3

		ENSMUSG00000074460 ///	
1438750_at	1.8	Tmed2	predicted gene, ENSMUSG00000074460 /// transmembrane emp24 domain trafficking protein 2
1455725_a_at	1.8	Bcap31	B-cell receptor-associated protein 31
1436570_at	1.8	Rheb1l	Ras homolog enriched in brain like 1
1437304_at	1.8	Tmem50a	transmembrane protein 50A
1428682_at	1.7	Cpne3	copine III
1435338_at	1.7	Tns1	tensin 1
1455711_at	1.7	Cdc42ep3	CDC42 effector protein (Rho GTPase binding) 3
1417771_a_at	1.7	LOC100046044 /// Nr2f1	similar to COUP-TFI /// nuclear receptor subfamily 2, group F, member 1
1442892_at	1.7	Cpt1a	carnitine palmitoyltransferase 1a, liver
1458163_at	1.7	Bcr	breakpoint cluster region
1457769_at	1.7	Plcxd2	phosphatidylinositol-specific phospholipase C, X domain containing 2
1415711_at	1.7	LOC100044471 /// Sap30l	similar to SAP30-like /// SAP30-like
1417022_at	1.7	Psrc1	proline/serine-rich coiled-coil 1
1435520_at	1.7	Ripk2	receptor (TNFRSF)-interacting serine-threonine kinase 2
1433447_x_at	1.7	Ctnna1	catenin (cadherin associated protein), alpha 1
1438148_at	1.7	Ano6	anoctamin 6
1426818_at	1.7	Sulf2	sulfatase 2
1434904_at	1.7	Sod2	superoxide dismutase 2, mitochondrial
		Hist1h2bb /// Hist1h2bc ///	
		Hist1h2be /// Hist1h2bg ///	
		LOC665622 /// RP23-	histone cluster 1, H2bb /// histone cluster 1, H2bc /// histone cluster 1, H2be /// histone cluster 1, H2bg /// H2b
1447556_x_at	1.7	38E20.1	histone family member /// predicted gene, OTTMUSG00000013203
1456405_at	1.7	Alg10b	asparagine-linked glycosylation 10 homolog B (yeast, alpha-1,2-glucosyltransferase)
1420933_a_at	1.7	Skil	SKI-like
1434082_at	1.7	Bat1a	HLA-B-associated transcript 1A
1421240_at	1.7	Tlr3	toll-like receptor 3
1438606_a_at	1.7	Abcc8	ATP-binding cassette, sub-family C (CFTR/MRP), member 8
1436074_at	1.7	Ndrp1	N-myc downstream regulated gene 1
1443264_at	1.7	Kank2	KN motif and ankyrin repeat domains 2
1433654_at	1.7	Pgd	phosphogluconate dehydrogenase
1455389_s_at	1.6	Mlec	malectin
1428616_at	1.6	Cpt1c	carnitine palmitoyltransferase 1c
1422945_a_at	1.6	Mphosph6	M phase phosphoprotein 6
1457596_at	1.6	Luc7l	Luc7 homolog (S. cerevisiae)-like
1444521_at	1.6	Riok3	RIO kinase 3 (yeast)
1460597_at	1.6	Crebbp	CREB binding protein
1427088_at	1.6	Slc45a4	solute carrier family 45, member 4
1426286_at	1.6	Atp13a2	ATPase type 13A2
1456083_x_at	1.6	Zfp251	zinc finger protein 251
1415723_at	1.6	5730453l16Rik	RIKEN cDNA 5730453l16 gene
1449158_at	1.6	Wdr43	WD repeat domain 43
1420958_at	1.6	Dbi	diazepam binding inhibitor
1447292_at	1.6	Sfrs6	splicing factor, arginine/serine-rich 6
1415730_at	1.6	Tmem165	transmembrane protein 165
1433697_at	1.5	Atp13a4 /// LOC637970	ATPase type 13A4 /// similar to type V P-type ATPase isoform 4
1452091_a_at	1.5	Ptgfrn	prostaglandin F2 receptor negative regulator
1440289_at	1.5	Sf1	splicing factor 1
1441751_at	1.5	Clca1 /// Clca2	chloride channel calcium activated 1 /// chloride channel calcium activated 2
		EG665562 /// EG667682 ///	
		ENSMUSG00000066956 ///	predicted gene, EG665562 /// predicted gene, EG667682 /// predicted gene, ENSMUSG00000066956 /// similar
		LOC638399 /// LOC673582	to ribosomal protein L31 /// similar to ribosomal protein L31 /// similar to ribosomal protein L31 /// ribosomal
1425957_x_at	1.5	/// LOC675018 /// Rpl31	protein L31
1459916_at	1.5	4930427A07Rik	RIKEN cDNA 4930427A07 gene
1433925_at	1.5	LOC100048538 /// Prss27	similar to protease, serine 27 /// protease, serine 27
1447366_at	1.5	Ccnd1	cyclin D1
1436454_x_at	1.5	Edem1	ER degradation enhancer, mannosidase alpha-like 1
1443524_x_at	1.5	Hisppd2a	histidine acid phosphatase domain containing 2A
1435951_at	1.5	Eif4a2	eukaryotic translation initiation factor 4A2
1426924_at	1.4	Cox7a2l	cytochrome c oxidase subunit VIIa polypeptide 2-like
1419920_s_at	1.4	S100a6	S100 calcium binding protein A6 (calcylin)
		LOC100047187 /// Mbtps2 ///	similar to zinc finger, X-linked, duplicated B /// membrane-bound transcription factor peptidase, site 2 /// Yy2
1453334_at	1.4	Yy2	transcription factor
1430499_at	1.4	F2r	coagulation factor II (thrombin) receptor
1431180_at	1.4	Eif2b2	eukaryotic translation initiation factor 2B, subunit 2 beta
1416941_s_at	1.4	Psme1	proteasome (prosome, macropain) 28 subunit, alpha
1421466_at	1.4	Abcg2	ATP-binding cassette, sub-family G (WHITE), member 2
1444023_at	1.3	Ehmt2	euchromatic histone lysine N-methyltransferase 2
1439555_at	1.3	Ythdc1	YTH domain containing 1
1449323_a_at	1.3	9430020K01Rik	RIKEN cDNA 9430020K01 gene
1437428_x_at	1.2	Tmem77	transmembrane protein 77
1447997_s_at	1.2	Usp7	ubiquitin specific peptidase 7
1447756_x_at	1.2	Rassf7	Ras association (RalGDS/AF-6) domain family (N-terminal) member 7
1415701_x_at	-1.3	Rpl23	ribosomal protein L23
1433472_x_at	-1.3	Bat1a	HLA-B-associated transcript 1A
1429595_at	-1.3	Nelf	nasal embryonic LHRH factor
1460680_a_at	-1.4	Hnrmpk	heterogeneous nuclear ribonucleoprotein K
1438174_x_at	-1.4	D630045J12Rik	RIKEN cDNA D630045J12 gene
1434588_x_at	-1.4	Ulk1	Unc-51 like kinase 1 (C. elegans)
1423455_at	-1.4	Leprot	leptin receptor overlapping transcript
1455578_x_at	-1.4	Casp3	caspase 3
1436795_at	-1.4	Rbm28	RNA binding motif protein 28
		ENSMUSG00000050347 ///	
1430123_a_at	-1.5	LOC100048142 /// Tmsb10	predicted gene, ENSMUSG00000050347 /// similar to thymosin, beta 10 /// thymosin, beta 10
1424635_at	-1.5	LOC677319 /// Ppp1r10	similar to protein phosphatase 1, regulatory subunit 10 /// protein phosphatase 1, regulatory subunit 10
1452774_at	-1.5	Chml	choroideremia-like

1423429_at	-1.5	Nup93	nucleoporin 93
1425195_a_at	-1.5	Malat1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
1426660_x_at	-1.5	Uba6	ubiquitin-like modifier activating enzyme 6
1460008_x_at	-1.5	Rod1	ROD1 regulator of differentiation 1 (S. pombe)
1435885_s_at	-1.5	Rad54l	RAD54 like (S. cerevisiae)
1426659_a_at	-1.5	Canx	calnexin
1452156_a_at	-1.5	Zfp568	zinc finger protein 568
1454776_at	-1.5	Car13	carbonic anhydrase 13
1436924_x_at	-1.5	Iqsec1	IQ motif and Sec7 domain 1
1439069_a_at	-1.6	Tmem109	transmembrane protein 109
1416415_a_at	-1.6	Pnpla6	patatin-like phospholipase domain containing 6
1417665_a_at	-1.6	Nrp1	neuropilin 1
1428212_x_at	-1.6	Aebp2	AE binding protein 2
1422623_x_at	-1.6	Usp20	ubiquitin specific peptidase 20
		100042986 ///	
		OTTMUSG00000015874 ///	
1442905_at	-1.6	Rpl37a	predicted gene, 100042986 /// predicted gene, OTTMUSG00000015874 /// ribosomal protein L37a
1421870_at	-1.6	Tead1	TEA domain family member 1
1429304_at	-1.6	Rnf26	ring finger protein 26
1435081_at	-1.6	Rbpj	recombination signal binding protein for immunoglobulin kappa J region
1437975_a_at	-1.6	Smad3	MAD homolog 3 (Drosophila)
1426752_at	-1.6	Pcmdt1	protein-L-isoaspartate (D-aspartate) O-methyltransferase domain containing 1
1435025_at	-1.6	Timm44	translocase of inner mitochondrial membrane 44
1428369_s_at	-1.6	EG620313 ///	predicted gene, EG620313 /// tubulin cofactor a
1434612_s_at	-1.6	Lgals3bp	lectin, galactoside-binding, soluble, 3 binding protein
1448245_at	-1.6	Rpl41	ribosomal protein L41
1417810_a_at	-1.6	Malat1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
1453729_a_at	-1.6	Rarres1	retinoic acid receptor responder (tazarotene induced) 1
1416539_at	-1.6	Htra1	HtrA serine peptidase 1
1416385_a_at	-1.6	Rpn1	ribophorin I
1455819_at	-1.7	Iars	isoleucine-tRNA synthetase
1416520_x_at	-1.7	Cks1b	CDC28 protein kinase 1b
1429229_s_at	-1.7	Hadh	hydroxyacyl-Coenzyme A dehydrogenase
1433935_at	-1.7	Gabpb2	GA repeat binding protein, beta 2
1426812_a_at	-1.7	Rps21	ribosomal protein S21
1415821_at	-1.7	Elovl5	ELOVL family member 5, elongation of long chain fatty acids (yeast)
1416996_at	-1.7	Fah	fumarylacetoacetate hydrolase
1439253_x_at	-1.7	Cd151	CD151 antigen
1460387_a_at	-1.7	AI256396	EST AI256396
1437393_at	-1.7	Plp2	proteolipid protein 2
1418000_a_at	-1.7	Rnf128	ring finger protein 128
1434517_at	-1.7	Gstm1	glutathione S-transferase, mu 1
1438092_x_at	-1.7	Itga3	integrin alpha 3
1415758_at	-1.7	Wbp11	WW domain binding protein 11
1455968_x_at	-1.7	Zdhhc2	zinc finger, DHHC domain containing 2
1436452_x_at	-1.7	Ppap2c	phosphatidic acid phosphatase type 2c
1424656_s_at	-1.7	Phf17	PHD finger protein 17
1419637_s_at	-1.7	Jak2	Janus kinase 2
1452331_s_at	-1.7	Plcxd2	phosphatidylinositol-specific phospholipase C, X domain containing 2
1454989_at	-1.7	Strn3	Striatin, calmodulin binding protein 3 (Strn3), mRNA
1426904_s_at	-1.7	Sh3gl3	SH3-domain GRB2-like 3
1433822_x_at	-1.7	Cdc20	cell division cycle 20 homolog (S. cerevisiae)
1460736_at	-1.7	A230054D04Rik	RIKEN cDNA A230054D04 gene
			dolichyl-phosphate (UDP-N-acetylglucosamine) acetylglucosaminophosphotransferase 1 (GlcNAc-1-P transferase)
1434889_at	-1.7	Dpagt1	Jumonji domain containing 3, mRNA (cDNA clone IMAGE:1378940)
1454925_x_at	-1.7	Jmj3d3	YY1 transcription factor
1452746_at	-1.8	Yy1	YY1 transcription factor
1422443_at	-1.8	BC017643	cDNA sequence BC017643
1415833_x_at	-1.8	Trim28	tripartite motif-containing 28
1439436_x_at	-1.8	Prkar2b	protein kinase, cAMP dependent regulatory, type II beta
		1200015M12Rik ///	
		1200016E24Rik ///	
		A130040M12Rik ///	RIKEN cDNA 1200015M12 gene /// RIKEN cDNA 1200016E24 gene /// RIKEN cDNA A130040M12 gene ///
1428564_at	-1.8	E430024C06Rik	RIKEN cDNA E430024C06 gene
1446868_at	-1.8	Tnfaip2	tumor necrosis factor, alpha-induced protein 2
1430288_x_at	-1.8	Fosl2 ///	fos-like antigen 2 /// similar to fos-like antigen 2
1426576_at	-1.8	Tmem57	transmembrane protein 57
1428939_s_at	-1.8	Nfkbid	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, delta
1424052_at	-1.8	Rnf11	ring finger protein 11
1418031_at	-1.8	Prim1	DNA primase, p49 subunit
1427923_at	-1.8	Cttn	cortactin
1437024_at	-1.8	Atp13a2	ATPase type 13A2
1437159_at	-1.8	Rapgef2	Rap guanine nucleotide exchange factor (GEF) 2
1456205_x_at	-1.8	Iqwd1	IQ motif and WD repeats 1
1415849_s_at	-1.8	Papss1	3'-phosphoadenosine 5'-phosphosulfate synthase 1
1456128_at	-1.8	1700012B15Rik	RIKEN cDNA 1700012B15 gene
1454960_at	-1.8	Mppe1	metallophosphoesterase 1
1451516_at	-1.8	9430008C03Rik	RIKEN cDNA 9430008C03 gene
		ENSMUSG00000074846 ///	predicted gene, ENSMUSG00000074846 /// polymerase (RNA) II (DNA directed) polypeptide L /// ubiquitin
1449145_a_at	-1.8	Polr2l ///	specific peptidase 50
1456763_at	-1.8	Cblb	Casitas B-lineage lymphoma b
1452830_s_at	-1.8	Cast	calpastatin
1455155_at	-1.8	LOC432971	hypothetical gene supported by AK038224
1448103_s_at	-1.8	Nfkbia	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
1433805_at	-1.8	Slc9a3r2	solute carrier family 9 (sodium/hydrogen exchanger), member 3 regulator 2
1448242_at	-1.8	Ifi30	interferon gamma inducible protein 30

1453004_at	-1.8	Ddx58	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58
1449372_at	-1.8	Xpo5	exportin 5
1434833_at	-1.9	Kpnb1	karyopherin (importin) beta 1
1450628_at	-1.9	Fam101b	family with sequence similarity 101, member B
1415741_at	-1.9	Hp1bp3	heterochromatin protein 1, binding protein 3
1433455_at	-1.9	Ergic1	endoplasmic reticulum-golgi intermediate compartment (ERGIC) 1
1434986_a_at	-1.9	H47	histocompatibility 47
1416105_at	-1.9	Prdx4	peroxiredoxin 4
1439443_x_at	-1.9	Akr1b3	aldo-keto reductase family 1, member B3 (aldose reductase)
1433510_x_at	-1.9	Dbi	diazepam binding inhibitor
1438091_a_at	-1.9	Nlgn2	neuroligin 2
1434487_at	-1.9	Nfkbia	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
1424535_at	-1.9	Ets1	E26 avian leukemia oncogene 1, 5' domain
1437175_at	-1.9	Nars	asparaginyl-tRNA synthetase
1426972_at	-1.9	AI467606	expressed sequence AI467606
1456695_x_at	-1.9	Argef2	ADP-ribosylation factor guanine nucleotide-exchange factor 2 (brefeldin A-inhibited)
1434031_at	-1.9	Tatdn1	TatD DNase domain containing 1
1424987_at	-1.9	Ccnt2	cyclin T2
1455818_at	-1.9	Uqcrl	ubiquinol-cytochrome c reductase hinge protein
1423677_at	-1.9	Hip1	huntingtin interacting protein 1
1426342_at	-1.9	Smarcc2	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c, member 2
1423929_at	-1.9	Pros1	protein S (alpha)
1436292_a_at	-1.9	Rps25	ribosomal protein S25
1448474_at	-1.9	Noc3l	nucleolar complex associated 3 homolog (S. cerevisiae)
1418856_a_at	-1.9	Zfr	zinc finger RNA binding protein
1455964_at	-1.9	Creb3l2	cAMP responsive element binding protein 3-like 2
1424755_at	-2.0	Ythdc1	YTH domain containing 1
1416721_s_at	-2.0	Parp9	poly (ADP-ribose) polymerase family, member 9
1438159_x_at	-2.0	Phf15	PHD finger protein 15
1451561_at	-2.0	Mtmr9	myotubularin related protein 9
1433721_x_at	-2.0	Hn1	hematological and neurological expressed sequence 1
1448770_a_at	-2.0	Nt5dc3	5'-nucleotidase domain containing 3
1437389_x_at	-2.0	Ly6e	lymphocyte antigen 6 complex, locus E
1439394_x_at	-2.0	Gsn	gelsolin
1419636_at	-2.0	Jak2	Janus kinase 2
1436499_at	-2.0	Ptpn11	protein tyrosine phosphatase, non-receptor type 11
1428944_at	-2.0	4930523C11Rik /// Adam6	RIKEN cDNA 4930523C11 gene /// a disintegrin and metallopeptidase domain 6
1436451_a_at	-2.0	Lass5	LAG1 homolog, ceramide synthase 5
1456308_x_at	-2.0	Troap	trophinin associated protein
1423141_at	-2.0	Nop14	NOP14 nucleolar protein homolog (yeast)
1435824_at	-2.0	Tg	thyroglobulin
1451015_at	-2.0	Dnajc3	DnaJ (Hsp40) homolog, subfamily C, member 3
1423847_at	-2.0	1700021K02Rik	RIKEN cDNA 1700021K02 gene
1452147_at	-2.0	1500001A10Rik	RIKEN cDNA 1500001A10 gene
1453120_at	-2.0	Smpd4	sphingomyelin phosphodiesterase 4
1448526_at	-2.0	Rbm26	RNA binding motif protein 26
1435157_at	-2.0	Cav1	caveolin 1, caveolae protein
1449099_at	-2.0	Pxdn	peroxidase homolog (Drosophila)
1436834_x_at	-2.0	Ddx17	DEAD (Asp-Glu-Ala-Asp) box polypeptide 17
1433520_at	-2.0	Slc9a3r1	solute carrier family 9 (sodium/hydrogen exchanger), member 3 regulator 1
1456018_at	-2.0	Cds2	CDP-diacylglycerol synthase (phosphatidate cytidyltransferase) 2
1423828_at	-2.0	Anxa8	annexin A8
1436954_at	-2.0	B3gnt1	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 1
1418152_at	-2.0	Smarcd3	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 3
1435178_x_at	-2.0	Kcnk2	potassium channel, subfamily K, member 2
1451550_at	-2.0	Alkbh1	alkB, alkylation repair homolog 1 (E. coli)
1460634_at	-2.0	Tbk1	TANK-binding kinase 1
1438483_at	-2.0	Dtx4	deltex 4 homolog (Drosophila)
1437014_x_at	-2.0	Lman1	lectin, mannose-binding, 1
1433854_at	-2.0	Tkt	transketolase
1452870_at	-2.0	Sulf1	sulfatase 1
1429429_s_at	-2.0	Leprt	leptin receptor overlapping transcript
1421375_a_at	-2.0	Runx1	runt related transcription factor 1
1436756_x_at	-2.1	Dhcr24	24-dehydrocholesterol reductase
1416698_a_at	-2.1	Rps6ka1	ribosomal protein S6 kinase polypeptide 1
1435612_at	-2.1	Slc48a1	solute carrier family 48 (heme transporter), member 1
1434897_a_at	-2.1	D4Wsu114e	DNA segment, Chr 4, Wayne State University 114, expressed
1451068_s_at	-2.1	AU020206	expressed sequence AU020206
1435074_at	-2.1	Stard10	START domain containing 10
1450399_at	-2.1	Ankrd10	ankyrin repeat domain 10
1433763_at	-2.1	Txndc17	thioredoxin domain containing 17
1448691_at	-2.1	Cubn	cubilin (intrinsic factor-cobalamin receptor)
1452230_at	-2.1	Cdk6	cyclin-dependent kinase 6
1437413_x_at	-2.1	Rpl37	ribosomal protein L37
1435718_at	-2.1	Lima1	LIM domain and actin binding 1
1438760_x_at	-2.1	Hadh	hydroxyacyl-Coenzyme A dehydrogenase
1417407_at	-2.1	LOC636537 /// Ssr1	similar to signal sequence receptor, alpha /// signal sequence receptor, alpha region containing RIKEN cDNA 2310056B04 gene; pre B-cell leukemia transcription factor 1 /// pre B-cell
1449623_at	-2.1	LOC676870 /// Pbx1	leukemia transcription factor 1
1428661_at	-2.1	Parp1	poly (ADP-ribose) polymerase family, member 1
1454917_at	-2.1	Txndc10	thioredoxin domain containing 10
1448149_at	-2.1	Dnajc21	DnaJ (Hsp40) homolog, subfamily C, member 21
1416195_at	-2.1	Tk1	thymidine kinase 1
1419869_s_at	-2.1	Jub	ajuba

		OTTMUSG00000000724 ///	predicted gene, OTTMUSG00000000724 /// serine (or cysteine) peptidase inhibitor, clade B, member 9e ///
1418101_a_at	-2.1	Serpinb9e /// Serpinb9f /// Serpinb9g	serine (or cysteine) peptidase inhibitor, clade B, member 9f /// serine (or cysteine) peptidase inhibitor, clade B, member 9g
1448486_at	-2.1	Mgat2	mannoside acetylglucosaminyltransferase 2
1434063_at	-2.1	Hspa9	heat shock protein 9
1418394_a_at	-2.1	Eno2	enolase 2, gamma neuronal
1448353_x_at	-2.1	Lims2	LIM and senescent cell antigen like domains 2
1428935_at	-2.1	Siglecg	sialic acid binding Ig-like lectin G
1452327_at	-2.2	Epha2	EF-hand domain family, member A2
1434091_at	-2.2	Slc25a25	solute carrier family 25 (mitochondrial carrier, phosphate carrier), member 25
1416969_at	-2.2	Emp3	epithelial membrane protein 3
1428587_at	-2.2	Anapc5	anaphase-promoting complex subunit 5
1436883_at	-2.2	Ets1	E26 avian leukemia oncogene 1, 5' domain
1435281_at	-2.2	LOC100043000 /// Rpl3	similar to ribosomal protein L3 /// ribosomal protein L3
1437807_x_at	-2.2	1110013L07Rik	RIKEN cDNA 1110013L07 gene
1450641_at	-2.2	Hhip1	hedgehog interacting protein-like 1
1426387_x_at	-2.2	Actn1	actinin, alpha 1
1437885_at	-2.2	2610101N10Rik	RIKEN cDNA 2610101N10 gene
1417376_a_at	-2.2	Sspn	sarcospan
1423126_at	-2.2	Shisa5	shisa homolog 5 (Xenopus laevis)
1427234_at	-2.2	Pat1	protein associated with topoisomerase II homolog 1 (yeast)
1416470_a_at	-2.2	Akt1 /// LOC100047666	thymoma viral proto-oncogene 1 /// similar to serine/threonine protein kinase
1429151_at	-2.2	Prdx1	peroxiredoxin 1
1416372_at	-2.2	Pfkfb3	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 3
1452671_s_at	-2.2	D5Wsu178e	DNA segment, Chr 5, Wayne State University 178, expressed
1452887_at	-2.2	Fam171b	family with sequence similarity 171, member B
1451437_at	-2.2	Wdfy2	WD repeat and FYVE domain containing 2
			potassium voltage gated channel, Shab-related subfamily, member 1 /// protein kinase C and casein kinase
1417420_at	-2.2	Kcnb1 /// Pacsin2	substrate in neurons 2
1437716_x_at	-2.2	Myo10	myosin X
1455090_at	-2.2	Ank2	ankyrin 2, brain
1421594_a_at	-2.2	Ide	insulin degrading enzyme
1451049_at	-2.2	Dync1li2	dynein, cytoplasmic 1 light intermediate chain 2
1428884_at	-2.2	Prkab2	protein kinase, AMP-activated, beta 2 non-catalytic subunit
1426244_at	-2.2	Glt8d1	glycosyltransferase 8 domain containing 1
1420977_at	-2.2	Ephx1	epoxide hydrolase 1, microsomal
1426680_at	-2.2	1200009F10Rik	RIKEN cDNA 1200009F10 gene
1455178_at	-2.2	Pcyox1	prenylcysteine oxidase 1
1455959_s_at	-2.2	Qser1	glutamine and serine rich 1
1433862_at	-2.2	Rif	rearranged L-myc fusion sequence
1437908_a_at	-2.2	Mdh1	malate dehydrogenase 1, NAD (soluble)
1423229_at	-2.2	Cd151	CD151 antigen
1442347_at	-2.2	0610007P08Rik	RIKEN cDNA 0610007P08 gene
1454650_at	-2.2	Cxcl3	chemokine (C-X-C motif) ligand 3
1454677_at	-2.2	Osbpl3	oxysterol binding protein-like 3
1433429_at	-2.2	Ddx17	DEAD (Asp-Glu-Ala-Asp) box polypeptide 17
1456728_x_at	-2.2	Cdc2l6	cell division cycle 2-like 6 (CDK8-like)
1452155_a_at	-2.2	Zfp362	zinc finger protein 362
1423680_at	-2.2	D930016D06Rik	RIKEN cDNA D930016D06 gene
1455019_x_at	-2.2	AW493563	expressed sequence AW493563
1423508_at	-2.2	Lpcat1	lysophosphatidylcholine acyltransferase 1
1433985_at	-2.3	Rbm26	RNA binding motif protein 26
1434026_at	-2.3	Glt8d4 /// LOC100048436	glycosyltransferase 8 domain containing 4 /// similar to CDNA sequence BC049816
1424291_at	-2.3	Ano1	anoctamin 1, calcium activated chloride channel
1418634_at	-2.3	Il23a	interleukin 23, alpha subunit p19
1439377_x_at	-2.3	Tmem171	transmembrane protein 171
1447602_x_at	-2.3	Srf	serum response factor
1416119_at	-2.3	Pnrc2	proline-rich nuclear receptor coactivator 2
1427229_at	-2.3	Emp2	epithelial membrane protein 2
1450069_a_at	-2.3	6820431F20Rik	RIKEN cDNA 6820431F20 gene
1420375_at	-2.3	Tank	TRAF family member-associated Nf-kappa B activator
1423448_at	-2.3	Traf7	Tnf receptor-associated factor 7
1416961_at	-2.3	Sec61b	Sec61 beta subunit
1450686_at	-2.3	Taf1d	TATA box binding protein (Tbp)-associated factor, RNA polymerase I, D
1441866_s_at	-2.3	Tars	threonyl-tRNA synthetase
1426884_at	-2.3	Parva	parvin, alpha
		OTTMUSG00000016246 ///	predicted gene, OTTMUSG00000016246 /// ribosomal protein S29
1431179_at	-2.3	Rps29	ribosomal protein S29
1460243_at	-2.3	Dido1	death inducer-obliterator 1
1449405_at	-2.3	Nin	ninein
1433779_at	-2.3	LOC100046650 /// Prelid1	similar to PRELI domain containing 1 /// PRELI domain containing 1
1416723_at	-2.3	Eif4h	eukaryotic translation initiation factor 4H
1448253_at	-2.3	Chek2	CHK2 checkpoint homolog (S. pombe)
1423902_s_at	-2.3	Asph	aspartate-beta-hydroxylase
1433875_at	-2.3	P2rx7	purinergic receptor P2X, ligand-gated ion channel, 7
1418506_a_at	-2.3	Nr1h4	nuclear receptor subfamily 1, group H, member 4
1434373_at	-2.3	Sec61a1	Sec61 alpha 1 subunit (S. cerevisiae)
1436618_at	-2.3	Ephb3	Eph receptor B3
1429019_s_at	-2.3	Hspb6	heat shock protein, alpha-crystallin-related, B6
1439184_s_at	-2.3	Apex1	apurinic/apyrimidinic endonuclease 1
1415751_at	-2.3	Atox1	ATX1 (antioxidant protein 1) homolog 1 (yeast)
1426373_at	-2.3	Zfp579	zinc finger protein 579
1437724_x_at	-2.3	LOC100047199 /// Odf2	similar to outer dense fiber of sperm tails 2 /// outer dense fiber of sperm tails 2
1448599_s_at	-2.3	Gpr125	G protein-coupled receptor 125
1428229_at	-2.3	Cbx6 /// Npcc /// Nptxr	chromobox homolog 6 /// neuronal pentraxin with chromo domain /// neuronal pentraxin receptor
1435925_at	-2.3	Hlf	helicase-like transcription factor

1451218_at	-2.4	Map4k4	mitogen-activated protein kinase kinase 4
1437773_x_at	-2.4	Phldb2	pleckstrin homology-like domain, family B, member 2
1423104_at	-2.4	Ubac2	ubiquitin associated domain containing 2
1453312_at	-2.4	Prkca	protein kinase C, alpha
1430388_a_at	-2.4	Fzd1	frizzled homolog 1 (Drosophila)
1435087_at	-2.4	Cxxc5	CXXC finger 5
1452664_a_at	-2.4	Ehd2	EH-domain containing 2
1434010_at	-2.4	Bcl10	B-cell leukemia/lymphoma 10
1452153_at	-2.4	Tmem106b	transmembrane protein 106B
1450054_at	-2.4	Mfhas1	malignant fibrous histiocytoma amplified sequence 1
1460694_s_at	-2.4	Asxl2	additional sex combs like 2 (Drosophila)
1451210_at	-2.4	LOC546078 /// Samd1	similar to sterile alpha motif domain containing 1 /// sterile alpha motif domain containing 1
1420809_a_at	-2.4	Itga3	integrin alpha 3
1448634_at	-2.4	Rmnd5a	required for meiotic nuclear division 5 homolog A (S. cerevisiae)
1460543_x_at	-2.4	Lmna	lamin A
1450380_at	-2.4	4930534B04Rik	RIKEN cDNA 4930534B04 gene
1455345_at	-2.4	Nek7	NIMA (never in mitosis gene a)-related expressed kinase 7
1417763_at	-2.4	Nsbp1	nucleosome binding protein 1
1434731_x_at	-2.4	Ggt1	gamma-glutamyltransferase 1
1428270_at	-2.4	BC055324	cDNA sequence BC055324
1437133_x_at	-2.4	Hnrnpa3	heterogeneous nuclear ribonucleoprotein A3
1421824_at	-2.4	Tob1	transducer of ErbB-2.1
1451209_at	-2.4	Fut11	fucosyltransferase 11
1429291_at	-2.4	Kctd3	potassium channel tetramerisation domain containing 3
1455777_x_at	-2.4	Cast	calpastatin
1439185_x_at	-2.4	Eif3c	eukaryotic translation initiation factor 3, subunit C
1456378_s_at	-2.4	Sec1411	SEC14-like 1 (S. cerevisiae)
1455538_at	-2.4	Sesn3	Sestrin 3, mRNA (cDNA clone IMAGE:3481673)
1424707_at	-2.4	Ipo8	importin 8
1424460_s_at	-2.4	Sreb1	sterol regulatory element binding transcription factor 1
1434116_at	-2.4	Timm8a2	translocase of inner mitochondrial membrane 8 homolog a2 (yeast)
1433670_at	-2.4	Lasp1	LIM and SH3 protein 1
1451091_at	-2.4	Als2cr13	amyotrophic lateral sclerosis 2 (juvenile) chromosome region, candidate 13 (human)
1423151_at	-2.4	Ppil4	peptidylprolyl isomerase (cyclophilin)-like 4
1432263_a_at	-2.4	Galnt12	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 12
1424515_at	-2.4	Iars	isoleucine-tRNA synthetase
1448449_at	-2.4	Mylk	myosin, light polypeptide kinase
1436691_x_at	-2.4	Rab4b	RAB4B, member RAS oncogene family
1436801_x_at	-2.4	Spnb2	spectrin beta 2
1456590_x_at	-2.4	Rnf157	ring finger protein 157
1433717_at	-2.4	Mat2a	methionine adenosyltransferase II, alpha
1416517_at	-2.4	Gtpbp2	GTP binding protein 2
1439259_x_at	-2.5	Nfia	nuclear factor I/A
1449198_a_at	-2.5	Tm9sf3	transmembrane 9 superfamily member 3
1455164_at	-2.5	P4ha3	procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), alpha polypeptide III
1428217_at	-2.5	Cbx2	chromobox homolog 2 (Drosophila Pc class)
1448368_at	-2.5	Ccdc137	coiled-coil domain containing 137
1420959_at	-2.5	Idh1	isocitrate dehydrogenase 1 (NADP+), soluble
1422782_s_at	-2.5	Eif1	eukaryotic translation initiation factor 1
1436332_at	-2.5	Asns	asparagine synthetase
1454753_at	-2.5	Dot1l	DOT1-like, histone H3 methyltransferase (S. cerevisiae)
1447363_s_at	-2.5	Fbx14	F-box and leucine-rich repeat protein 14
1423678_at	-2.5	Slc25a28	solute carrier family 25, member 28
1416503_at	-2.5	Ebp	phenylalkylamine Ca2+ antagonist (emopamil) binding protein
1446618_at	-2.5	Tubb5	tubulin, beta 5
1436907_at	-2.5	6330406115Rik	RIKEN cDNA 6330406115 gene
1416009_at	-2.5	Flii	flightless 1 homolog (Drosophila)
1455350_at	-2.5	Mut	methylmalonyl-Coenzyme A mutase
1450018_s_at	-2.5	A130040M12Rik	RIKEN cDNA A130040M12 gene
1428875_at	-2.5	Nde1	nuclear distribution gene E homolog 1 (A nidulans)
1418127_a_at	-2.5	Ncf4	neutrophil cytosolic factor 4
1455750_at	-2.5	Anp32e	acidic (leucine-rich) nuclear phosphoprotein 32 family, member E
1450044_at	-2.5	Gnaq	guanine nucleotide binding protein, alpha q polypeptide
1428796_at	-2.5	Gnai2	guanine nucleotide binding protein (G protein), alpha inhibiting 2
1419259_at	-2.5	Hspa8	heat shock protein 8
1436319_at	-2.5	Txnec5	thioredoxin domain containing 5
1460303_at	-2.5	4932425I24Rik	RIKEN cDNA 4932425I24 gene
1435345_at	-2.5	Fkbp10	FK506 binding protein 10
1435737_a_at	-2.5	Pon2	paraoxonase 2
1460170_at	-2.5	2700023E23Rik	RIKEN cDNA 2700023E23 gene
1455022_at	-2.5	Gtsf1	Gametocyte specific factor 1 (Gtsf1), mRNA
1418084_at	-2.5	Serpnb9g	serine (or cysteine) peptidase inhibitor, clade B, member 9g
1421861_at	-2.5	Rhox5	reproductive homeobox 5
1426350_at	-2.5	Rgmb	RGM domain family, member B
1428239_at	-2.6	Fez2	fasciculation and elongation protein zeta 2 (zygin II)
1448361_at	-2.6	B230354K17Rik	RIKEN cDNA B230354K17 gene
1460203_at	-2.6	Nhlrc3	NHL repeat containing 3
1434860_at	-2.6	Tbcb	tubulin folding cofactor B
1435456_at	-2.6	Add1	adducin 1 (alpha)
1428103_at	-2.6	Slc2a6	solute carrier family 2 (facilitated glucose transporter), member 6
1433559_at	-2.6	Nfkbia	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
1426571_at	-2.6	Tmem57	transmembrane protein 57
1455564_at	-2.6	Nfkbia	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
1441097_at	-2.6	Itpr1	inositol 1,4,5-triphosphate receptor 1
1440279_at	-2.6	Dzip3	DAZ interacting protein 3, zinc finger
1436364_x_at	-2.6	Maf1	MAF1 homolog (S. cerevisiae)

1436395_at	-2.6	Kif22	kinesin family member 22
1433645_at	-2.6	Ptpn2	protein tyrosine phosphatase, non-receptor type 2
1415840_at	-2.6	Ghitm	growth hormone inducible transmembrane protein
1437290_at	-2.6	Txndc13	thioredoxin domain containing 13
1417028_a_at	-2.6	Entpd5	ectonucleoside triphosphate diphosphohydrolase 5
1449839_at	-2.6	Bbx	bobby sox homolog (Drosophila)
1436346_at	-2.6	Cmtm6	CKLF-like MARVEL transmembrane domain containing 6
1428478_at	-2.6	Sec61a1	Sec61 alpha 1 subunit (S. cerevisiae)
1415949_at	-2.6	Casp6	caspase 6
1450852_s_at	-2.6	Ptar1	protein prenyltransferase alpha subunit repeat containing 1
1437284_at	-2.6	Sema6d	sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6D
1429065_at	-2.6	ENSMUSG00000074460 ///	predicted gene, ENSMUSG00000074460 ///
1416412_at	-2.6	Tmed2	predicted gene, ENSMUSG00000074460 /// transmembrane emp24 domain trafficking protein 2
1434767_at	-2.7	Lxn	latexin
1422476_at	-2.7	Ing1	inhibitor of growth family, member 1
1424906_at	-2.7	Aars	alanyl-tRNA synthetase
1449632_s_at	-2.7	Smo	smoothened homolog (Drosophila)
1460559_at	-2.7	Zc3h6	zinc finger CCCH type containing 6
1418483_a_at	-2.7	Hivep3	human immunodeficiency virus type I enhancer binding protein 3
1460674_at	-2.7	Gltp	glycolipid transfer protein
1418192_at	-2.7	Wrb	tryptophan rich basic protein
1426905_a_at	-2.7	Prdx2	peroxiredoxin 2
1429189_at	-2.7	Gcsh	glycine cleavage system protein H (aminomethyl carrier)
1424894_at	-2.7	Fam100b	family with sequence similarity 100, member B
1433586_at	-2.7	Sec24d	Sec24 related gene family, member D (S. cerevisiae)
1455049_at	-2.7	Sulf1	sulfatase 1
1439925_at	-2.7	Nt5dc3	5'-nucleotidase domain containing 3
1450048_a_at	-2.7	Opcml	opioid binding protein/cell adhesion molecule-like
1437308_s_at	-2.7	Atad2b	ATPase family, AAA domain containing 2B
1418626_a_at	-2.7	Plscr1	phospholipid scramblase 1
1455728_at	-2.7	Aox1	aldehyde oxidase 1
1434311_at	-2.7	Nisch	nischarin
1417104_at	-2.7	Dpp3	dipeptidylpeptidase 3
1455419_at	-2.7	F3	coagulation factor III
1419027_s_at	-2.7	Man2a1	mannosidase 2, alpha 1
1427177_at	-2.7	LOC100044161 /// Sema3a	hypothetical protein LOC100044161 /// sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3A
1436316_at	-2.7	Gnl3	guanine nucleotide binding protein-like 3 (nucleolar)
1417323_at	-2.7	Aars	alanyl-tRNA synthetase
1429896_at	-2.7	Ier5	immediate early response 5
1417842_at	-2.7	Akr1b3	aldo-keto reductase family 1, member B3 (aldose reductase)
1424092_at	-2.8	Malat1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
1423609_a_at	-2.8	Tmem43	transmembrane protein 43
1439368_a_at	-2.8	Tctn3	tectonic family member 3
1454735_at	-2.8	Tbca	tubulin cofactor a
1420836_at	-2.8	Wipi1	WD repeat domain, phosphoinositide interacting 1
1433954_at	-2.8	Hivep2	human immunodeficiency virus type I enhancer binding protein 2
1429240_at	-2.8	Rassf1	Ras association (RalGDS/AF-6) domain family member 1
1437649_x_at	-2.8	Pard3	par-3 (partitioning defective 3) homolog (C. elegans)
1448370_at	-2.8	Insig1	insulin induced gene 1
1448241_at	-2.8	Tmed10	transmembrane emp24-like trafficking protein 10 (yeast)
1424459_at	-2.8	Itga6	integrin alpha 6
1416499_a_at	-2.8	Seprn1	selenoprotein N, 1
1428535_at	-2.8	Cdc20	cell division cycle 20 homolog (S. cerevisiae)
1452656_at	-2.8	Ogofd1	2-oxoglutarate and iron-dependent oxygenase domain containing 1
1416041_at	-2.8	Tbc1d16	TBC1 domain family, member 16
1437471_at	-2.8	Mtap4	microtubule-associated protein 4
1424776_a_at	-2.8	Rsrc2	arginine/serine-rich coiled-coil 2
1456039_at	-2.8	Etl4	enhancer trap locus 4
1437289_at	-2.8	Gtsf1	gametocyte specific factor 1
1451446_at	-2.8	Slc16a13	solute carrier family 16 (monocarboxylic acid transporters), member 13
1434676_at	-2.8	Odz4	odd Oz/ten-m homolog 4 (Drosophila)
1447896_s_at	-2.8	Irf1	interferon regulatory factor 1
1450431_a_at	-2.8	Rsu1	Ras suppressor protein 1
1418269_at	-2.8	Cldnd1	claudin domain containing 1
1437670_x_at	-2.8	Abhd2	abhydrolase domain containing 2
1434478_at	-2.9	Timp2	tissue inhibitor of metalloproteinase 2
1432164_a_at	-2.9	Arc3	actin related protein 2/3 complex, subunit 3
1434485_a_at	-2.9	Ppp2r2a	protein phosphatase 2 (formerly 2A), regulatory subunit B (PR 52), alpha isoform
1418238_at	-2.9	Uqcrc	ubiquinol-cytochrome c reductase (6.4kD) subunit
1460211_a_at	-2.9	S3-12	plasma membrane associated protein, S3-12
		Fbxl20	F-box and leucine-rich repeat protein 20
		100043718 ///	
		LOC100048508 ///	
1427049_s_at	-2.9	OTTMUSG00000012957 ///	predicted gene, 100043718 /// similar to Rpl36 protein /// predicted gene, OTTMUSG00000012957 /// ribosomal protein L36
1448410_at	-2.9	Rpl36	PQ loop repeat containing
1455249_at	-2.9	Pqlc3	RIKEN cDNA 1700094D03 gene
		1700094D03Rik	CCR4 carbon catabolite repression 4-like (S. cerevisiae) /// similar to carbon catabolite repression 4 protein homolog
1423846_x_at	-2.9	Ccrn4l /// LOC100047134	homolog
1435763_at	-2.9	Rgl2	ral guanine nucleotide dissociation stimulator-like 2
1429764_at	-2.9	Tmem109	transmembrane protein 109
1428412_at	-2.9	Prdx1	peroxiredoxin 1
1416664_at	-2.9	Ing1	inhibitor of growth family, member 1
1448549_a_at	-2.9	Flnb	filamin, beta
1450688_at	-2.9	4931431B13Rik	RIKEN cDNA 4931431B13 gene

1438390_s_at	-2.9	Tspan17	tetraspanin 17
1416897_at	-2.9	Trim2	tripartite motif-containing 2
1423986_a_at	-2.9	Stt3b	STT3, subunit of the oligosaccharyltransferase complex, homolog B (S. cerevisiae)
1423176_at	-2.9	Epb4.1	erythrocyte protein band 4.1
1456079_x_at	-2.9	Slc22a23	solute carrier family 22, member 23
1417853_at	-3.0	Foxf2	forkhead box F2
1415869_a_at	-3.0	Zfand2a	zinc finger, AN1-type domain 2A
1446951_at	-3.0	Dctn6	dynactin 6
1416364_at	-3.0	Gabarapl1	gamma-aminobutyric acid (GABA(A)) receptor-associated protein-like 1
1452095_a_at	-3.0	Zfp422-rs1	zinc finger protein 422, related sequence 1
1437211_x_at	-3.0	Fgp	phosphoglycolate phosphatase
1426754_x_at	-3.0	Rif1	Rap1 interacting factor 1 homolog (yeast)
1451066_at	-3.0	Dync1li2	dynein, cytoplasmic 1 light intermediate chain 2
1439060_s_at	-3.0	Snx14	sorting nexin 14
1424093_x_at	-3.0	AW549877	expressed sequence AW549877
1423120_at	-3.0	Lpcat3	lysophosphatidylcholine acyltransferase 3
1460238_at	-3.0	2310002J21Rik	RIKEN cDNA 2310002J21 gene
1426760_at	-3.0	Plscr1	phospholipid scramblase 1
1455322_at	-3.0	Mrpl33	mitochondrial ribosomal protein L33
1456087_at	-3.0	100043468	predicted gene, 100043468
1417018_at	-3.0	Crip2	cysteine rich protein 2
1451895_a_at	-3.0	Map4k2	mitogen-activated protein kinase kinase kinase kinase 2
1422906_at	-3.0	Ncapd2	non-SMC condensin I complex, subunit D2
1421662_a_at	-3.0	Dnajb11	DnaJ (Hsp40) homolog, subfamily B, member 11
1416000_a_at	-3.0	Sgk1	serum/glucocorticoid regulated kinase 1
1421546_a_at	-3.0	Ncbp2	nuclear cap binding protein subunit 2
1423030_at	-3.0	Pvr	poliovirus receptor
1438976_x_at	-3.0	Cct6a	chaperonin containing Tcp1, subunit 6a (zeta)
1416589_at	-3.1	Mosc2	MOCO sulphurase C-terminal domain containing 2
1452832_s_at	-3.1	Bicc1	bicaudal C homolog 1 (Drosophila)
1428078_at	-3.1	Abi2	abl-interactor 2
1453056_at	-3.1	Matr3	matrin 3
1417143_at	-3.1	Tacc3	transforming, acidic coiled-coil containing protein 3
1448592_at	-3.1	Dag1	dystroglycan 1
1428431_at	-3.1	Rbm9	RNA binding motif protein 9
1451668_at	-3.1	C79407	expressed sequence C79407
1435524_at	-3.1	Stab1	stabilin 1
1416766_at	-3.1	Msh2	mutS homolog 2 (E. coli)
1455915_at	-3.1	Dna2	DNA replication helicase 2 homolog (yeast)
1455731_at	-3.1	Suox	sulfite oxidase
1453572_a_at	-3.1	Ppargc1a	peroxisome proliferative activated receptor, gamma, coactivator 1 alpha
1423667_at	-3.1	Zfp71-rs1	zinc finger protein 71, related sequence
1454740_at	-3.1	Marveld1	MARVEL (membrane-associating) domain containing 1
1416091_at	-3.1	Apex1	apurinic/aprimidinic endonuclease 1
1427387_a_at	-3.1	Entpd5	ectonucleoside triphosphate diphosphohydrolase 5
1453412_a_at	-3.1	BC049807	cDNA sequence BC049807
1435323_a_at	-3.1	Dnajc3	DnaJ (Hsp40) homolog, subfamily C, member 3
1426246_at	-3.1	Cnpy4	canopy 4 homolog (zebrafish)
1456085_x_at	-3.1	Otud1	OTU domain containing 1
1448647_at	-3.1	Rc3h2	ring finger and CCCH-type zinc finger domains 2
1434997_at	-3.1	Elk3	ELK3, member of ETS oncogene family
1417893_at	-3.1	Orc2l	origin recognition complex, subunit 2-like (S. cerevisiae)
1423767_at	-3.1	Acat2 /// Acat3	acetyl-Coenzyme A acetyltransferase 2 /// acetyl-Coenzyme A acetyltransferase 3
1423806_at	-3.2	1500001A10Rik	RIKEN cDNA 1500001A10 gene
1428600_at	-3.2	Btaf1	BTAf1 RNA polymerase II, B-TFIIID transcription factor-associated, (Mot1 homolog, S. cerevisiae)
1448557_at	-3.2	Ckap4	cytoskeleton-associated protein 4
1427060_at	-3.2	Eaf1	ELL associated factor 1
1423777_at	-3.2	Col4a5	collagen, type IV, alpha 5
1416135_at	-3.2	Il33	interleukin 33
1431375_s_at	-3.2	Ppib	peptidylprolyl isomerase B
1456475_s_at	-3.2	Iws1	IWS1 homolog (S. cerevisiae)
1438847_at	-3.2	Dbi	diazepam binding inhibitor
1416340_a_at	-3.2	Gstm1	glutathione S-transferase, mu 1
1439381_x_at	-3.2	Trim28	tripartite motif-containing 28
1420928_at	-3.2	Cntf /// Zfp91 /// Zfp91-cntf	ciliary neurotrophic factor /// zinc finger protein 91 /// zinc finger protein 91, ciliary neurotrophic factor
1439794_at	-3.2	Acpl2	transcription unit
1417538_at	-3.2	Nab2	acid phosphatase-like 2
1448124_at	-3.2	Nfkbia	Ngfi-A binding protein 2
1433626_at	-3.2	Mat2a	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha (Nfkbia), mRNA
1451359_at	-3.2	Mef2d	methionine adenosyltransferase II, alpha
1426434_at	-3.2	Nars	myocyte enhancer factor 2D
1422503_s_at	-3.2	Qars	asparaginyl-tRNA synthetase
1450629_at	-3.2	5830408B19Rik	glutaminyl-tRNA synthetase
1434975_x_at	-3.2	Plcb3	RIKEN cDNA 5830408B19 gene
1434518_at	-3.2	Rpn1	phospholipase C, beta 3
1439264_x_at	-3.2	Atp5g2	ribophorin I
1417544_a_at	-3.2	Ap3d1	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit c (subunit 9), isoform 2
1436426_at	-3.3	Pvr	adaptor-related protein complex 3, delta 1 subunit
1449151_at	-3.3	Wdr43	poliovirus receptor
1437401_at	-3.3	6820431F20Rik	WD repeat domain 43
1424296_at	-3.3	Sgms1	RIKEN cDNA 6820431F20 gene
1426774_at	-3.3	Cyld	sphingomyelin synthase 1
1451284_at	-3.3	Cnot6l	cylindromatosis (turban tumor syndrome)
1415698_at	-3.3	Golm1	CCR4-NOT transcription complex, subunit 6-like
1454741_s_at	-3.3	Snhg1	golgi membrane protein 1
			small nucleolar RNA host gene (non-protein coding) 1

1422833_at	-3.3	Ints4	integrator complex subunit 4
1422747_at	-3.3	Dap	death-associated protein
1433887_at	-3.3	Heatr5b	HEAT repeat containing 5B
1435682_at	-3.3	Slc2a8	solute carrier family 2, (facilitated glucose transporter), member 8
1437185_s_at	-3.3	Apaf1	apoptotic peptidase activating factor 1
1424828_at	-3.3	Dnajc10 /// LOC100047007	DnaJ (Hsp40) homolog, subfamily C, member 10 /// similar to DnaJ (Hsp40) homolog, subfamily C, member 10
1435344_at	-3.3	Txnrd3	thioredoxin reductase 3
1450560_a_at	-3.3	2810474O19Rik	RIKEN cDNA 2810474O19 gene
1416258_at	-3.3	Litaf	LPS-induced TN factor
1423782_at	-3.3	Zfp62	zinc finger protein 62
1436960_at	-3.3	2810474O19Rik	RIKEN cDNA 2810474O19 gene
1419577_at	-3.3	Adh7	alcohol dehydrogenase 7 (class IV), mu or sigma polypeptide
1416657_at	-3.3	Lrp10	low-density lipoprotein receptor-related protein 10
1448928_at	-3.3	2810474O19Rik	RIKEN cDNA 2810474O19 gene
1448311_at	-3.3	Arhgef12	Rho guanine nucleotide exchange factor (GEF) 12
1435368_a_at	-3.3	Fnip1	folliculin interacting protein 1
1423695_at	-3.3	Zkscan5	zinc finger with KRAB and SCAN domains 5
1447522_s_at	-3.3	Clca1	chloride channel calcium activated 1
1442280_at	-3.3	BC003267	cDNA sequence BC003267
1448960_at	-3.3	Zwint	ZW10 interactor
1437194_x_at	-3.3	Dip2a /// LOC100044059	DIP2 disco-interacting protein 2 homolog A (Drosophila) /// similar to mKIAA0184 protein
1435666_at	-3.3	Ppp2r5d	protein phosphatase 2, regulatory subunit B (B56), delta isoform
1427938_at	-3.3	4632419I22Rik	RIKEN cDNA 4632419I22 gene
1423648_at	-3.3	Usp19	ubiquitin specific peptidase 19
1416836_at	-3.3	Rrs1	RRS1 ribosome biogenesis regulator homolog (S. cerevisiae)
1448279_at	-3.3	Smad7	MAD homolog 7 (Drosophila)
1452181_at	-3.3	Elk3	ELK3, member of ETS oncogene family
1433639_at	-3.3	Pttg1	pituitary tumor-transforming gene 1
1451356_at	-3.3	Heca	headcase homolog (Drosophila)
1416125_at	-3.3	Inpp5k	inositol polyphosphate 5-phosphatase K
1433979_at	-3.4	LOC674712 /// Ptdss1	similar to phosphatidylinositol synthase 1 /// phosphatidylinositol synthase 1
1428559_at	-3.4	Pip5k1a	phosphatidylinositol-4-phosphate 5-kinase, type 1 alpha
1434543_a_at	-3.4	Ttc3	tetratricopeptide repeat domain 3
1422438_at	-3.4	Fkbp9	FK506 binding protein 9
1448330_at	-3.4	Mospd2	motile sperm domain containing 2
1428624_at	-3.4	Mboat1	membrane bound O-acyltransferase domain containing 1
1435926_at	-3.4	Ccnb2	cyclin B2
1428801_at	-3.4	Lars2	leucyl-tRNA synthetase, mitochondrial
1453731_a_at	-3.4	Mcc	mutated in colorectal cancers
1452210_at	-3.4	Hook3	hook homolog 3 (Drosophila)
1451731_at	-3.4	Ppp1r12b	protein phosphatase 1, regulatory (inhibitor) subunit 12B
1439965_at	-3.4	Cyr61	cysteine rich protein 61
1420498_a_at	-3.4	Tusc3	tumor suppressor candidate 3
1450355_a_at	-3.4	Arsb	arylsulfatase B
1417403_at	-3.4	Eif2s2	eukaryotic translation initiation factor 2, subunit 2 (beta)
1434228_at	-3.4	Atf4	activating transcription factor 4
		100043718 ///	
		LOC100048508 ///	
		OTTMUSG00000012957 ///	predicted gene, 100043718 /// similar to Rpl36 protein /// predicted gene, OTTMUSG00000012957 /// ribosomal
1416416_x_at	-3.5	Rpl36	protein L36
1428236_at	-3.5	Zeb2	zinc finger E-box binding homeobox 2
1448797_at	-3.5	Zfp26	zinc finger protein 26
1423650_at	-3.5	Slc25a25	solute carrier family 25 (mitochondrial carrier, phosphate carrier), member 25
1424320_a_at	-3.5	Tmem184c	transmembrane protein 184C
1420603_s_at	-3.5	Ldlr	low density lipoprotein receptor
1448661_at	-3.5	Aim1	absent in melanoma 1
1434413_at	-3.5	Tmem19	transmembrane protein 19
1453370_at	-3.5	Phf2011	PHD finger protein 20-like 1
1438386_x_at	-3.5	Rpl41	ribosomal protein L41
1448498_at	-3.5	Rbm26	RNA binding motif protein 26
1435797_at	-3.5	Brd4	bromodomain containing 4
1435450_at	-3.5	Idh2	isocitrate dehydrogenase 2 (NADP+), mitochondrial
1452133_at	-3.5	Hivep2	human immunodeficiency virus type I enhancer binding protein 2
1452769_at	-3.5	Ociad2	OCIA domain containing 2
1416429_a_at	-3.5	Ctps	cytidine 5'-triphosphate synthase
1438633_x_at	-3.5	Fam149a	family with sequence similarity 149, member A
1434395_at	-3.5	Cndp2	CNDP dipeptidase 2 (metallopeptidase M20 family)
1426015_s_at	-3.5	1600012H06Rik	RIKEN cDNA 1600012H06 gene
1455481_at	-3.5	Pctk3	PCTAIRE-motif protein kinase 3
1455789_x_at	-3.5	Prr12	proline rich 12
1435395_s_at	-3.5	Zfand2a	zinc finger, AN1-type domain 2A
1416217_a_at	-3.6	Mapksp1	MAPK scaffold protein 1
1448569_at	-3.6	Parp12	poly (ADP-ribose) polymerase family, member 12
1450388_s_at	-3.6	Stard4	StAR-related lipid transfer (START) domain containing 4
1424085_at	-3.6	Rbm26	RNA binding motif protein 26
1417090_at	-3.6	Elov6	ELOVL family member 6, elongation of long chain fatty acids (yeast)
1448967_at	-3.6	Tmem158	transmembrane protein 158
1428429_at	-3.6	Slc25a4	solute carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 4
1448275_at	-3.6	Irs1	insulin receptor substrate 1
1428259_at	-3.6	Axud1	AXIN1 up-regulated 1
1416780_at	-3.6	Tbc1d8	TBC1 domain family, member 8
1426880_at	-3.6	Cldnd1	claudin domain containing 1
1449036_at	-3.6	Arl8b	ADP-ribosylation factor-like 8B
1434183_at	-3.6	Nono	non-POU-domain-containing, octamer binding protein
1416896_at	-3.7	Trim2	tripartite motif-containing 2
1435649_at	-3.7	Slc48a1	solute carrier family 48 (heme transporter), member 1

1430526_a_at	-3.7	Pgd	phosphogluconate dehydrogenase
1440880_at	-3.7	Hadh	hydroxyacyl-Coenzyme A dehydrogenase
1439815_at	-3.7	Zfp800	zinc finger protein 800
1428146_s_at	-3.7	Atp5k	ATP synthase, H+ transporting, mitochondrial F1F0 complex, subunit e
		1190002N15Rik ///	
1450872_s_at	-3.7	LOC100044725	RIKEN cDNA 1190002N15 gene /// hypothetical protein LOC100044725
1425616_a_at	-3.7	Nfkb1	nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105
1448433_a_at	-3.7	5430435G22Rik	RIKEN cDNA 5430435G22 gene
1424157_at	-3.7	Nol5a	nucleolar protein 5A
1460692_at	-3.8	Glg1	golgi apparatus protein 1
1438724_at	-3.8	Crkrs	CDC2-related kinase, arginine/serine-rich
1422525_at	-3.8	Tram1	translocating chain-associating membrane protein 1
1434628_a_at	-3.8	Smarcd2	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 2
1440795_x_at	-3.8	Ext2	exostoses (multiple) 2
1419435_at	-3.8	Tgfb1	transforming growth factor, beta receptor I
1429081_at	-3.8	Fen1	flap structure specific endonuclease 1
1433582_at	-3.8	Ppp2r1a	protein phosphatase 2 (formerly 2A), regulatory subunit A (PR 65), alpha isoform
1455878_at	-3.8	Cited2	Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 2
1421469_a_at	-3.8	Kif5c	kinesin family member 5C
1416261_at	-3.8	Crip1	cysteine-rich protein 1 (intestinal)
1449084_s_at	-3.8	Prkd3	protein kinase D3
1417027_at	-3.8	Cadm1	cell adhesion molecule 1
1428853_at	-3.8	Ap3s2	adaptor-related protein complex 3, sigma 2 subunit
1418318_at	-3.8	S100a13	S100 calcium binding protein A13
1433576_at	-3.8	Ndufv2	NADH dehydrogenase (ubiquinone) flavoprotein 2
1453155_at	-3.9	2810474O19Rik	RIKEN cDNA 2810474O19 gene
1428684_at	-3.9	Ttc28	tetratricopeptide repeat domain 28
1438630_x_at	-3.9	Hspa8	heat shock protein 8
1434365_a_at	-3.9	Gm2a	GM2 ganglioside activator protein
1426628_at	-3.9	Fgfr1op	Fgfr1 oncogene partner
1449303_at	-3.9	Reep4	receptor accessory protein 4
1438055_at	-3.9	Pogz	pogo transposable element with ZNF domain
1416750_at	-3.9	Gtse1	G two S phase expressed protein 1
1448196_at	-3.9	Man1a2	mannosidase, alpha, class 1A, member 2
1417283_at	-3.9	LOC100046775 ///	similar to CMP-sialic acid transporter /// solute carrier family 35 (CMP-sialic acid transporter), member 1
1426873_s_at	-3.9	Daam1	dishevelled associated activator of morphogenesis 1
1452346_at	-3.9	LOC547150	similar to p47 protein
1421853_at	-3.9	Pcyox1	pernilycysteine oxidase 1
1434123_at	-3.9	Ankhd1 ///	ankyrin repeat and KH domain containing 1 /// eukaryotic translation initiation factor 4E binding protein 3
1425475_at	-3.9	Napb	N-ethylmaleimide sensitive fusion protein attachment protein beta
1426782_at	-4.0	Fam175a	family with sequence similarity 175, member A
1455793_at	-4.0	H2-K1	MRNA similar to histocompatibility 2, D region locus 1 (cDNA clone MGC:25703 IMAGE:3675316)
1451339_at	-4.0	Man1a2	mannosidase, alpha, class 1A, member 2
1450640_x_at	-4.0	1700094D03Rik	RIKEN cDNA 1700094D03 gene
1428789_at	-4.0	Opcml	opioid binding protein/cell adhesion molecule-like
1435727_s_at	-4.0	Atp5k	ATP synthase, H+ transporting, mitochondrial F1F0 complex, subunit e
1417311_at	-4.0	Flot2	flotillin 2
1416430_at	-4.0	Sparc	secreted acidic cysteine rich glycoprotein
1428508_at	-4.0	Fam5c	family with sequence similarity 5, member C
1415707_at	-4.0	Anapc2	anaphase promoting complex subunit 2
1448496_a_at	-4.0	Far1	fatty acyl CoA reductase 1
1423917_a_at	-4.0	Mapre2	microtubule-associated protein, RP/EB family, member 2
1449343_s_at	-4.0	Kdsr	3-ketodihydroshpingosine reductase
1428082_at	-4.0	Dbi	diazepam binding inhibitor
1447917_x_at	-4.0	Mttp	microsomal triglyceride transfer protein
1425472_a_at	-4.0	Sfrs10	splicing factor, arginine/serine-rich 10 (transformer 2 homolog, Drosophila)
1428382_at	-4.0	Sbno1	sno, strawberry notch homolog 1 (Drosophila)
1428218_a_at	-4.0	Ppm2c	protein phosphatase 2C, magnesium dependent, catalytic subunit
1422888_at	-4.0	Tuba1b	tubulin, alpha 1B
1434105_at	-4.0	Ntn1	N-terminal Asn amidase
1415718_at	-4.1	Eif5	eukaryotic translation initiation factor 5
1433770_at	-4.1	D430028G21Rik	RIKEN cDNA D430028G21 gene
1423046_s_at	-4.1	Ctnn	cortactin
1436900_x_at	-4.1	Skil	SKI-like
1417930_at	-4.1	Ivd	isovaleryl coenzyme A dehydrogenase
1416999_at	-4.1	Lynx1	Ly6/neurotoxin 1
1416167_at	-4.1	Aqp1	aquaporin 1
1428340_s_at	-4.1	Ugp2	UDP-glucose pyrophosphorylase 2
1417272_at	-4.1	Fosl1	fos-like antigen 1
1416365_at	-4.1	Cat	catalase
1438988_x_at	-4.1	Brd9	bromodomain containing 9
1452225_at	-4.1	Tbc1d4	TBC1 domain family, member 4
1435652_a_at	-4.1	Nedd4	neural precursor cell expressed, developmentally down-regulated 4
1438093_x_at	-4.1	Sgsm2	small G protein signaling modulator 2
1417404_at	-4.1	Anxa8	annexin A8
1423071_x_at	-4.1	Tspan14	tetraspanin 14
1422445_at	-4.2	Fads1	fatty acid desaturase 1
		1190002N15Rik ///	
1450889_at	-4.2	LOC100044725	RIKEN cDNA 1190002N15 gene /// hypothetical protein LOC100044725
1459800_s_at	-4.2	Pten	phosphatase and tensin homolog
1425506_at	-4.2	Eif6	eukaryotic translation initiation factor 6
1418220_at	-4.2	Fzd2	frizzled homolog 2 (Drosophila)
1416988_at	-4.3	Lpar1	lysophosphatidic acid receptor 1
1448180_a_at	-4.3	Slc25a30	solute carrier family 25, member 30
1421844_at	-4.3	Pitpna	phosphatidylinositol transfer protein, alpha
1449901_a_at	-4.3	Filip1l	filamin A interacting protein 1-like

1433908_a_at	-4.3	Gabpb2	GA repeat binding protein, beta 2
1428296_at	-4.3	Fnip1	folliculin interacting protein 1
1435557_at	-4.3	Epdr1	ependymin related protein 1 (zebrafish)
1435292_at	-4.3	Sin3a	transcriptional regulator, SIN3A (yeast)
1451128_s_at	-4.3	Faah	fatty acid amide hydrolase
1417852_x_at	-4.3	Mnt	max binding protein
1452330_a_at	-4.4	Braf	Braf transforming gene
1417384_at	-4.4	Cpsf1	cleavage and polyadenylation specific factor 1
1426942_at	-4.4	Cct4	chaperonin containing Tcp1, subunit 4 (delta)
		100041163 /// 100041478 ///	
		ENSMUSG00000063556 ///	
		ENSMUSG00000071532 ///	predicted gene, 100041163 /// predicted gene, 100041478 /// predicted gene, ENSMUSG00000063556 ///
1424438_a_at	-4.4	LOC100046821 /// Rpl23a	predicted gene, ENSMUSG00000071532 /// similar to ribosomal protein L23a /// ribosomal protein L23a
1453372_at	-4.4	Dcbl2	discoidin, CUB and LCCL domain containing 2
1416269_at	-4.4	Hsp90ab1	heat shock protein 90 alpha (cytosolic), class B member 1
1439830_at	-4.4	Rrs1	RRS1 ribosome biogenesis regulator homolog (S. cerevisiae)
1428325_at	-4.4	Igf1	insulin-like growth factor 1
1452381_at	-4.4	1810013L24Rik	RIKEN cDNA 1810013L24 gene
1415890_at	-4.5	Scd1	stearoyl-Coenzyme A desaturase 1
1418257_at	-4.5	Notch1	Notch gene homolog 1 (Drosophila)
1426778_at	-4.5	Patz1	POZ (BTB) and AT hook containing zinc finger 1
1422603_at	-4.5	Dpy30	dpy-30 homolog (C. elegans)
1448392_at	-4.5	Fh1	fumarate hydratase 1
1418884_x_at	-4.5	Ngf	nerve growth factor
1428647_at	-4.5	Tfdp2	transcription factor Dp 2
1418072_at	-4.5	Cd97	CD97 antigen
1428883_at	-4.6	1810063B05Rik	RIKEN cDNA 1810063B05 gene
1415964_at	-4.6	Prdx1	peroxiredoxin 1
1452213_at	-4.6	Crebbp	CREB binding protein
1423960_at	-4.6	Dimt1	DIM1 dimethyladenosine transferase 1-like (S. cerevisiae)
1428522_at	-4.6	Cdc2l6	cell division cycle 2-like 6 (CDK8-like)
		ENSMUSG00000045799 ///	
1421997_s_at	-4.6	Ptma	predicted gene, ENSMUSG00000045799 /// prothymosin alpha
1416330_at	-4.6	H2afz	H2A histone family, member Z
1416860_s_at	-4.6	Smpd2	sphingomyelin phosphodiesterase 2, neutral
1421654_a_at	-4.6	Lipa	lysosomal acid lipase A
1457670_s_at	-4.7	Lpp	LIM domain containing preferred translocation partner in lipoma
1460554_s_at	-4.7	Nlrc3	NLR family, CARD domain containing 3
1434037_s_at	-4.7	Bub1b	budding uninhibited by benzimidazoles 1 homolog, beta (S. cerevisiae)
1422433_s_at	-4.7	Mat2a	methionine adenosyltransferase II, alpha
1428738_a_at	-4.7	Atad5	ATPase family, AAA domain containing 5
1420895_at	-4.7	Ets1	E26 avian leukemia oncogene 1, 5' domain
1420619_a_at	-4.7	Il1rap	interleukin 1 receptor accessory protein
1455470_x_at	-4.7	E330009J07Rik	RIKEN cDNA E330009J07 gene
1434891_at	-4.7	Fam13c	family with sequence similarity 13, member C
1426716_at	-4.7	Anxa6	annexin A6
1438634_x_at	-4.7	Kctd3	potassium channel tetramerisation domain containing 3
1415760_s_at	-4.7	Gsn	gelsolin
1435140_at	-4.7	Prim1	DNA primase, p49 subunit
1416032_at	-4.7	Ifrd1	interferon-related developmental regulator 1
1426952_at	-4.7	Abtb2	ankyrin repeat and BTB (POZ) domain containing 2
1434387_at	-4.8	Glud1	glutamate dehydrogenase 1
1429739_a_at	-4.8	Gsn	gelsolin
1452037_at	-4.8	Dpy19l4	dpy-19-like 4 (C. elegans)
1423790_at	-4.8	Cd74	CD74 antigen (invariant polypeptide of major histocompatibility complex, class II antigen-associated)
1418704_at	-4.8	Sfrs10	splicing factor, arginine/serine-rich 10 (transformer 2 homolog, Drosophila)
1418924_at	-4.8	Cxcl11 /// LOC630447	chemokine (C-X-C motif) ligand 11 /// similar to Small inducible cytokine B11 precursor (CXCL11) (Interferon-inducible T-cell alpha chemoattractant) (I-TAC)
1436824_x_at	-4.8	Fbxo18	F-box protein 18
1423739_x_at	-4.8	Csf1	colony stimulating factor 1 (macrophage)
1456726_x_at	-4.8	Strn	striatin, calmodulin binding protein
1448380_at	-4.9	Cald1	caldesmon 1
1435735_x_at	-4.9	Vim	vimentin
1455221_at	-4.9	Tnks2	tankyrase, TRF1-interacting ankyrin-related ADP-ribose polymerase 2
1424105_a_at	-4.9	Nr1d1	nuclear receptor subfamily 1, group D, member 1
1433504_at	-4.9	EG626950 /// H2afz	predicted gene, EG626950 /// H2A histone family, member Z
1436796_at	-5.0	H47	histocompatibility 47
1435143_at	-5.0	Sh3d19	SH3 domain protein D19
1417644_at	-5.0	Myo9b	myosin IXb
1451114_at	-5.0	Atp8b2	ATPase, class I, type 8B, member 2
1449865_at	-5.0	Ptch1	patched homolog 1
1418746_at	-5.0	Mdm4	transformed mouse 3T3 cell double minute 4
1423732_at	-5.0	EG621629 /// Ubxn2a	predicted gene, EG621629 /// UBX domain protein 2A
1421821_at	-5.0	Napb	N-ethylmaleimide sensitive fusion protein attachment protein beta
1448400_a_at	-5.1	A830007P12Rik	RIKEN cDNA A830007P12 gene
1452754_at	-5.1	Itns1	intersectin 1 (SH3 domain protein 1A)
1417450_a_at	-5.1	Caml	calcium modulating ligand
1418496_at	-5.1	Ero1l	ERO1-like (S. cerevisiae)
1448619_at	-5.1	Arndc4	arrestin domain containing 4
1450410_a_at	-5.1	Eny2	enhancer of yellow 2 homolog (Drosophila)
1454658_at	-5.1	Nos1	nitric oxide synthase 1, neuronal
1455257_at	-5.1	Jmjd3	jumonji domain containing 3
1450862_at	-5.1	LOC100047863 /// Sh2b3	similar to lymphocyte-specific adaptor protein Lnk /// SH2B adaptor protein 3
1425194_a_at	-5.1	Hmgcr	3-hydroxy-3-methylglutaryl-Coenzyme A reductase
1416967_at	-5.1	Rcn1	reticulocalbin 1
1448491_at	-5.2	2810403A07Rik	RIKEN cDNA 2810403A07 gene

1418595_at	-5.2	Klf7	Kruppel-like factor 7 (ubiquitous)
1436959_x_at	-5.2	Bcr	breakpoint cluster region
1433581_at	-5.2	Flot2	flotillin 2
1420416_at	-5.2	Lmna	lamin A
1460409_at	-5.3	Chd1	chromodomain helicase DNA binding protein 1
1416667_at	-5.3	Stam	signal transducing adaptor molecule (SH3 domain and ITAM motif) 1
1415753_at	-5.3	Wdr6	WD repeat domain 6
1447277_s_at	-5.3	Siae	sialic acid acetyltransferase
1450409_a_at	-5.3	Clcn5	chloride channel 5
1437380_x_at	-5.3	Ppp2r2a	protein phosphatase 2 (formerly 2A), regulatory subunit B (PR 52), alpha isoform
1452919_a_at	-5.4	Card6	caspase recruitment domain family, member 6
1433702_at	-5.4	Adam15	a disintegrin and metalloproteinase domain 15 (metargidin)
1454893_at	-5.4	Gigyf2	GRB10 interacting GYF protein 2
1455976_x_at	-5.4	Rnf145	ring finger protein 145
1451115_at	-5.4	Mafg	v-maf musculoaponeurotic fibrosarcoma oncogene family, protein G (avian)
1452143_at	-5.5	Pik3r5	phosphoinositide-3-kinase, regulatory subunit 5, p101
1429089_s_at	-5.5	Ppig	peptidyl-prolyl isomerase G (cyclophilin G)
1449254_at	-5.5	Zcchc24	zinc finger, CCHC domain containing 24
1460173_at	-5.5	Galnt4	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 4
1426690_a_at	-5.5	Gcc2	GRIP and coiled-coil domain containing 2
1435917_at	-5.6	Lipa	lysosomal acid lipase A
1416368_at	-5.6	Cat	catalase
1420046_s_at	-5.6	Asb10	ankyrin repeat and SOCS box-containing 10
1452040_a_at	-5.6	Plekha7	pleckstrin homology domain containing, family A member 7
1428432_at	-5.6	Esf1	ESF1, nucleolar pre-rRNA processing protein, homolog (S. cerevisiae)
1452908_at	-5.6	Nfix	nuclear factor I/X
1450982_at	-5.6	Tmem164	CDNA clone IMAGE:6815971
1438627_x_at	-5.7	Hsd17b4	hydroxysteroid (17-beta) dehydrogenase 4
1435785_at	-5.7	Slc7a2	solute carrier family 7 (cationic amino acid transporter, y+ system), member 2
1418467_at	-5.7	Klk1b5	kallikrein 1-related peptidase b5
1436771_x_at	-5.7	Cdca3	cell division cycle associated 3
1422502_at	-5.7	Pgd	phosphogluconate dehydrogenase
1415865_s_at	-5.7	Zfand2a	zinc finger, AN1-type domain 2A
1423282_at	-5.7	Pttg1	pituitary tumor-transforming gene 1
1450920_at	-5.8	Rgmb	RGM domain family, member B
1460241_a_at	-5.8	Ppargc1a	peroxisome proliferative activated receptor, gamma, coactivator 1 alpha
1421840_at	-5.8	Inpp5e	inositol polyphosphate-5-phosphatase E
1423712_a_at	-5.8	Anxa13	annexin A13
1460259_s_at	-5.9	Marcks	myristoylated alanine rich protein kinase C substrate
1448704_s_at	-5.9	Plk2	polo-like kinase 2 (Drosophila)
1423394_at	-5.9	Ehd2	EH-domain containing 2
1438164_x_at	-6.0	Tmem62	transmembrane protein 62
1424829_at	-6.0	Dnajc10 /// LOC100047007	DnaJ (Hsp40) homolog, subfamily C, member 10 /// similar to DnaJ (Hsp40) homolog, subfamily C, member 10
1416044_at	-6.0	Nnt	nicotinamide nucleotide transhydrogenase
1434270_at	-6.0	Hn1	hematological and neurological expressed sequence 1
1426245_s_at	-6.0	Atxn11	ataxin 7-like 1
1449056_at	-6.0	Arl8b	ADP-ribosylation factor-like 8B
1416256_a_at	-6.0	Ctns	cystinosis, nephropathic
1448215_a_at	-6.1	Ankrd1	ankyrin repeat domain 1 (cardiac muscle)
1417460_at	-6.1	Clca1	chloride channel calcium activated 1
1424130_a_at	-6.1	Nrp2 /// Pard3b	neuropilin 2 /// par-3 partitioning defective 3 homolog B (C. elegans)
1418157_at	-6.1	Ggta1	glycoprotein galactosyltransferase alpha 1, 3
1418533_s_at	-6.2	Serpine1	serine (or cysteine) peptidase inhibitor, clade E, member 1
1438200_at	-6.2	Lasp1	LIM and SH3 protein 1
1448292_at	-6.2	Myst4	MYST histone acetyltransferase monocytic leukemia 4
1453634_a_at	-6.2	Eea1	early endosome antigen 1
1452244_at	-6.3	Ppig	peptidyl-prolyl isomerase G (cyclophilin G)
1448533_at	-6.3	Ovgp1	oviductal glycoprotein 1
1451126_at	-6.3	Pctk2	PCTAIRE-motif protein kinase 2
1451413_at	-6.4	Atp13a3	ATPase type 13A3
1416206_at	-6.4	Atp5j2	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit f, isoform 2
1415984_at	-6.5	Klf10	Kruppel-like factor 10
1423706_a_at	-6.5	Rab13	RAB13, member RAS oncogene family
1427347_s_at	-6.5	Rps21	ribosomal protein S21
1416536_at	-6.6	Tcf4	transcription factor 4
1416203_at	-6.6	Ets2	E26 avian leukemia oncogene 2, 3' domain
1426369_at	-6.6	Ttf2	transcription termination factor, RNA polymerase II
1453055_at	-6.6	9630058J23Rik	RIKEN cDNA 9630058J23 gene
1448956_at	-6.6	Tubb2a	tubulin, beta 2a
1442340_x_at	-6.7	Siae	sialic acid acetyltransferase
1436991_x_at	-6.7	Erdr1	erythroid differentiation regulator 1
1416200_at	-6.7	Tmem19	transmembrane protein 19
1428707_at	-6.8	Irgq	immunity-related GTPase family, Q
1428708_x_at	-6.8	Fhod1	formin homology 2 domain containing 1
1457823_at	-6.8	2310051F07Rik	RIKEN cDNA 2310051F07 gene
		OTTMUSG00000016246 ///	
1415818_at	-6.8	Rps29	predicted gene, OTTMUSG00000016246 /// ribosomal protein S29
1435864_a_at	-6.9	Tnfai3	tumor necrosis factor, alpha-induced protein 3
1436747_at	-7.0	Abca3	ATP-binding cassette, sub-family A (ABC1), member 3
1433825_at	-7.1	Cdc20	cell division cycle 20 homolog (S. cerevisiae)
1448354_at	-7.1	Lpcat1	lysophosphatidylcholine acyltransferase 1
1436902_x_at	-7.1	Dnajc10 /// LOC100047007	DnaJ (Hsp40) homolog, subfamily C, member 10 /// similar to DnaJ (Hsp40) homolog, subfamily C, member 10
1460184_at	-7.1	Gclc	Glutamate-cysteine ligase, catalytic subunit, mRNA (cDNA clone MGC:30487 IMAGE:4195425)
1423484_at	-7.1	Acaa1a /// Acaa1b	acetyl-Coenzyme A acyltransferase 1A /// acetyl-Coenzyme A acyltransferase 1B
1415995_at	-7.2	Tmem109	transmembrane protein 109
1416868_at	-7.2	Slc7a3	solute carrier family 7 (cationic amino acid transporter, y+ system), member 3

1434993_at	-7.2	Atpif1	ATPase inhibitory factor 1
1436944_x_at	-7.2	Mxra8	matrix-remodelling associated 8
1415770_at	-7.3	Anxa6	annexin A6
1456057_x_at	-7.3	6820431F20Rik	RIKEN cDNA 6820431F20 gene
1433991_x_at	-7.3	Cyr61	cysteine rich protein 61
1418840_at	-7.4	4833420G17Rik	RIKEN cDNA 4833420G17 gene
1436029_at	-7.4	Got1	glutamate oxaloacetate transaminase 1, soluble
1429390_at	-7.5	Mdh1	malate dehydrogenase 1, NAD (soluble)
1420623_x_at	-7.5	Clstn1	calyntenin 1
1450966_at	-7.6	Slc44a1	solute carrier family 44, member 1
1428795_at	-7.6	Nexn	nexilin
1437008_x_at	-7.6	1200016E24Rik	RIKEN cDNA 1200016E24 gene
1417083_at	-7.6	Elovf6	ELOVL family member 6, elongation of long chain fatty acids (yeast)
1417056_at	-7.7	Fam132a	family with sequence similarity 132, member A
1415812_at	-7.7	Scd2	stearoyl-Coenzyme A desaturase 2
1437171_x_at	-7.8	2010300C02Rik	RIKEN cDNA 2010300C02 gene
1438115_a_at	-7.8	Pip5k1a	phosphatidylinositol-4-phosphate 5-kinase, type 1 alpha
1456735_x_at	-7.9	Igsf3	immunoglobulin superfamily, member 3
1454671_at	-7.9	Clic4	chloride intracellular channel 4 (mitochondrial)
1428588_a_at	-8.0	Baz2b	bromodomain adjacent to zinc finger domain, 2B
1420622_a_at	-8.1	Psen1	presenilin 1
1433751_at	-8.1	4933439C20Rik	RIKEN cDNA 4933439C20 gene
1428074_at	-8.2	Rbms2	RNA binding motif, single stranded interacting protein 2
1423642_at	-8.2	Eef1a1	eukaryotic translation elongation factor 1 alpha 1
1415822_at	-8.2	Stmn1	stathmin 1
1441137_at	-8.3	Kdelr1	KDEL (Lys-Asp-Glu-Leu) endoplasmic reticulum protein retention receptor 1
1419292_at	-8.4	Acox2	acyl-Coenzyme A oxidase 2, branched chain
1422432_at	-8.5	Rnf26	ring finger protein 26
1453304_s_at	-8.6	Khdrbs1	KH domain containing, RNA binding, signal transduction associated 1
1455719_at	-8.6	Xdh	xanthine dehydrogenase
		100041163 /// 100042634 ///	
		EG385336 /// EG664936 ///	
		EG666548 ///	
		ENSMUSG00000063556 ///	predicted gene, 100041163 /// predicted gene, 100042634 /// predicted gene, EG385336 /// predicted gene,
		ENSMUSG00000071532 ///	EG664936 /// predicted gene, EG666548 /// predicted gene, ENSMUSG00000063556 /// predicted gene,
		LOC100042058 ///	ENSMUSG00000071532 /// similar to ribosomal protein L23a /// similar to ribosomal protein L23a /// ribosomal
1433465_a_at	-8.6	LOC100046821 /// Rpl23a	protein L23a
1434053_x_at	-8.6	Sulf2	sulfatase 2
1451643_a_at	-8.6	Mga	MAX gene associated
1452861_at	-8.7	Dlc1	deleted in liver cancer 1
1429246_a_at	-8.7	Pgd	phosphogluconate dehydrogenase
1423924_s_at	-8.8	Mapre2	microtubule-associated protein, RP/EB family, member 2
1456393_at	-8.8	Rnpep1	arginyl aminopeptidase (aminopeptidase B)-like 1
1459823_at	-9.0	A230067G21Rik	RIKEN cDNA A230067G21 gene
1426499_at	-9.2	Ptms	parathyromosin
1455642_a_at	-9.3	Slc25a30	solute carrier family 25, member 30
1437760_at	-9.8	Prps2	phosphoribosyl pyrophosphate synthetase 2
1423771_at	-10.0	Wsb1	WD repeat and SOCS box-containing 1
1435972_at	-10.0	Crot	carnitine O-octanoyltransferase
1438116_x_at	-10.0	Frat2	frequently rearranged in advanced T-cell lymphomas 2
1416066_at	-10.0	Txn1	thioredoxin 1
1450062_a_at	-10.1	6820431F20Rik	RIKEN cDNA 6820431F20 gene
1438195_at	-10.5	Prr8	proline rich 8
1456312_x_at	-10.5	Dnajc1	DnaJ (Hsp40) homolog, subfamily C, member 1
1424451_at	-10.5	Rbm39	RNA binding motif protein 39
1434642_at	-10.6	Ube4b	ubiquitination factor E4B, UFD2 homolog (S. cerevisiae)
1449147_at	-10.7	1600027N09Rik	RIKEN cDNA 1600027N09 gene
1455972_x_at	-11.2	Tm7sf3	transmembrane 7 superfamily member 3
1417220_at	-12.3	Ifitm2	interferon induced transmembrane protein 2
1443849_x_at	-12.8	Paqr7	progesterone and adipoQ receptor family member VII
1417732_at	-13.0	Aifm1	apoptosis-inducing factor, mitochondrion-associated 1
1425789_s_at	-13.5	Acsl5	acyl-CoA synthetase long-chain family member 5
1436528_at	-18.5	Zdhhc20	zinc finger, DHHC domain containing 20
1455940_x_at	-19.9	Cubn	cubilin (intrinsic factor-cobalamin receptor)
1416326_at	-70.6	Nsmaf	neutral sphingomyelinase (N-SMase) activation associated factor

Table S4. ChAG-associated signature response of mGEP cells: 695 transcripts that are differentially expressed upon infection with all 5 ChAG strains but not with the strain associated with normal gastric histology, or with heat-killed bacteria (fdr threshold 0.005).

Moe430_2 GeneChip probeset	fold-change	gene symbol	gene description
1419149_at	24.3	Serpine1	serine (or cysteine) peptidase inhibitor, clade E, member 1
1417256_at	19.2	Mmp13	matrix metalloproteinase 13
1457644_s_at	19.1	Cxcl1	chemokine (C-X-C motif) ligand 1
1420197_at	16.1	Gadd45b	Growth arrest and DNA-damage-inducible 45 beta, mRNA (cDNA clone MGC:36156 IMAGE:5355150)
1427381_at	16.1	Irg1	immunoresponsive gene 1
		Casp4 ///	
1449591_at	14.4	LOC100044206	caspase 4, apoptosis-related cysteine peptidase /// hypothetical protein LOC100044206
1418536_at	13.4	H2-Q7	histocompatibility 2, Q region locus 7
1425412_at	11.3	Nlrp3	NLR family, pyrin domain containing 3
1423413_at	10.7	Ndrp1	N-myc downstream regulated gene 1
1418829_a_at	9.8	Eno2	enolase 2, gamma neuronal
1419675_at	9.6	Ngf	nerve growth factor
1418936_at	9.4	Maff	v-maf musculoaponeurotic fibrosarcoma oncogene family, protein F (avian)
1433453_a_at	9.1	Abtb2	ankyrin repeat and BTB (POZ) domain containing 2
1448485_at	8.8	Ggt1	gamma-glutamyltransferase 1
1448610_a_at	8.3	Sod2	superoxide dismutase 2, mitochondrial
1447612_x_at	8.1	Jmjd3	jumonji domain containing 3
1418188_a_at	8.0	Malat1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
1417813_at	7.8	Ikbke	inhibitor of kappaB kinase epsilon
1421207_at	7.7	Lif	leukemia inhibitory factor
1456014_s_at	7.5	Fermt3	fermitin family homolog 3 (Drosophila)
1438855_x_at	7.4	Tnfrsf2	tumor necrosis factor, alpha-induced protein 2
1458802_at	7.4	Hivep3	human immunodeficiency virus type I enhancer binding protein 3
1423904_a_at	6.8	Pvr	poliovirus receptor
1438157_s_at	6.8	Nfkbia	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
1422053_at	6.6	Inhba	inhibin beta-A
1418105_at	6.4	Stmn4	stathmin-like 4
1439787_at	6.4	P2rx7	purinergic receptor P2X, ligand-gated ion channel, 7
1454976_at	6.3	Sod2	superoxide dismutase 2, mitochondrial
1420515_a_at	5.8	Pglyrp2	peptidoglycan recognition protein 2
1420330_at	5.8	Clec4e	C-type lectin domain family 4, member e
1419853_a_at	5.7	P2rx7	purinergic receptor P2X, ligand-gated ion channel, 7
1420450_at	5.6	Mmp10	matrix metalloproteinase 10
1418133_at	5.6	Bcl3	B-cell leukemia/lymphoma 3
1460602_at	5.5	Dlc1	deleted in liver cancer 1
		Hrh1 ///	
1438494_at	5.4	LOC100041871	histamine receptor H1 /// similar to histamine receptor H1
		Atp13a4 ///	
1438707_at	5.4	LOC637970	ATPase type 13A4 /// similar to type V P-type ATPase isoform 4
1451160_s_at	5.4	Pvr	poliovirus receptor
1422748_at	5.4	Zeb2	zinc finger E-box binding homeobox 2
1436173_at	5.2	Dlc1	deleted in liver cancer 1
1435540_at	5.2	Irgq	immunity-related GTPase family, Q
1435108_at	4.9	Arhgap22	Rho GTPase activating protein 22
1420382_at	4.9	Apob48r	apolipoprotein B48 receptor
1424959_at	4.9	Anxa13	annexin A13
1434350_at	4.8	Axud1	AXIN1 up-regulated 1
1460336_at	4.8	Ppargc1a	peroxisome proliferative activated receptor, gamma, coactivator 1 alpha
1432059_x_at	4.7	5031425E22Rik	RIKEN cDNA 5031425E22 gene
1440346_at	4.7	Jmjd3	Jumonji domain containing 3, mRNA (cDNA clone IMAGE:1378940)
1447870_x_at	4.6	1110002E22Rik	RIKEN cDNA 1110002E22 gene
1428909_at	4.6	A130040M12Rik	RIKEN cDNA A130040M12 gene
1443883_at	4.5	Sys1	SYS1 Golgi-localized integral membrane protein homolog (S. cerevisiae)
1437247_at	4.5	Fosl2 /// LOC634417	fos-like antigen 2 /// similar to fos-like antigen 2
1426464_at	4.5	Nr1d1	nuclear receptor subfamily 1, group D, member 1
1455029_at	4.4	Kif21a	kinesin family member 21A
		Fbxl10 ///	
		OTTMUSG00000006	
1459861_s_at	4.4	609	F-box and leucine-rich repeat protein 10 /// predicted gene, OTTMUSG00000006609
1424408_at	4.4	Lims2	LIM and senescent cell antigen like domains 2
		1200015M12Rik ///	
		1200016E24Rik ///	
		A130040M12Rik ///	
1435137_s_at	4.3	E430024C06Rik	RIKEN cDNA 1200015M12 gene /// RIKEN cDNA 1200016E24 gene /// RIKEN cDNA A130040M12 gene /// RIKEN cDNA E430024C06 gene
1445843_at	4.2	Chd2	chromodomain helicase DNA binding protein 2
1421756_a_at	4.2	Gpr19	G protein-coupled receptor 19
1449851_at	4.2	Per1	period homolog 1 (Drosophila)
1454865_at	4.2	Slc9a8	solute carrier family 9 (sodium/hydrogen exchanger), member 8
1422028_a_at	4.2	Ets1	E26 avian leukemia oncogene 1, 5' domain

1426526_s_at	4.1	Ovgp1	oviductal glycoprotein 1
1449702_at	4.1	Zfand2a	zinc finger, AN1-type domain 2A
1438796_at	4.1	Nr4a3	nuclear receptor subfamily 4, group A, member 3
1428691_at	4.1	Chd2	chromodomain helicase DNA binding protein 2
1418714_at	4.1	Dusp8	dual specificity phosphatase 8
1429588_at	4.1	2810474O19Rik	RIKEN cDNA 2810474O19 gene
1420591_at	4.1	Gpr84	G protein-coupled receptor 84
1415941_s_at	4.0	Zfand2a	zinc finger, AN1-type domain 2A
1434054_at	3.9	Mafig	v-maf musculoaponeurotic fibrosarcoma oncogene family, protein G (avian)
1435458_at	3.9	Pim1	proviral integration site 1
1427160_at	3.9	Pcf11	cleavage and polyadenylation factor subunit homolog (S. cerevisiae)
1437100_x_at	3.9	Pim3	proviral integration site 3
1450430_at	3.9	Mrc1	mannose receptor, C type 1
1450414_at	3.9	Pdgfb	platelet derived growth factor, B polypeptide
1448026_at	3.9	Chd7	chromodomain helicase DNA binding protein 7
1453228_at	3.8	Stx11	syntaxin 11
1422473_at	3.7	Pde4b	phosphodiesterase 4B, cAMP specific
1435470_at	3.6	LOC547150	similar to p47 protein
1454102_at	3.6	5031425E22Rik	RIKEN cDNA 5031425E22 gene
1452397_at	3.6	2810474O19Rik	RIKEN cDNA 2810474O19 gene
1453181_x_at	3.6	Plscr1	phospholipid scramblase 1
1455266_at	3.6	Kif5c	kinesin family member 5C
1417612_at	3.6	Ier5	immediate early response 5
1455166_at	3.5	Arl5b	ADP-ribosylation factor-like 5B
1436094_at	3.5	Vgf	VEGF nerve growth factor inducible
1434774_at	3.5	Rhbdf2	rhuboid 5 homolog 2 (Drosophila)
1419029_at	3.5	Ero1l	ERO1-like (S. cerevisiae)
1422474_at	3.5	Pde4b	phosphodiesterase 4B, cAMP specific
1441737_s_at	3.5	Rassf1	Ras association (RalGDS/AF-6) domain family member 1
1452214_at	3.5	Skil	SKI-like
1416600_a_at	3.5	Rcan1	regulator of calcineurin 1
1437111_at	3.4	Zc3h12c	zinc finger CCCH type containing 12C
1425020_at	3.4	EG621629 /// Ubxn2a	predicted gene, EG621629 /// UBX domain protein 2A
1425319_s_at	3.4	Snmp48	small nuclear ribonucleoprotein 48 (U11/U12)
1416224_at	3.4	Zbtb17	zinc finger and BTB domain containing 17
1449168_a_at	3.4	Akap2 /// Palm2 ///	A kinase (PRKA) anchor protein 2 /// paralemmin 2 /// Palm2-Akap2 protein
1421031_a_at	3.4	2310016C08Rik	RIKEN cDNA 2310016C08 gene
1425536_at	3.4	Stx3	syntaxin 3
1426726_at	3.4	LOC677319 ///	
1448596_at	3.4	Ppp1r10	similar to protein phosphatase 1, regulatory subunit 10 /// protein phosphatase 1, regulatory subunit 10
1418808_at	3.4	Slc6a8	solute carrier family 6 (neurotransmitter transporter, creatine), member 8
1419766_at	3.4	Rdh5	retinol dehydrogenase 5
1420618_at	3.4	Sik1	salt inducible kinase 1
1427364_a_at	3.3	Cpeb4	cytoplasmic polyadenylation element binding protein 4
1427143_at	3.3	Odc1	ornithine decarboxylase, structural 1
1447923_at	3.3	Jarid1b	jumonji, AT rich interactive domain 1B (Rbp2 like)
1426700_a_at	3.3	1810026B05Rik	PREDICTED: Mus musculus RIKEN cDNA 1810026B05 gene, transcript variant 2 (1810026B05Rik), mRNA
1439488_at	3.2	Usp52	ubiquitin specific peptidase 52
1427005_at	3.2	Dot1l	DOT1-like, histone H3 methyltransferase (S. cerevisiae)
1434405_at	3.2	Plk2	polo-like kinase 2 (Drosophila)
1418189_s_at	3.2	Fnip1	folliculin interacting protein 1
1418203_at	3.2	Malat1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
1421365_at	3.2	Pmaip1	phorbol-12-myristate-13-acetate-induced protein 1
1449164_at	3.1	Fst	folliculin
1447685_x_at	3.1	Cd68	CD68 antigen
1418835_at	3.1	Ets2	E26 avian leukemia oncogene 2, 3' domain
1427988_s_at	3.1	Phlda1	pleckstrin homology-like domain, family A, member 1
1423173_at	3.1	Safb2	scaffold attachment factor B2
1433963_a_at	3.1	Napb	N-ethylmaleimide sensitive fusion protein attachment protein beta
1418422_at	3.1	Fermt3	fermitin family homolog 3 (Drosophila)
1451123_at	3.0	Serpib9g	serine (or cysteine) peptidase inhibitor, clade B, member 9g
1435055_a_at	3.0	C330016O10Rik	RIKEN cDNA C330016O10 gene
1419203_at	3.0	EG545878 /// Tom1	predicted gene, EG545878 /// target of myb1 homolog (chicken)
1419427_at	3.0	Gtf3a	gene trap locus F3a
1428982_at	3.0	Csf3	colony stimulating factor 3 (granulocyte)
1456699_s_at	3.0	Atad2b	ATPase family, AAA domain containing 2B
1441107_at	3.0	Ythdc1	YTH domain containing 1
1424384_a_at	3.0	Dmrt2	doublesex and mab-3 related transcription factor like family A2
1424861_at	2.9	Znrf1	zinc and ring finger 1
1430353_at	2.9	D930016D06Rik	RIKEN cDNA D930016D06 gene
1457268_at	2.9	Glis3	GLIS family zinc finger 3
1452406_x_at	2.9	Dot1l	DOT1-like, histone H3 methyltransferase (S. cerevisiae)
1427410_at	2.9	Erdr1	erythroid differentiation regulator 1
	2.9	Dleu2	deleted in lymphocytic leukemia, 2

1434184_s_at	2.9	Map4k4	mitogen-activated protein kinase kinase kinase kinase 4
1422931_at	2.9	Fosl2	fos-like antigen 2
1449603_at	2.9	AI594671	expressed sequence AI594671
1425241_a_at	2.9	Wsb1	WD repeat and SOCS box-containing 1
1448239_at	2.9	Hmox1	heme oxygenase (decycling) 1
1439221_s_at	2.9	Cd40	CD40 antigen
1427521_a_at	2.9	9930023K05Rik	RIKEN cDNA 9930023K05 gene
1435402_at	2.8	Gramd1b	GRAM domain containing 1B
1454929_s_at	2.8	Safb	scaffold attachment factor B
1453285_at	2.8	Tmem88	transmembrane protein 88
1427047_at	2.8	Nup188	nucleoporin 188
1438676_at	2.8	Mpa2l	macrophage activation 2 like
1429262_at	2.8	Rassf6	Ras association (RalGDS/AF-6) domain family member 6
1449173_at	2.8	Mpp2	membrane protein, palmitoylated 2 (MAGUK p55 subfamily member 2)
1436549_a_at	2.8	Hnrnpa1	heterogeneous nuclear ribonucleoprotein A1
1434830_at	2.8	Mxd1	MAX dimerization protein 1
		Cntf /// Zfp91 ///	ciliary neurotrophic factor /// zinc finger protein 91 /// zinc finger protein 91, ciliary neurotrophic factor
1422033_a_at	2.8	Zfp91-cntf	transcription unit
1453294_at	2.8	1700012B15Rik	RIKEN cDNA 1700012B15 gene
1435597_at	2.8	Atad5	ATPase family, AAA domain containing 5
1422864_at	2.7	Runx1	runt related transcription factor 1
1440789_at	2.7	Neo1	neogenin
1449234_at	2.7	Car15	carbonic anhydrase 15
1432103_a_at	2.7	Sh3gl3	SH3-domain GRB2-like 3
1421499_a_at	2.7	Ptpn14	protein tyrosine phosphatase, non-receptor type 14
1439892_at	2.7	Brsk1	BR serine/threonine kinase 1
1418540_a_at	2.7	Ptpre	protein tyrosine phosphatase, receptor type, E
1455046_a_at	2.7	Pogz	pogo transposable element with ZNF domain
1448263_a_at	2.7	Cndp2	CNDP dipeptidase 2 (metallopeptidase M20 family)
1453101_at	2.7	Klhl25	kelch-like 25 (Drosophila)
1434726_at	2.7	Tmem146	transmembrane protein 146
1427283_at	2.6	Mll1	myeloid/lymphoid or mixed-lineage leukemia 1
1432001_at	2.6	Zmynd17	zinc finger, MYND domain containing 17
1429556_at	2.6	2610024B07Rik	RIKEN cDNA 2610024B07 gene
		EG627245 ///	
		EG666231 ///	
		EG668343 ///	predicted gene, EG627245 /// predicted gene, EG666231 /// predicted gene, EG668343 /// similar to
1438761_a_at	2.6	LOC677259 /// Odc1	Ornithine decarboxylase (ODC) /// ornithine decarboxylase, structural 1
1454655_at	2.6	Dgkd	diacylglycerol kinase, delta
1418322_at	2.6	Crem	cAMP responsive element modulator
1427128_at	2.6	Ptpn23	protein tyrosine phosphatase, non-receptor type 23
1435062_at	2.6	1500001A10Rik	RIKEN cDNA 1500001A10 gene
1449473_s_at	2.6	Cd40	CD40 antigen
1424892_at	2.6	Zkscan5	zinc finger with KRAB and SCAN domains 5
1419241_a_at	2.6	Aire	autoimmune regulator (autoimmune polyendocrinopathy candidiasis ectodermal dystrophy)
1421045_at	2.5	Mrc2	mannose receptor, C type 2
1460556_at	2.5	Micall1	microtubule associated monooxygenase, calponin and LIM domain containing -like 1
1434687_at	2.5	C730026J16	hypothetical protein C730026J16
1418872_at	2.5	Abcb1b	ATP-binding cassette, sub-family B (MDR/TAP), member 1B
1435091_at	2.5	Zfp568	zinc finger protein 568
1426725_s_at	2.5	Ets1	E26 avian leukemia oncogene 1, 5' domain
1426528_at	2.5	Nrp2 /// Pard3b	neuropilin 2 /// par-3 partitioning defective 3 homolog B (C. elegans)
1435249_at	2.4	Btaf1	BTAf1 RNA polymerase II, B-TFIIID transcription factor-associated, (Mot1 homolog, S. cerevisiae)
1451485_at	2.4	3300001P08Rik	RIKEN cDNA 3300001P08 gene
1424393_s_at	2.4	Adhfe1	alcohol dehydrogenase, iron containing, 1
1451496_at	2.4	Mtss1	metastasis suppressor 1
1426806_at	2.4	Obfc2a	oligonucleotide/oligosaccharide-binding fold containing 2A
		Centb1 ///	
1434873_a_at	2.4	LOC100045877	centaurin, beta 1 /// similar to Centaurin, beta 1
1438684_at	2.4	Nuak1	NUAK family, SNF1-like kinase, 1
1416225_at	2.4	Adh1	alcohol dehydrogenase 1 (class I)
1421446_at	2.4	Prkcc	protein kinase C, gamma
1455104_at	2.3	Mxd1	MAX dimerization protein 1
1449217_at	2.3	Casp8ap2	caspase 8 associated protein 2
1454923_at	2.3	Iws1	IWS1 homolog (S. cerevisiae)
1435341_at	2.3	Ppig	peptidyl-prolyl isomerase G (cyclophilin G)
1420361_at	2.3	Slc11a1	solute carrier family 11 (proton-coupled divalent metal ion transporters), member 1
1434746_at	2.3	Mga	MAX gene associated
1416274_at	2.3	Ctns	cystinosis, nephropathic
1418305_s_at	2.3	Gar1	GAR1 ribonucleoprotein homolog (yeast)
1448135_at	2.3	Atf4	activating transcription factor 4
1419380_at	2.3	Zfp423	zinc finger protein 423
1442038_at	2.3	Rbm26	RNA binding motif protein 26
1434832_at	2.3	Foxo3	forkhead box O3
1429907_at	2.3	1700094D03Rik	RIKEN cDNA 1700094D03 gene
1455241_at	2.3	BC037703	cDNA sequence BC037703
1455308_at	2.2	Ano6	anoctamin 6

1420331_at	2.2	Clec4e	C-type lectin domain family 4, member e
1438405_at	2.2	Fgf7	fibroblast growth factor 7
1426361_at	2.2	Zc3h11a	zinc finger CCCH type containing 11A
1460315_s_at	2.2	Tbk1	TANK-binding kinase 1
		LOC100048538 ///	
1440686_at	2.2	Prss27	similar to protease, serine 27 /// protease, serine 27
1429400_at	2.2	Clcn5	chloride channel 5
1417249_at	2.2	Polm	polymerase (DNA directed), mu
		LOC638050 ///	
1455187_at	2.2	Zbtb40	similar to zinc finger and BTB domain containing 40 /// zinc finger and BTB domain containing 40
1456865_x_at	2.2	Rrs1	RRS1 ribosome biogenesis regulator homolog (S. cerevisiae)
1416419_s_at	2.2	Gabarapl1	gamma-aminobutyric acid (GABA(A)) receptor-associated protein-like 1
1438967_x_at	2.2	Amhr2	anti-Mullerian hormone type 2 receptor
1452257_at	2.2	Bdh1	3-hydroxybutyrate dehydrogenase, type 1
1450711_at	2.2	Brd4	bromodomain containing 4
1434513_at	2.2	Atp13a3	ATPase type 13A3
1424632_a_at	2.2	Rev3l	REV3-like, catalytic subunit of DNA polymerase zeta RAD54 like (S. cerevisiae)
1435007_s_at	2.2	AI132487	expressed sequence AI132487
1455239_at	2.2	6330512M04Rik	RIKEN cDNA 6330512M04 gene
1434092_at	2.2	Atg9b	ATG9 autophagy related 9 homolog B (S. cerevisiae)
1432129_a_at	2.2	Prrx1	paired related homeobox 1
1453775_at	2.2	4921505C17Rik	RIKEN cDNA 4921505C17 gene
1435039_a_at	2.1	Pip5k1a	phosphatidylinositol-4-phosphate 5-kinase, type 1 alpha
1440615_at	2.1	Dusp16	dual specificity phosphatase 16
1416187_s_at	2.1	Pnrc2	proline-rich nuclear receptor coactivator 2
1455269_a_at	2.1	Coro1a	coronin, actin binding protein 1A
1435596_at	2.1	Pion	pigeon homolog (Drosophila)
1417671_at	2.1	Scly	selenocysteine lyase
1456389_at	2.1	Zeb2	zinc finger E-box binding homeobox 2
1453202_at	2.1	E330016A19Rik	RIKEN cDNA E330016A19 gene
1433523_at	2.1	D930005D10Rik	RIKEN cDNA D930005D10 gene
1427484_at	2.1	Emi5	echinoderm microtubule associated protein like 5
1454774_at	2.1	Zfp445	zinc finger protein 445
			hect (homologous to the E6-AP (UBE3A) carboxyl terminus) domain and RCC1 (CHC1)-like domain (RLD) 2
1444228_s_at	2.1	Herc2	
1437635_at	2.1	Dcbld2	discoidin, CUB and LCCL domain containing 2
1436651_at	2.1	Prdm11	PR domain containing 11
1420394_s_at	2.0	Gp49a /// Liltrb4	glycoprotein 49 A /// leukocyte immunoglobulin-like receptor, subfamily B, member 4
1437851_x_at	2.0	Rnps1	ribonucleic acid binding protein S1
1455309_at	2.0	Ano6	anoctamin 6
1455430_at	2.0	Prr8	proline rich 8
1453038_at	2.0	4930422G04Rik	RIKEN cDNA 4930422G04 gene
		Atp6v0c /// Atp6v0c-	ATPase, H+ transporting, lysosomal V0 subunit C /// ATPase, H+ transporting, lysosomal V0 subunit C,
1435732_x_at	2.0	ps2	pseudogene 2
1416072_at	2.0	Cd34	CD34 antigen
1419354_at	2.0	Klf7	Kruppel-like factor 7 (ubiquitous)
1444226_at	2.0	Foxo3	forkhead box O3
1457473_at	2.0	Chd1	chromodomain helicase DNA binding protein 1
1425125_at	2.0	Oit3	oncogene induced transcript 3
1417964_at	2.0	Ap3d1	adaptor-related protein complex 3, delta 1 subunit
1456422_at	2.0	Dennd5b	DENN/MADD domain containing 5B
1449061_a_at	2.0	Prim1	DNA primase, p49 subunit
1420296_at	2.0	Clcn5	Chloride channel 5, mRNA (cDNA clone MGC:35965 IMAGE:3989812)
		Atp6v0c /// Atp6v0c-	ATPase, H+ transporting, lysosomal V0 subunit C /// ATPase, H+ transporting, lysosomal V0 subunit C,
1438925_x_at	2.0	ps2	pseudogene 2
1448681_at	2.0	Il15ra	interleukin 15 receptor, alpha chain
1423799_at	2.0	Eif1	eukaryotic translation initiation factor 1
1421219_at	2.0	Ttl3	tubulin tyrosine ligase-like family, member 3
1422469_at	1.9	Tbk1	TANK-binding kinase 1
1455295_at	1.9	Slc38a7	solute carrier family 38, member 7
1419400_at	1.9	Mtp	microsomal triglyceride transfer protein
1455110_at	1.9	Gabpb2	GA repeat binding protein, beta 2
1440868_at	1.9	Gabpb2	GA repeat binding protein, beta 2
1443954_at	1.9	Rad18	RAD18 homolog (S. cerevisiae), mRNA (cDNA clone MGC:19000 IMAGE:4014013)
1440645_at	1.9	BB114814	expressed sequence BB114814
1448838_at	1.9	Topors	topoisomerase I binding, arginine/serine-rich
1423309_at	1.9	Tgoln1	trans-golgi network protein
1445576_at	1.9	Rsph10b2	radial spoke head 10 homolog B (Chlamydomonas)
1455549_at	1.9	Sestd1	SEC14 and spectrin domains 1
1416303_at	1.9	Litaf	LPS-induced TN factor
1417022_at	1.9	Slc7a3	solute carrier family 7 (cationic amino acid transporter, y+ system), member 3
1427285_s_at	1.9	Malat1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
1455765_a_at	1.9	Abcc8	ATP-binding cassette, sub-family C (CFTR/MRP), member 8
1436604_at	1.9	Ttl3	tubulin tyrosine ligase-like family, member 3
1457262_at	1.9	Smg1	SMG1 homolog, phosphatidylinositol 3-kinase-related kinase (C. elegans)
1433599_at	1.8	Baz1a	bromodomain adjacent to zinc finger domain 1A
1439983_a_at	1.8	Accn3	amiloride-sensitive cation channel 3

1429124_s_at	1.8	Rexo1	REX1, RNA exonuclease 1 homolog (S. cerevisiae)
1449705_x_at	1.8	Mcm3	similar to DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3) /// minichromosome maintenance deficient 3 (S. cerevisiae)
1451225_at	1.8	Ptpn11	protein tyrosine phosphatase, non-receptor type 11
1439501_at	1.8	Cbar1	calcium binding atopy-related autoantigen 1
1455096_at	1.8	Flrt2	fibronectin leucine rich transmembrane protein 2
1436885_a_at	1.8	Cherp	calcium homeostasis endoplasmic reticulum protein
1423798_a_at	1.8	Eif1	eukaryotic translation initiation factor 1
1424788_at	1.8	Kri1	KRI1 homolog (S. cerevisiae)
1443664_s_at	1.8	Cd164I2	CD164 sialomucin-like 2
1424645_at	1.8	Tnrc6c	trinucleotide repeat containing 6C
1437980_at	1.8	9130230N09Rik	RIKEN cDNA 9130230N09 gene
1437984_x_at	1.8	Bat1a	HLA-B-associated transcript 1A
1427970_at	1.8	Zfp689	zinc finger protein 689
1442992_at	1.8	130004C03	hypothetical LOC403343
1429085_at	1.8	Vezf1	vascular endothelial zinc finger 1
1436174_at	1.7	Atad2	ATPase family, AAA domain containing 2
1434005_at	1.7	Rbms1	RNA binding motif, single stranded interacting protein 1
1437646_at	1.7	LOC631806 /// Znrf3	similar to Goliath homolog precursor (Ring finger protein 130) (R-goliath) /// zinc and ring finger 3
1433944_at	1.7	Hectd2	HECT domain containing 2
1433517_at	1.7	Myeov2	myeloma overexpressed 2
1443531_at	1.7	A930005I04Rik	RIKEN cDNA A930005I04 gene, mRNA (cDNA clone MGC:151305 IMAGE:40126247)
1432356_at	1.7	1700056N10Rik	RIKEN cDNA 1700056N10 gene
1460597_at	1.7	Asx2	additional sex combs like 2 (Drosophila)
1460318_at	1.7	Csrp3	cysteine and glycine-rich protein 3
1458685_at	1.7	Garnl1	GTPase activating RANGAP domain-like 1
1446337_at	1.7	Htt	huntingtin
1434824_at	1.7	Baz1b	bromodomain adjacent to zinc finger domain, 1B
1458163_at	1.7	BC066028	cDNA sequence BC066028
1434753_at	1.7	Nfrkb	nuclear factor related to kappa B binding protein
1459765_s_at	1.7	Sf1	splicing factor 1
1455389_s_at	1.7	2310051F07Rik	RIKEN cDNA 2310051F07 gene
1459622_at	1.7	Gm22	gene model 22, (NCBI)
1441216_at	1.7	St3gal1	ST3 beta-galactoside alpha-2,3-sialyltransferase 1
1455261_at	1.7	Luc7l	Luc7 homolog (S. cerevisiae)-like
1455943_at	1.7	Zfp451	zinc finger protein 451
1450314_at	1.7	Dqx1	DEAQ RNA-dependent ATPase
1419920_s_at	1.7	Usp7	ubiquitin specific peptidase 7
1430135_at	1.7	Dnase2a	deoxyribonuclease II alpha
1455668_at	1.6	Whsc11l	Wolf-Hirschhorn syndrome candidate 1-like 1 (human)
1427411_s_at	1.6	Dleu2	deleted in lymphocytic leukemia, 2
1455148_at	1.6	Tmem130	transmembrane protein 130
1449158_at	1.6	Kcnk2	potassium channel, subfamily K, member 2
1456844_at	1.6	Camk2d	calcium/calmodulin-dependent protein kinase II, delta
1427534_at	1.6	4930535I16Rik	RIKEN cDNA 4930535I16 gene
1458087_at	1.6	Stac3	SH3 and cysteine rich domain 3
1454944_at	1.6	Hic2	hypermethylated in cancer 2
1459815_at	1.6	LOC100045751 ///	
1452614_at	1.5	Zmynd12	similar to zinc finger, MYND domain containing 12 /// zinc finger, MYND domain containing 12
1430594_at	1.5	Bcl2l15	BCL2-like 15
1439620_at	1.5	Rab11fip1	RAB11 family interacting protein 1 (class I)
1452243_at	1.5	Car13	carbonic anhydrase 13
1441409_at	1.5	Kcnj14	potassium inwardly-rectifying channel, subfamily J, member 14
1437779_at	1.5	BC030307	cDNA sequence BC030307
1437304_at	1.5	Foxh1	forkhead box H1
1433910_at	1.5	Cblb	Casitas B-lineage lymphoma b
1433450_at	1.5	Zcchc6	zinc finger, CCHC domain containing 6
1450611_at	1.5	Cdk5r1	cyclin-dependent kinase 5, regulatory subunit 1 (p35)
1460042_at	1.5	Orm3	orosomucoid 3
1455675_a_at	1.5	Slc23a3	solute carrier family 23 (nucleobase transporters), member 3
1455502_at	1.5	Tial1	Tia1 cytotoxic granule-associated RNA binding protein-like 1
1436454_x_at	1.5	Madd	MAP-kinase activating death domain
1455676_x_at	1.5	Fen1	flap structure specific endonuclease 1
1453334_at	1.5	Tial1	Tia1 cytotoxic granule-associated RNA binding protein-like 1
1446509_at	1.5	B230216N24Rik	RIKEN cDNA B230216N24 gene
1444419_at	1.4	Smox	spermium oxidase
1433933_s_at	1.4	LOC100048394 ///	
1441039_at	1.4	Prcp	hypothetical protein LOC100048394 /// prolylcarboxypeptidase (angiotensinase C)
1456052_at	1.4	Slco2b1	solute carrier organic anion transporter family, member 2b1
1454200_at	1.4	4930532J02Rik	RIKEN cDNA 4930532J02 gene
1439618_at	1.3	Cdkl3	cyclin-dependent kinase-like 3
1431180_at	1.3	Zeb2	zinc finger E-box binding homeobox 2
1448641_at	1.3	Pde10a	phosphodiesterase 10A
1428611_at	1.3	Zfp433	RIKEN cDNA 1700123A16 gene
1447997_s_at	1.2	Mbtd1	mbt domain containing 1
		Atg7	autophagy-related 7 (yeast)
		Timm8a2	translocase of inner mitochondrial membrane 8 homolog a2 (yeast)

		LOC100046668 ///	
		OTTMUSG00000022	similar to yeast ribosomal protein S28 homologue /// predicted gene, OTTMUSG00000022083 ///
1460175_at	-1.3	083 /// Rps23	ribosomal protein S23
1456497_x_at	-1.3	Rps10	ribosomal protein S10
1438723_a_at	-1.3	Rps10	ribosomal protein S10
1456308_x_at	-1.4	Trim28	tripartite motif-containing 28
		ENSMUSG000000045	
1423455_at	-1.4	799 /// Ptma	predicted gene, ENSMUSG000000045799 /// prothymosin alpha
1424000_a_at	-1.4	Rps11	ribosomal protein S11
1416054_at	-1.4	Rps5	ribosomal protein S5
1435151_a_at	-1.4	Rps3	ribosomal protein S3
1415701_x_at	-1.4	Rpl23	ribosomal protein L23
1452167_at	-1.4	2810407C02Rik	RIKEN cDNA 2810407C02 gene
1434588_x_at	-1.4	EG620313 /// Tbca	predicted gene, EG620313 /// tubulin cofactor a
1453467_s_at	-1.4	Rps15a	ribosomal protein S15a
1439443_x_at	-1.4	Tkt	transketolase
1439069_a_at	-1.4	4933439C20Rik	RIKEN cDNA 4933439C20 gene
1415979_x_at	-1.4	Rpl7	ribosomal protein L7
1455578_x_at	-1.5	Rpl41	ribosomal protein L41
1416089_at	-1.5	Rps15	ribosomal protein S15
		EG667682 ///	
		ENSMUSG000000066	predicted gene, EG667682 /// predicted gene, ENSMUSG000000066956 /// ERO1-like (S. cerevisiae) ///
1460008_x_at	-1.5	956 /// Ero1 /// Rpl31	ribosomal protein L31
		100041509 ///	
		ENSMUSG000000058	
		443 ///	
		LOC100048223 ///	
		LOC100048462 ///	
		OTTMUSG000000015	predicted gene, 100041509 /// predicted gene, ENSMUSG000000058443 /// similar to QM protein ///
1448157_s_at	-1.5	005 /// Rpl10	similar to QM protein /// predicted gene, OTTMUSG00000015005 /// ribosomal protein 10
1423429_at	-1.5	Rhox5	reproductive homeobox 5
1416300_a_at	-1.5	Slc25a3	solute carrier family 25 (mitochondrial carrier, phosphate carrier), member 3
1419441_at	-1.5	Rplp0	ribosomal protein, large, P0
1452984_at	-1.5	LOC100044842	similar to cyclin fold protein 1
1422623_x_at	-1.5	Rpl41	ribosomal protein L41
		100041163 ///	
		100041478 ///	
		ENSMUSG000000063	
		556 ///	
		ENSMUSG000000071	
		532 ///	predicted gene, 100041163 /// predicted gene, 100041478 /// predicted gene, ENSMUSG000000063556
		LOC100046821 ///	/// predicted gene, ENSMUSG000000071532 /// similar to ribosomal protein L23a /// ribosomal protein
1426660_x_at	-1.5	Rpl23a	L23a
		EG665562 ///	
		EG667682 ///	
		EG668850 ///	
		ENSMUSG000000066	
		956 /// Ero1 ///	
		LOC638399 ///	
		LOC673582 ///	predicted gene, EG665562 /// predicted gene, EG667682 /// predicted gene, EG668850 /// predicted
		LOC675018 ///	gene, ENSMUSG000000066956 /// ERO1-like (S. cerevisiae) /// similar to ribosomal protein L31 ///
		OTTMUSG000000009	similar to ribosomal protein L31 /// similar to ribosomal protein L31 /// predicted gene,
1436924_x_at	-1.5	823 /// Rpl31	OTTMUSG00000009823 /// ribosomal protein L31
1460287_at	-1.5	Timp2	tissue inhibitor of metalloproteinase 2
		LOC100039355 ///	
1416404_s_at	-1.5	Rps16	similar to Rps16 protein /// ribosomal protein S16
1448242_at	-1.5	Sec61a1	Sec61 alpha 1 subunit (S. cerevisiae)
1433822_x_at	-1.6	Anapc5	anaphase-promoting complex subunit 5
		EG665562 ///	
		EG667682 ///	
		ENSMUSG000000066	
		956 /// LOC638399 ///	predicted gene, EG665562 /// predicted gene, EG667682 /// predicted gene, ENSMUSG000000066956
		LOC673582 ///	/// similar to ribosomal protein L31 /// similar to ribosomal protein L31 /// similar to ribosomal protein
1428212_x_at	-1.6	LOC675018 /// Rpl31	L31 /// ribosomal protein L31
1416415_a_at	-1.6	H2afz	H2A histone family, member Z
1436883_at	-1.6	Mbtps2	membrane-bound transcription factor peptidase, site 2
1433645_at	-1.6	Slc44a1	solute carrier family 44, member 1
1448252_a_at	-1.6	Eef1b2	eukaryotic translation elongation factor 1 beta 2
1417451_a_at	-1.6	Ppia	peptidylprolyl isomerase A
		LOC674712 ///	
1441866_s_at	-1.6	Ptdss1	similar to phosphatidylserine synthase 1 /// phosphatidylserine synthase 1
		Dnajc10 ///	DnaJ (Hsp40) homolog, subfamily C, member 10 /// similar to DnaJ (Hsp40) homolog, subfamily C,
1426904_s_at	-1.6	LOC100047007	member 10
1448322_a_at	-1.6	Cox4i1	cytochrome c oxidase subunit IV isoform 1

1415833_x_at	-1.6	OTTMUSG00000016 246 /// Rps29	predicted gene, OTTMUSG00000016246 /// ribosomal protein S29 potassium voltage gated channel, Shab-related subfamily, member 1 /// protein kinase C and casein
1417810_a_at	-1.6	Kcnb1 /// Pacsin2 LOC100044627 ///	kinase substrate in neurons 2
1460680_a_at	-1.6	Rpl23	similar to HL23 ribosomal protein /// ribosomal protein L23
1417323_at	-1.6	Psrc1	proline/serine-rich coiled-coil 1
1435910_at	-1.6	Fads3	fatty acid desaturase 3
1420880_a_at	-1.7	Ywhab	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, beta polypeptide
1453034_at	-1.7	Zfp251	zinc finger protein 251
1436079_s_at	-1.7	Vapb	vesicle-associated membrane protein, associated protein B and C
1437389_x_at	-1.7	Khdrbs1 100041163 /// 100041478 /// ENSMUSG000000063 556 ///	KH domain containing, RNA binding, signal transduction associated 1
1426659_a_at	-1.7	LOC100046821 ///	predicted gene, 100041163 /// predicted gene, 100041478 /// predicted gene, ENSMUSG000000063556
1415821_at	-1.7	Rpl23a	/// similar to ribosomal protein L23a /// ribosomal protein L23a
1456128_at	-1.7	Nptn	neuroplastin
1448504_a_at	-1.7	Atp5g2	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit c (subunit 9), isoform 2
1453729_a_at	-1.7	Cbx3 /// LOC633016	chromobox homolog 3 (Drosophila HP1 gamma) /// similar to chromobox homolog 3
1430288_x_at	-1.7	Rpl37	ribosomal protein L37
1428152_a_at	-1.7	Rps21	ribosomal protein S21
1434731_x_at	-1.7	Rpl18a	ribosomal protein L18A
1451002_at	-1.7	Prdx1	peroxiredoxin 1
1452830_s_at	-1.7	Aco2	aconitase 2, mitochondrial
1416539_at	-1.7	Cad	carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase
1428884_at	-1.7	Siae	sialic acid acetyltransferase
		Tmem57	transmembrane protein 57
		4933439C20Rik ///	RIKEN cDNA 4933439C20 gene /// phosphatidylserine decarboxylase pseudogene ///
1426387_x_at	-1.7	LOC236604 /// Pisd	phosphatidylserine decarboxylase
1426809_at	-1.8	C430004E15Rik 100038991 /// 100043296 ///	RIKEN cDNA C430004E15 gene
1416243_a_at	-1.8	ENSMUSG000000069	predicted gene, 100038991 /// predicted gene, 100043296 /// predicted gene,
1439060_s_at	-1.8	439 /// Rpl35	ENSMUSG00000069439 /// ribosomal protein L35
1415741_at	-1.8	Wipi1	WD repeat domain, phosphoinositide interacting 1
1416996_at	-1.8	Tmem165	transmembrane protein 165
		Tbc1d8	TBC1 domain family, member 8
		EG668144 ///	
		ENSMUSG000000062	
1422475_a_at	-1.8	611 /// Rps3a 100041163 ///	predicted gene, EG668144 /// predicted gene, ENSMUSG000000062611 /// ribosomal protein S3a
		100042634 ///	
		EG385336 ///	
		EG664936 ///	
		EG666548 ///	
		ENSMUSG000000063 556 ///	
		ENSMUSG000000071 532 ///	
		LOC100042058 ///	predicted gene, 100041163 /// predicted gene, 100042634 /// predicted gene, EG385336 /// predicted
		LOC100046821 ///	gene, EG664936 /// predicted gene, EG666548 /// predicted gene, ENSMUSG000000063556 ///
1437975_a_at	-1.8	Rpl23a	predicted gene, ENSMUSG000000071532 /// similar to ribosomal protein L23a /// similar to ribosomal
1416276_a_at	-1.8	Rps4x	protein L23a /// ribosomal protein L23a
1448103_s_at	-1.8	Nono	ribosomal protein S4, X-linked
1435612_at	-1.8	Opcml	non-POU-domain-containing, octamer binding protein
1426576_at	-1.8	Sgms1	opioid binding protein/cell adhesion molecule-like
1416546_a_at	-1.8	Rpl6	sphingomyelin synthase 1
1424635_at	-1.8	Eef1a1	ribosomal protein L6
1416961_at	-1.8	Bub1b	eukaryotic translation elongation factor 1 alpha 1
1434091_at	-1.8	Faah	budding uninhibited by benzimidazoles 1 homolog, beta (S. cerevisiae)
1426680_at	-1.8	Sepr1	fatty acid amide hydrolase
1437159_at	-1.8	Glb1	selenoprotein N, 1
1436691_x_at	-1.8	Prdx1	galactosidase, beta 1
1455022_at	-1.9	Strn	peroxiredoxin 1
1417615_a_at	-1.9	Rpl11	striatin, calmodulin binding protein
1449183_at	-1.9	Comt1	ribosomal protein L11
1438159_x_at	-1.9	Ndufv2	catechol-O-methyltransferase 1
1456695_x_at	-1.9	Anapc5	NADH dehydrogenase (ubiquinone) flavoprotein 2
1416105_at	-1.9	Nnt	anaphase-promoting complex subunit 5
1437807_x_at	-1.9	Ctnna1	nicotinamide nucleotide transhydrogenase
1448449_at	-1.9	Ripk3	catenin (cadherin associated protein), alpha 1
1421870_at	-1.9	Trim44	receptor-interacting serine-threonine kinase 3
1423677_at	-1.9	Fkbp9	tripartite motif-containing 44
1435880_at	-1.9	Ankrd50	FK506 binding protein 9
			ankyrin repeat domain 50

1451516_at	-1.9	Rheb1	Ras homolog enriched in brain like 1
1426342_at	-1.9	Stt3b	STT3, subunit of the oligosaccharyltransferase complex, homolog B (S. cerevisiae)
1435178_x_at	-1.9	Anapc5	anaphase-promoting complex subunit 5
1436499_at	-1.9	Sgms1	sphingomyelin synthase 1
1424052_at	-1.9	Thap4	THAP domain containing 4
1417842_at	-1.9	Caml	calcium modulating ligand
1460387_a_at	-1.9	Siae	sialic acid acetyltransferase
1418101_a_at	-1.9	Rtn3	reticulum 3
		Gm1604A ///	
		Gm1604b ///	
		Rnaset2a ///	
1452734_at	-1.9	Rnaset2b	gene model 1604A, (NCBI) /// gene model 1604B, (NCBI) /// ribonuclease T2A /// ribonuclease T2B
1455164_at	-2.0	Cdgap	CDC42 GTPase-activating protein
1424005_at	-2.0	B230219D22Rik	RIKEN cDNA B230219D22 gene
1428600_at	-2.0	Nin	ninein
1424987_at	-2.0	5430435G22Rik	RIKEN cDNA 5430435G22 gene
1422780_at	-2.0	Pxmp4	peroxisomal membrane protein 4
1416058_s_at	-2.0	Atp5c1	ATP synthase, H+ transporting, mitochondrial F1 complex, gamma polypeptide 1
1423680_at	-2.0	Fads1	fatty acid desaturase 1
1421375_a_at	-2.0	S100a6	S100 calcium binding protein A6 (calyculin)
1456475_s_at	-2.0	Prkar2b	protein kinase, cAMP dependent regulatory, type II beta
1423030_at	-2.0	Vcp	valosin containing protein
1450686_at	-2.0	Pon2	paraoxonase 2
1423071_x_at	-2.0	6720475J19Rik	RIKEN cDNA 6720475J19 gene
1451015_at	-2.0	Tkt	transketolase
1416836_at	-2.0	Lrp10	low-density lipoprotein receptor-related protein 10
1429019_s_at	-2.0	Pon2	paraoxonase 2
1418066_at	-2.0	Cfl2	cofilin 2, muscle
1452147_at	-2.0	Sec24c	Sec24 related gene family, member C (S. cerevisiae)
1434897_a_at	-2.0	Slc25a4	solute carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 4
1455350_at	-2.0	Tmem62	transmembrane protein 62
1435074_at	-2.0	Tmem106b	transmembrane protein 106B
1433805_at	-2.0	Jak1	Janus kinase 1
1435157_at	-2.0	Hook3	hook homolog 3 (Drosophila)
1448526_at	-2.0	Kpnb1	karyopherin (importin) beta 1
1416119_at	-2.0	Txn1	thioredoxin 1
1448149_at	-2.1	Ctnna1	catenin (cadherin associated protein), alpha 1
		ENSMUSG00000050	
		347 ///	
		LOC100048142 ///	
1437185_s_at	-2.1	Tmsb10	predicted gene, ENSMUSG00000050347 /// similar to thymosin, beta 10 /// thymosin, beta 10
1422747_at	-2.1	Chek2	CHK2 checkpoint homolog (S. pombe)
1429304_at	-2.1	Ankrd10	ankyrin repeat domain 10
1428270_at	-2.1	Glt8d1	glycosyltransferase 8 domain containing 1
1415751_at	-2.1	Hp1bp3	heterochromatin protein 1, binding protein 3
1428382_at	-2.1	Smarcc2	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c, member 2
1428103_at	-2.1	Adam10	a disintegrin and metallopeptidase domain 10
1426350_at	-2.1	Mgat2	mannoside acetylglucosaminyltransferase 2
1434383_at	-2.1	Pja2	praja 2, RING-H2 motif containing
1428535_at	-2.1	9430020K01Rik	RIKEN cDNA 9430020K01 gene
1448619_at	-2.1	Dhcr7	7-dehydrocholesterol reductase
1434478_at	-2.1	Heca	headcase homolog (Drosophila)
1448474_at	-2.1	Nek7	NIMA (never in mitosis gene a)-related expressed kinase 7
1418506_a_at	-2.1	Prdx2	peroxiredoxin 2
1417028_a_at	-2.2	Trim2	tripartite motif-containing 2
1439184_s_at	-2.2	Txndc17	thioredoxin domain containing 17
		EG629732 ///	
		LOC100042180 ///	
		LOC100048094 ///	
		OTTMUSG000000000	
		623 ///	
		OTTMUSG000000016	
		616 ///	predicted gene, EG629732 /// ribosomal protein S8 pseudogene /// similar to ribosomal protein S8 ///
		OTTMUSG000000022	predicted gene, OTTMUSG00000000623 /// predicted gene, OTTMUSG00000016616 /// predicted
1436760_a_at	-2.2	847 /// Rps8	gene, OTTMUSG000000022847 /// ribosomal protein S8
1434395_at	-2.2	Man1a2	mannosidase, alpha, class 1A, member 2
1417090_at	-2.2	Rcn1	reticulocalbin 1
1433779_at	-2.2	Casc4	cancer susceptibility candidate 4
1455419_at	-2.2	D630045J12Rik	RIKEN cDNA D630045J12 gene
1427048_at	-2.2	Smo	smoothened homolog (Drosophila)
1428412_at	-2.2	Tm9sf3	transmembrane 9 superfamily member 3
1448661_at	-2.2	Plcb3	phospholipase C, beta 3
1417012_at	-2.2	Sdc2	syndecan 2
1443978_at	-2.2	Ankle1	ankyrin repeat and LEM domain containing 1
1417893_at	-2.2	Sfxn3	sideroflexin 3

		100041509 ///	
		EG234703 ///	
		EG665071 ///	
		ENSMUSG00000058	
		443 ///	
		LOC100048223 ///	
		LOC100048462 ///	predicted gene, 100041509 ///
		OTTMUSG00000015	predicted gene, EG234703 ///
1415942_at	-2.2	005 ///	predicted gene, EG665071 ///
		Rpl10	predicted gene, ENSMUSG00000058443 ///
		100042986 ///	similar to QM protein ///
		OTTMUSG00000015	similar to QM protein ///
		874 ///	predicted gene, OTTMUSG00000015874 ///
1460543_x_at	-2.2	Rpl37a	ribosomal protein L37a
1454649_at	-2.3	Srd5a1	steroid 5 alpha-reductase 1
1433908_a_at	-2.3	Cttn	cortactin
1424906_at	-2.3	Pq1c3	PQ loop repeat containing
1452155_a_at	-2.3	Ddx17	DEAD (Asp-Glu-Ala-Asp) box polypeptide 17
1435666_at	-2.3	Mast3	microtubule associated serine/threonine kinase 3
1448486_at	-2.3	Mut	methylmalonyl-Coenzyme A mutase
1418000_a_at	-2.3	Itm2b	integral membrane protein 2B
1424438_a_at	-2.3	Leptot	leptin receptor overlapping transcript
		LOC674712 ///	
1416372_at	-2.3	Ptdss1	similar to phosphatidylserine synthase 1 ///
1428875_at	-2.3	Golim4	phosphatidylserine synthase 1
1451068_s_at	-2.3	Rps25	golgi integral membrane protein 4
1451175_at	-2.3	Spcs3	ribosomal protein S25
1428853_at	-2.3	Ptch1	signal peptidase complex subunit 3 homolog (S. cerevisiae)
1425985_s_at	-2.3	Masp1	patched homolog 1
1433887_at	-2.3	Dnajc3	mannan-binding lectin serine peptidase 1
1420895_at	-2.3	Tgfr1	DnaJ (Hsp40) homolog, subfamily C, member 3
1451359_at	-2.3	Lpcat1	transforming growth factor, beta receptor I
1437290_at	-2.4	Impad1	lysophosphatidylcholine acyltransferase 1
1421824_at	-2.4	Bace1	inositol monophosphatase domain containing 1
1418483_a_at	-2.4	Ggta1	beta-site APP cleaving enzyme 1
1429425_at	-2.4	Rnf139	glycoprotein galactosyltransferase alpha 1, 3
1418238_at	-2.4	Ivd	ring finger protein 139
1432360_a_at	-2.4	Tmtc4	isovaleryl coenzyme A dehydrogenase
1423120_at	-2.4	Ide	transmembrane and tetratricopeptide repeat containing 4
1423846_x_at	-2.4	Tuba1b	insulin degrading enzyme
1416440_at	-2.4	Cd164	tubulin, alpha 1B
1416664_at	-2.4	Cdc20	CD164 antigen
1434891_at	-2.4	Ptgfrn	cell division cycle 20 homolog (S. cerevisiae)
1435737_a_at	-2.4	Nde1	prostaglandin F2 receptor negative regulator
1429896_at	-2.4	5830408B19Rik	nuclear distribution gene E homolog 1 (A nidulans)
1415707_at	-2.4	Anapc2	RIKEN cDNA 5830408B19 gene
1450431_a_at	-2.5	Nedd4	anaphase promoting complex subunit 2
1438602_s_at	-2.5	Masp1	neural precursor cell expressed, developmentally down-regulated 4
1448253_at	-2.5	Glud1	mannan-binding lectin serine peptidase 1
1454709_at	-2.5	Tmem64	glutamate dehydrogenase 1
1417404_at	-2.5	Elovl6	transmembrane protein 64
1438847_at	-2.5	Mxd3	ELOVL family member 6, elongation of long chain fatty acids (yeast)
1428624_at	-2.5	2810482107Rik	Max dimerization protein 3
1416750_at	-2.5	Sigmar1	RIKEN cDNA 2810482107 gene
1436747_at	-2.5	Fam100b	sigma non-opioid intracellular receptor 1
1448592_at	-2.5	Crtap	family with sequence similarity 100, member B
1448241_at	-2.5	Gm2a	cartilage associated protein
1415698_at	-2.5	Golm1	GM2 ganglioside activator protein
1448647_at	-2.5	Man2a1	golgi membrane protein 1
1448960_at	-2.6	Cxxc5	mannosidase 2, alpha 1
1427177_at	-2.6	Fyco1	CXXC finger 5
1438976_x_at	-2.6	Mat2a	FYVE and coiled-coil domain containing 1
1435395_s_at	-2.6	Atp5j2	methionine adenosyltransferase II, alpha
1449125_at	-2.6	Tnfrsf81	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit f, isoform 2
1448498_at	-2.6	Rps6ka4	tumor necrosis factor, alpha-induced protein 8-like 1
1429189_at	-2.6	Arsb	ribosomal protein S6 kinase, polypeptide 4
1439815_at	-2.6	Heatr5b	arylsulfatase B
1419259_at	-2.6	Rsu1	HEAT repeat containing 5B
1417420_at	-2.6	Ccnd1	Ras suppressor protein 1
1423917_a_at	-2.6	Cttn	cyclin D1
1416536_at	-2.6	Mum1	cortactin
1449303_at	-2.6	Sesn3	melanoma associated antigen (mutated) 1
1435649_at	-2.7	Nexn	Sestrin 3, mRNA (cDNA clone IMAGE:3481673)
1426015_s_at	-2.7	Asph	nexilin
1424707_at	-2.7	Tmed10	aspartate-beta-hydroxylase
1416364_at	-2.7	Hsp90ab1	transmembrane emp24-like trafficking protein 10 (yeast)
1453572_a_at	-2.7	Plp2	heat shock protein 90 alpha (cytosolic), class B member 1
1424828_a_at	-2.7	Fh1	proteolipid protein 2
			fumarate hydratase 1

1430700_a_at	-2.7	Pla2g7	phospholipase A2, group VII (platelet-activating factor acetylhydrolase, plasma)
1425506_at	-2.7	Mylk	myosin, light polypeptide kinase
1434037_s_at	-2.7	Kat2b	K(lysine) acetyltransferase 2B
1422438_at	-2.7	Ephx1	epoxide hydrolase 1, microsomal
1428647_at	-2.7	LOC676870 /// Pbx1	region containing RIKEN cDNA 2310056B04 gene; pre B-cell leukemia transcription factor 1 /// pre B-cell leukemia transcription factor 1
1434123_at	-2.7	Fut11	fucosyltransferase 11
1436824_x_at	-2.7	Rnf26	ring finger protein 26
1446618_at	-2.7	LOC432971	hypothetical gene supported by AK038224
1429739_a_at	-2.7	Patz1	POZ (BTB) and AT hook containing zinc finger 1
1435652_a_at	-2.7	Gnai2	guanine nucleotide binding protein (G protein), alpha inhibiting 2
1418318_at	-2.7	Rnf128	ring finger protein 128
1434518_at	-2.8	Phka2	phosphorylase kinase alpha 2
1460732_a_at	-2.8	Ppl	periplakin
		100042986 ///	
		OTTMUSG00000015	
1416217_a_at	-2.8	874 /// Rpl37a	predicted gene, 100042986 /// predicted gene, OTTMUSG00000015874 /// ribosomal protein L37a
1426690_a_at	-2.8	Srebf1	sterol regulatory element binding transcription factor 1
1435727_s_at	-2.8	Lima1	LIM domain and actin binding 1
1424093_x_at	-2.8	Cd151	CD151 antigen
1450862_at	-2.8	Rad54l	RAD54 like (S. cerevisiae)
1428431_at	-2.8	Zcchc24	zinc finger, CCHC domain containing 24
1428432_at	-2.8	Zcchc24	zinc finger, CCHC domain containing 24
1438055_at	-2.8	Rarres1	retinoic acid receptor responder (tazarotene induced) 1
1438200_at	-2.8	Sulf1	sulfatase 1
		4933439C20Rik ///	
		LOC236604 /// Pisd	RIKEN cDNA 4933439C20 gene /// phosphatidylserine decarboxylase pseudogene ///
1436944_x_at	-2.9	LOC236604 /// Pisd	phosphatidylserine decarboxylase
1450388_s_at	-2.9	Twsg1	twisted gastrulation homolog 1 (Drosophila)
1460409_at	-2.9	Cpt1a	carnitine palmitoyltransferase 1a, liver
1416529_at	-2.9	Emp1	epithelial membrane protein 1
1426778_at	-2.9	Dag1	dystroglycan 1
1416365_at	-2.9	Hsp90ab1	heat shock protein 90 alpha (cytosolic), class B member 1
1431375_s_at	-2.9	Parva	parvin, alpha
1454843_at	-2.9	Prps2	phosphoribosyl pyrophosphate synthetase 2
1449056_at	-2.9	E330009J07Rik	RIKEN cDNA E330009J07 gene
1438634_x_at	-2.9	Laspl	LIM and SH3 protein 1
1423667_at	-2.9	Mat2a	methionine adenosyltransferase II, alpha
1428891_at	-3.0	9130213B05Rik	RIKEN cDNA 9130213B05 gene
1417027_at	-3.0	Trim2	tripartite motif-containing 2
1453634_a_at	-3.0	Erp29	endoplasmic reticulum protein 29
1416041_at	-3.0	Sgk1	serum/glucocorticoid regulated kinase 1
1455481_at	-3.0	Ids	iduronate 2-sulfatase
1455789_x_at	-3.0	Hspa8	heat shock protein 8
1421654_a_at	-3.0	Lmna	lamin A
1449147_at	-3.1	Chst1	carbohydrate (keratan sulfate Gal-6) sulfotransferase 1
1422445_at	-3.1	Itga6	integrin alpha 6
1416000_a_at	-3.1	Prdx1	peroxiredoxin 1
1438386_x_at	-3.1	Mat2a	methionine adenosyltransferase II, alpha
1437308_s_at	-3.1	F2r	coagulation factor II (thrombin) receptor
1434642_at	-3.1	Hsd17b11	hydroxysteroid (17-beta) dehydrogenase 11
		1190002N15Rik ///	
1433582_at	-3.1	LOC100044725	RIKEN cDNA 1190002N15 gene /// hypothetical protein LOC100044725
1415855_at	-3.2	Kitl	kit ligand
1455470_x_at	-3.2	Laspl	LIM and SH3 protein 1
1450852_s_at	-3.2	F2r	coagulation factor II (thrombin) receptor
1451339_at	-3.2	Suox	sulfite oxidase
1428789_at	-3.2	Ralgps2	CDNA clone IMAGE:6828107
1434105_at	-3.2	Epm2aip1	EPM2A (laforin) interacting protein 1
1454677_at	-3.2	Timp2	tissue inhibitor of metalloproteinase 2
1423732_at	-3.2	Tram1	translocating chain-associating membrane protein 1
1422906_at	-3.2	Abcg2	ATP-binding cassette, sub-family G (WHITE), member 2
1428801_at	-3.3	Mgat3	mannoside acetylglucosaminyltransferase 3
1420836_at	-3.3	Slc25a30	solute carrier family 25, member 30
1438630_x_at	-3.4	Mat2a	methionine adenosyltransferase II, alpha
1449145_a_at	-3.4	Cav1	caveolin 1, caveolae protein
1448433_a_at	-3.4	Pcolce	procollagen C-endopeptidase enhancer protein
1456292_a_at	-3.5	Vim	vimentin
1453304_s_at	-3.5	Ly6e	lymphocyte antigen 6 complex, locus E
1416269_at	-3.5	Atp5j2	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit f, isoform 2
1448354_at	-3.5	G6pdx	glucose-6-phosphate dehydrogenase X-linked
1417056_at	-3.5	Psme1	proteasome (prosome, macropain) 28 subunit, alpha
1429089_s_at	-3.5	2900026A02Rik	RIKEN cDNA 2900026A02 gene
		LOC100046044 ///	
1418157_at	-3.5	Nr2f1	similar to COUP-TFI /// nuclear receptor subfamily 2, group F, member 1
1457446_at	-3.5	Opcml	opioid binding protein/cell adhesion molecule-like
1433576_at	-3.6	Mat2a	methionine adenosyltransferase II, alpha
1415984_at	-3.6	Acadm	acyl-Coenzyme A dehydrogenase, medium chain

1428082_at	-3.6	Acsf5	acyl-CoA synthetase long-chain family member 5
1452037_at	-3.6	Mgat2	mannoside acetylglucosaminyltransferase 2
1443832_s_at	-3.6	Sdpr	serum deprivation response
1448533_at	-3.6	Tbcb	tubulin folding cofactor B
1416868_at	-3.6	Cdkn2c	cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)
1415770_at	-3.7	Wdr6	WD repeat domain 6
1415818_at	-3.7	Anxa6	annexin A6
1423712_a_at	-3.7	Qars	glutamyl-tRNA synthetase
1433504_at	-3.7	Pygb	brain glycogen phosphorylase
1428795_at	-3.7	1110021L09Rik	RIKEN cDNA 1110021L09 gene
1433770_at	-3.7	Dpysl2	dihydropyrimidinase-like 2
1424829_at	-3.8	A830007P12Rik	RIKEN cDNA A830007P12 gene
1424157_at	-3.8	Ehd2	EH-domain containing 2
1437760_at	-3.8	Galnt12	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 12
1423790_at	-3.8	Dap	death-associated protein
1429390_at	-3.8	Acpl2	acid phosphatase-like 2
1460173_at	-3.9	Lasp1	LIM and SH3 protein 1
1416167_at	-3.9	Prdx4	peroxiredoxin 4
		1190002N15Rik ///	
1433581_at	-3.9	LOC100044725	RIKEN cDNA 1190002N15 gene /// hypothetical protein LOC100044725
1436029_at	-4.0	Bicc1	bicaudal C homolog 1 (Drosophila)
1435972_at	-4.1	Cast	calpastatin
1456735_x_at	-4.1	Acpl2	acid phosphatase-like 2
		LOC100044161 ///	hypothetical protein LOC100044161 /// sema domain, immunoglobulin domain (Ig), short basic
1420416_at	-4.1	Sema3a	domain, secreted, (semaphorin) 3A
1416256_a_at	-4.1	Tubb5	tubulin, beta 5
1416044_at	-4.1	Flii	flightless I homolog (Drosophila)
1416779_at	-4.2	Sdpr	serum deprivation response
1435785_at	-4.3	Ehd2	EH-domain containing 2
1433751_at	-4.3	Slc39a10	solute carrier family 39 (zinc transporter), member 10
1452861_at	-4.3	2010300C02Rik	RIKEN cDNA 2010300C02 gene
1424130_a_at	-4.3	Ptrf	polymerase I and transcript release factor
1450641_at	-4.4	Vim	vimentin
1450920_at	-4.5	Ccnb2	cyclin B2
1455627_at	-4.6	Col8a1	collagen, type VIII, alpha 1
1433825_at	-4.6	Ntrk3	neurotrophic tyrosine kinase, receptor, type 3
1455160_at	-4.6	2610203C20Rik	RIKEN cDNA 2610203C20 gene
1418840_at	-4.7	Pdcd4	programmed cell death 4
1426369_at	-4.8	Far1	fatty acyl CoA reductase 1
1450062_a_at	-4.8	Maged1	melanoma antigen, family D, 1
		LOC100044161 ///	hypothetical protein LOC100044161 /// sema domain, immunoglobulin domain (Ig), short basic
1449865_at	-4.8	Sema3a	domain, secreted, (semaphorin) 3A
1416967_at	-4.9	Sox2	SRY-box containing gene 2
1460184_at	-5.3	Hadh	hydroxyacyl-Coenzyme A dehydrogenase
1415822_at	-5.4	Scd2	stearoyl-Coenzyme A desaturase 2
1455940_x_at	-5.5	Wdr6	WD repeat domain 6
1455972_x_at	-5.6	Hadh	hydroxyacyl-Coenzyme A dehydrogenase
1459823_at	-5.8	Ehd2	EH-domain containing 2
1420622_a_at	-6.1	Hspa8	heat shock protein 8
1420623_x_at	-6.2	Hspa8	heat shock protein 8
1456393_at	-6.3	2310002J21Rik	RIKEN cDNA 2310002J21 gene
1423642_at	-6.6	Tubb2c	tubulin, beta 2c
1438195_at	-7.0	Gpd1l	glycerol-3-phosphate dehydrogenase 1-like
1417852_x_at	-7.1	Clca1	chloride channel calcium activated 1
1460259_s_at	-7.7	Clca1 /// Clca2	chloride channel calcium activated 1 /// chloride channel calcium activated 2
1455719_at	-7.7	Tubb5	tubulin, beta 5
1436528_at	-9.0	Kazald1	Kazal-type serine peptidase inhibitor domain 1
1425789_s_at	-11.1	Anxa8	annexin A8
1416326_at	-23.2	Crip1	cysteine-rich protein 1 (intestinal)

Table S5. Shared 'ChAG and cancer' signature mGEP response (fdr threshold 0.005).

Moe430_2 GeneChip probeset	FDR	fold-change chag	fold-change cancer	gene symbol	gene description
1419149_at	7.74E-08	24.3	10.8	Serpine1	serine (or cysteine) peptidase inhibitor, clade E, member 1
1420197_at	1.85E-05	16.1	15.5	Gadd45b Casp4 ///	Growth arrest and DNA-damage-inducible 45 beta, mRNA (cDNA clone MGC:36156 IMAGE:5355150)
1449591_at	0.001027524	14.4	15.8	LOC100044206	caspase 4, apoptosis-related cysteine peptidase /// hypothetical protein LOC100044206
1418536_at	7.21E-13	13.4	4.5	H2-Q7	histocompatibility 2, Q region locus 7
1418829_a at	0.000101116	9.8	11.8	Eno2	enolase 2, gamma neuronal
1419675_at	5.29E-05	9.6	8.1	Ngf	nerve growth factor
1433453_a at	0.000149225	9.1	6.9	Abtb2	ankyrin repeat and BTB (POZ) domain containing 2
1448485_at	2.43E-16	8.8	4.3	Ggt1	gamma-glutamyltransferase 1
1448610_a at	1.26E-05	8.3	4.7	Sod2	superoxide dismutase 2, mitochondrial
1447612_x at	2.05E-06	8.1	5.2	Jmjd3	jumonji domain containing 3
1418188_a at	0.001225019	8.0	8.7	Malat1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
1458802_at	2.86E-05	7.4	6.5	Hivep3	human immunodeficiency virus type I enhancer binding protein 3
1423904_a at	0.00138512	6.8	7.7	Pvr	poliovirus receptor
1438157_s at	0.000204561	6.8	5.1	Nfkbia	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
1418105_at	6.59E-12	6.4	3.6	Stmn4	stathmin-like 4
1439787_at	1.07E-07	6.4	8.7	P2rx7	purinergic receptor P2X, ligand-gated ion channel, 7
1420515_a at	1.51E-40	5.8	2.6	Pglyrp2	peptidoglycan recognition protein 2
1419853_a at	0.001043317	5.7	6.3	P2rx7	purinergic receptor P2X, ligand-gated ion channel, 7
1460602_at	0.000202914	5.5	5.5	Dlc1	deleted in liver cancer 1
1438707_at	2.16E-13	5.4	3.5	Atp13a4 /// LOC637970	ATPase type 13A4 /// similar to type V P-type ATPase isoform 4
1451160_s at	0.004185843	5.4	5.1	Pvr	poliovirus receptor
1436173_at	1.64E-07	5.2	4.2	Dlc1	deleted in liver cancer 1
1435540_at	2.58E-06	5.2	3.1	Irgq	immunity-related GTPase family, Q
1435108_at	0.000307925	4.9	4.0	Arhgap22	Rho GTPase activating protein 22
1424959_at	5.61E-14	4.9	2.8	Anxa13	annexin A13
1434350_at	1.85E-09	4.8	4.0	Axud1	AXIN1 up-regulated 1
1460336_at	0.003770986	4.8	5.1	Ppargc1a	peroxisome proliferative activated receptor, gamma, coactivator 1 alpha
1440346_at	0.003708743	4.7	7.8	Jmjd3	Jumonji domain containing 3, mRNA (cDNA clone IMAGE:1378940)
1447870_x at	0.000179536	4.6	8.5	1110002E22Rik	RIKEN cDNA 1110002E22 gene
1428909_at	3.66E-06	4.6	3.1	A130040M12Rik Fosl2 ///	RIKEN cDNA A130040M12 gene
1437247_at	1.98E-06	4.5	5.6	LOC634417	fos-like antigen 2 /// similar to fos-like antigen 2
1426464_at	2.34E-06	4.5	4.2	Nr1d1	nuclear receptor subfamily 1, group D, member 1
1455029_at	1.92E-08	4.4	3.6	Kif21a	kinesin family member 21A
1424408_at	5.00E-07	4.4	4.4	Lims2	LIM and senescent cell antigen like domains 2
1435137_s at	3.75E-05	4.3	3.0	1200015M12Rik /// 1200016E24Rik ///	RIKEN cDNA 1200015M12 gene /// RIKEN cDNA 1200016E24 gene /// RIKEN cDNA
1421756_a at	4.67E-26	4.2	3.3	E430024C06Rik	A130040M12 gene /// RIKEN cDNA E430024C06 gene
1426526_s at	5.29E-06	4.1	3.6	Gpr19	G protein-coupled receptor 19
1449702_at	0.000846408	4.1	3.9	Ovgp1	oviductal glycoprotein 1
1428691_at	0.000221494	4.1	4.9	Zfand2a	zinc finger, AN1-type domain 2A
1429588_at	7.03E-06	4.1	6.9	Chd2	chromodomain helicase DNA binding protein 2
1415941_s at	0.00405687	4.0	4.1	2810474O19Rik	RIKEN cDNA 2810474O19 gene
1434054_at	0.000135236	3.9	3.0	Zfand2a	zinc finger, AN1-type domain 2A
1427160_at	7.58E-10	3.9	3.5	Mafg	v-maf musculoaponeurotic fibrosarcoma oncogene family, protein G (avian)
1435470_at	4.88E-10	3.6	3.0	Pcf11	cleavage and polyadenylation factor subunit homolog (S. cerevisiae)
1452397_at	0.003174175	3.6	5.0	LOC547150	similar to p47 protein
1453181_x at	0.000607416	3.6	3.2	2810474O19Rik	RIKEN cDNA 2810474O19 gene
1417612_at	4.18E-05	3.6	2.6	Plscr1	phospholipid scramblase 1
1419029_at	0.004174168	3.5	5.1	Ier5	immediate early response 5
1441737_s at	0.000244638	3.5	4.9	Ero1l	ERO1-like (S. cerevisiae)
1452214_at	4.86E-06	3.5	4.5	Rassf1	Ras association (RalGDS/AF-6) domain family member 1
1425020_at	0.000260283	3.4	5.3	Skil	SKI-like
1426726_at	7.94E-05	3.4	2.8	EG621629 ///	EG621629 ///
1420618_at	4.96E-06	3.4	4.4	Ubxn2a	predicted gene, EG621629 /// UBX domain protein 2A
1447923_at	0.002728509	3.3	5.8	LOC677319 ///	similar to protein phosphatase 1, regulatory subunit 10 /// protein phosphatase 1, regulatory
1439488_at	2.45E-10	3.2	2.9	Ppp1r10	subunit 10
1427005_at	0.002728692	3.2	4.7	Cpeb4	cytoplasmic polyadenylation element binding protein 4
1434405_at	1.68E-06	3.2	5.9	1810026B05Rik	(1810026B05Rik), mRNA
1418189_s at	2.34E-06	3.2	2.9	Dot1l	DOT1-like, histone H3 methyltransferase (S. cerevisiae)
1447685_x at	0.004191503	3.1	3.7	Plk2	polo-like kinase 2 (Drosophila)
1418835_at	0.000965289	3.1	3.8	Fnip1	folliculin interacting protein 1
1423173_at	0.000571042	3.1	3.4	Malat1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
1418422_at	1.69E-08	3.1	2.8	Ets2	E26 avian leukemia oncogene 2, 3' domain
1419203_at	5.68E-07	3.0	3.9	Phlda1	pleckstrin homology-like domain, family A, member 1
1428982_at	8.96E-06	3.0	3.5	Napb	N-ethylmaleimide sensitive fusion protein attachment protein beta
1456699_s at	0.00086634	3.0	2.6	Serpib9g	serine (or cysteine) peptidase inhibitor, clade B, member 9g
1424861_at	0.000396513	2.9	3.1	Gtlf3a	gene trap locus F3a
1452406_x at	0.001092326	2.9	2.9	Atad2b	ATPase family, AAA domain containing 2B
1434184_s at	2.85E-06	2.9	3.9	Ythdc1	YTH domain containing 1
1425241_a at	7.85E-07	2.9	3.8	D930016D06Rik	RIKEN cDNA D930016D06 gene
1448239_at	0.001936294	2.9	3.0	Erd1r	erythroid differentiation regulator 1
1427521_a at	0.000292729	2.9	2.3	Map4k4	mitogen-activated protein kinase kinase kinase 4
1435402_at	0.002999936	2.8	2.8	Wsb1	WD repeat and SOCS box-containing 1
1429262_at	6.87E-09	2.8	3.3	Hmox1	heme oxygenase (decycling) 1
				9930023K05Rik	RIKEN cDNA 9930023K05 gene
				Gramd1b	GRAM domain containing 1B
				Rassf6	Ras association (RalGDS/AF-6) domain family member 6

1422033_a_at	9.60E-09	2.8	2.4	Cntf /// Zfp91 ///	ciliary neurotrophic factor /// zinc finger protein 91 /// zinc finger protein 91, ciliary
1453294_at	5.85E-08	2.8	2.5	Zfp91-cntf	neurotrophic factor transcription unit
1435597_at	2.32E-05	2.8	2.5	1700012B15Rik	RIKEN cDNA 1700012B15 gene
1422864_at	0.003720958	2.7	2.8	Atad5	ATPase family, AAA domain containing 5
1432103_a_at	6.30E-05	2.7	2.2	Runx1	runt related transcription factor 1
1421499_a_at	2.05E-06	2.7	2.4	Sh3ql3	SH3-domain GRB2-like 3
1418540_a_at	0.000700533	2.7	2.5	Ptpn14	protein tyrosine phosphatase, non-receptor type 14
1455046_a_at	3.24E-05	2.7	2.2	Ptpre	protein tyrosine phosphatase, receptor type, E
1448263_a_at	0.001462483	2.7	2.9	Pogz	pogo transposable element with ZNF domain
1429556_at	1.34E-07	2.6	3.5	Cndp2	CNDP dipeptidase 2 (metallopeptidase M20 family)
1454655_at	1.90E-06	2.6	2.0	2610024B07Rik	RIKEN cDNA 2610024B07 gene
1435062_at	0.000246984	2.6	2.6	Dgkd	diacylglycerol kinase, delta
1424892_at	2.52E-05	2.6	4.9	1500001A10Rik	RIKEN cDNA 1500001A10 gene
1419241_a_at	8.32E-06	2.6	2.2	Zkscan5	zinc finger with KRAB and SCAN domains 5
1434687_at	3.77E-07	2.5	2.4	Aire	autoimmune regulator (autoimmune polyendocrinopathy candidiasis ectodermal dystrophy)
1435091_at	8.65E-14	2.5	2.1	C730026J16	hypothetical protein C730026J16
1426725_s_at	5.60E-08	2.5	3.5	Zfp568	zinc finger protein 568
1426528_at	1.66E-05	2.5	2.7	Ets1	E26 avian leukemia oncogene 1, 5' domain
				Nrp2 /// Pard3b	neuropilin 2 /// par-3 partitioning defective 3 homolog B (C. elegans)
					BTAF1 RNA polymerase II, B-TFIIID transcription factor-associated, (Mot1 homolog, S. cerevisiae)
1435249_at	0.002564004	2.4	3.0	Btaf1	oligonucleotide/oligosaccharide-binding fold containing 2A
1426806_at	0.000260062	2.4	2.8	Obfc2a	NUAK family, SNF1-like kinase, 1
1438684_at	6.34E-05	2.4	2.9	Nuak1	NUAK family, SNF1-like kinase, 1
1449217_at	0.003174175	2.3	2.4	Casp8ap2	caspase 8 associated protein 2
1454923_at	2.72E-05	2.3	2.4	lws1	IWS1 homolog (S. cerevisiae)
1435341_at	0.0005797	2.3	2.7	Ppig	peptidyl-prolyl isomerase G (cyclophilin G)
1434746_at	0.003654065	2.3	3.3	Mga	MAX gene associated
1416274_at	1.53E-16	2.3	2.0	Ctns	cystinosis, nephropathic
1448135_at	0.00169772	2.3	2.8	Atf4	activating transcription factor 4
1442038_at	0.002787392	2.3	2.7	Rbm26	RNA binding motif protein 26
1429907_at	2.92E-05	2.3	2.4	1700094D03Rik	RIKEN cDNA 1700094D03 gene
1460315_s_at	9.63E-08	2.2	1.8	Tbk1	TANK-binding kinase 1
				LOC100048538 ///	
1440686_at	5.45E-05	2.2	2.9	Prss27	similar to protease, serine 27 /// protease, serine 27
1429400_at	7.74E-07	2.2	1.9	Clcn5	chloride channel 5
1456865_x_at	0.001566655	2.2	2.2	Rrs1	RRS1 ribosome biogenesis regulator homolog (S. cerevisiae)
1416419_s_at	0.002317161	2.2	2.2	Gabarap1	gamma-aminobutyric acid (GABA(A)) receptor-associated protein-like 1
1450711_at	8.06E-16	2.2	1.8	Brd4	bromodomain containing 4
1434513_at	4.71E-08	2.2	2.6	Atp13a3	ATPase type 13A3
1435039_a_at	0.000518671	2.1	2.1	Pip5k1a	phosphatidylinositol-4-phosphate 5-kinase, type 1 alpha
1416187_s_at	0.002071493	2.1	2.8	Pnrc2	proline-rich nuclear receptor coactivator 2
1417671_at	6.24E-07	2.1	1.9	Scly	selenocysteine lyase
1456389_at	0.001616801	2.1	2.8	Zeb2	zinc finger E-box binding homeobox 2
1454774_at	0.000266469	2.1	2.7	Zfp445	zinc finger protein 445
1437635_at	0.004785408	2.1	2.7	Dcbl2	discoidin, CUB and LCCL domain containing 2
1437851_x_at	0.000101116	2.0	1.8	Rnps1	ribonucleic acid binding protein S1
1455309_at	4.08E-06	2.0	1.8	Ano6	anoctamin 6
1455430_at	0.003405199	2.0	2.6	Prr8	proline rich 8
1419354_at	0.000816352	2.0	2.4	Klf7	Kruppel-like factor 7 (ubiquitous)
1457473_at	0.000124245	2.0	1.8	Chd1	chromodomain helicase DNA binding protein 1
1417964_at	3.29E-05	2.0	2.1	Ap3d1	adaptor-related protein complex 3, delta 1 subunit
1449061_a_at	0.000930108	2.0	2.9	Prim1	DNA primase, p49 subunit
1423799_at	0.000982751	2.0	2.1	Eif1	eukaryotic translation initiation factor 1
1419400_at	0.000134537	1.9	2.4	Mttf	microsomal triglyceride transfer protein
1455110_at	0.000174578	1.9	1.9	Gabpb2	GA repeat binding protein, beta 2
1440868_at	0.001455108	1.9	2.4	Gabpb2	GA repeat binding protein, beta 2
1416303_at	0.00390029	1.9	2.5	Litaf	LPS-induced TN factor
1417022_at	0.000130469	1.9	1.7	Slc7a3	solute carrier family 7 (cationic amino acid transporter, y+ system), member 3
1427285_s_at	0.000259875	1.9	1.9	Malat1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
1455765_a_at	8.40E-05	1.9	1.9	Abcc8	ATP-binding cassette, sub-family C (CFTR/MRP), member 8
1433599_at	0.00099599	1.8	2.0	Baz1a	bromodomain adjacent to zinc finger domain 1A
1451225_at	9.83E-07	1.8	2.1	Ptpn11	protein tyrosine phosphatase, non-receptor type 11
1436885_a_at	0.000513594	1.8	1.9	Cherp	calcium homeostasis endoplasmic reticulum protein
1423798_a_at	0.00029704	1.8	2.0	Eif1	eukaryotic translation initiation factor 1
1437984_x_at	2.98E-07	1.8	1.8	Bat1a	HLA-B-associated transcript 1A
1429085_at	1.08E-06	1.8	2.3	VeZF1	vascular endothelial zinc finger 1
1436174_at	0.003392178	1.7	1.8	Atad2	ATPase family, AAA domain containing 2
1434005_at	0.00395958	1.7	2.4	Rbms1	RNA binding motif, single stranded interacting protein 1
1460597_at	0.001043317	1.7	1.6	Asxl2	additional sex combs like 2 (Drosophila)
1458163_at	0.000612461	1.7	1.7	BC066028	cDNA sequence BC066028
1459765_s_at	3.77E-07	1.7	1.9	Sf1	splicing factor 1
1455389_s_at	0.001744678	1.7	1.6	2310051F07Rik	RIKEN cDNA 2310051F07 gene
1455261_at	0.002648473	1.7	1.9	Luc7l	Luc7 homolog (S. cerevisiae)-like
1419920_s_at	4.59E-07	1.7	1.4	Usp7	ubiquitin specific peptidase 7
1455148_at	0.000307667	1.6	1.7	Tmem130	transmembrane protein 130
1449158_at	0.001898025	1.6	1.6	Kcnk2	potassium channel, subfamily K, member 2
1456844_at	0.000179889	1.6	2.1	Camk2d	calcium/calmodulin-dependent protein kinase II, delta
1439620_at	0.002057438	1.5	1.9	Car13	carbonic anhydrase 13
1437304_at	0.00395958	1.5	1.8	Cblb	Casitas B-lineage lymphoma b
1436454_x_at	0.00213889	1.5	1.5	Fen1	flap structure specific endonuclease 1
1453334_at	0.000144124	1.5	1.4	B230216N24Rik	RIKEN cDNA B230216N24 gene
1431180_at	0.001727458	1.3	1.4	Zfp433	RIKEN cDNA 1700123A16 gene
1447997_s_at	0.001124082	1.2	1.2	Timm8a2	translocase of inner mitochondrial membrane 8 homolog a2 (yeast)
1456308_x_at	0.001122996	-1.4	-2.0	Trim28	tripartite motif-containing 28
				ENSMUSG0000004	
1423455_at	0.000214952	-1.4	-1.4	5799 /// Ptma	predicted gene, ENSMUSG00000045799 /// prothymosin alpha
1415701_x_at	1.14E-08	-1.4	-1.3	Rpl23	ribosomal protein L23
1434588_x_at	0.004451187	-1.4	-1.4	EG620313 /// Tbca	predicted gene, EG620313 /// tubulin cofactor a
1439443_x_at	0.004205228	-1.4	-1.9	Tkt	transketolase

1439069_a_at	0.001979211	-1.4	-1.6	4933439C20Rik	RIKEN cDNA 4933439C20 gene
1455578_x_at	3.19E-06	-1.5	-1.4	Rpl41	ribosomal protein L41
				EG667682 ///	
				ENSMUSG00000006	
				6956 /// Ero11 ///	predicted gene, EG667682 /// predicted gene, ENSMUSG0000006956 /// ERO1-like (S. cerevisiae) ///
1460008_x_at	0.000179889	-1.5	-1.5	Rpl31	ribosomal protein L31
1423429_at	0.001878537	-1.5	-1.5	Rhox5	reproductive homeobox 5
1422623_x_at	0.003367776	-1.5	-1.6	Rpl41	ribosomal protein L41
				100041163 ///	
				100041478 ///	
				ENSMUSG00000006	
				3556 ///	
				ENSMUSG00000007	
				1532 ///	predicted gene, 100041163 /// predicted gene, 100041478 /// predicted gene,
				LOC100046821 ///	ENSMUSG00000063556 /// predicted gene, ENSMUSG00000071532 /// similar to
1426660_x_at	0.000201141	-1.5	-1.5	Rpl23a	ribosomal protein L23a /// ribosomal protein L23a
				EG665562 ///	
				EG667682 ///	
				EG668850 ///	
				ENSMUSG00000006	
				6956 /// Ero11 ///	
				LOC638399 ///	
				LOC673582 ///	predicted gene, EG665562 /// predicted gene, EG667682 /// predicted gene, EG668850 ///
				LOC675018 ///	predicted gene, ENSMUSG0000006956 /// ERO1-like (S. cerevisiae) /// similar to
				OTTMUSG00000000	ribosomal protein L31 /// similar to ribosomal protein L31 /// similar to ribosomal protein L31
1436924_x_at	4.64E-05	-1.5	-1.5	9823 /// Rpl31	ribosomal protein L31
1448242_at	0.000846408	-1.5	-1.8	Sec61a1	Sec61 alpha 1 subunit (S. cerevisiae)
1433822_x_at	0.000956838	-1.6	-1.7	Anapc5	anaphase-promoting complex subunit 5
				EG665562 ///	
				EG667682 ///	
				ENSMUSG00000006	
				6956 /// LOC638399	
				/// LOC673582 ///	predicted gene, EG665562 /// predicted gene, EG667682 /// predicted gene,
1428212_x_at	2.67E-06	-1.6	-1.6	LOC675018 ///	ENSMUSG0000006956 /// similar to ribosomal protein L31 /// similar to ribosomal protein
1416415_a_at	0.003690389	-1.6	-1.6	Rpl31	L31 /// similar to ribosomal protein L31 /// ribosomal protein L31
1436883_at	0.001828599	-1.6	-2.2	H2afz	H2A histone family, member Z
1433645_at	0.000578528	-1.6	-2.6	Mbtps2	membrane-bound transcription factor peptidase, site 2
				Slc44a1	solute carrier family 44, member 1
				LOC674712 ///	
1441866_s_at	0.000608216	-1.6	-2.3	Ptdss1	similar to phosphatidyserine synthase 1 /// phosphatidyserine synthase 1
				Dnajc10 ///	DnaJ (Hsp40) homolog, subfamily C, member 10 /// similar to DnaJ (Hsp40) homolog,
1426904_s_at	0.0023896	-1.6	-1.7	LOC100047007	subfamily C, member 10
				OTTMUSG00000001	
1415833_x_at	0.004184234	-1.6	-1.8	6246 /// Rps29	predicted gene, OTTMUSG00000016246 /// ribosomal protein S29
1417810_a_at	0.002389601	-1.6	-1.6	Kcnb1 /// Pacsin2	potassium voltage gated channel, Shab-related subfamily, member 1 /// protein kinase C
				LOC100044627 ///	and casein kinase substrate in neurons 2
1460680_a_at	1.52E-15	-1.6	-1.4	Rpl23	similar to HL23 ribosomal protein /// ribosomal protein L23
1417323_at	0.000447145	-1.6	-2.7	Psrf1	proline/serine-rich coiled-coil 1
1453034_at	0.003459983	-1.7	-1.6	Zfp251	zinc finger protein 251
1437389_x_at	0.001704532	-1.7	-2.0	Khdrbs1	KH domain containing, RNA binding, signal transduction associated 1
				100041163 ///	
				100041478 ///	
				ENSMUSG00000006	
				3556 ///	
				LOC100046821 ///	predicted gene, 100041163 /// predicted gene, 100041478 /// predicted gene,
1426659_a_at	1.94E-10	-1.7	-1.5	Rpl23a	ENSMUSG00000063556 /// similar to ribosomal protein L23a /// ribosomal protein L23a
1415821_at	0.001334051	-1.7	-1.7	Nptn	neuropilin
1456128_at	0.004509574	-1.7	-1.8	Atp5g2	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit c (subunit 9), isoform 2
1453729_a_at	3.41E-08	-1.7	-1.6	Rpl37	ribosomal protein L37
1430288_x_at	1.68E-06	-1.7	-1.8	Rps21	ribosomal protein S21
1434731_x_at	1.07E-07	-1.7	-2.4	Prdx1	peroxiredoxin 1
1452830_s_at	0.000132992	-1.7	-1.8	Cad	carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase
1416539_at	9.00E-05	-1.7	-1.6	Siae	sialic acid acetyltransferase
1428884_at	0.003405199	-1.7	-2.2	Tmem57	transmembrane protein 57
				4933439C20Rik ///	RIKEN cDNA 4933439C20 gene /// phosphatidyserine decarboxylase pseudogene ///
				LOC236604 /// Pisd	phosphatidyserine decarboxylase
1426387_x_at	1.81E-05	-1.7	-2.2	Wipi1	WD repeat domain, phosphoinositide interacting 1
1439060_s_at	0.00243451	-1.8	-3.0	Tmem165	transmembrane protein 165
1415741_at	0.000993488	-1.8	-1.9	Tbc1d8	TBC1 domain family, member 8
1416996_at	0.000563732	-1.8	-1.7	100041163 ///	
				100042634 ///	
				EG385336 ///	
				EG664936 ///	
				EG666548 ///	
				ENSMUSG00000006	
				3556 ///	
				ENSMUSG00000007	
				1532 ///	predicted gene, 100041163 /// predicted gene, 100042634 /// predicted gene, EG385336 ///
				LOC100042058 ///	predicted gene, EG664936 /// predicted gene, EG666548 /// predicted gene,
				LOC100046821 ///	ENSMUSG00000063556 /// predicted gene, ENSMUSG00000071532 /// similar to
1437975_a_at	1.85E-05	-1.8	-1.6	Rpl23a	ribosomal protein L23a /// similar to ribosomal protein L23a /// ribosomal protein L23a
1448103_s_at	0.000351501	-1.8	-1.8	Nono	non-POU-domain-containing, octamer binding protein
1435612_at	1.98E-05	-1.8	-2.1	Opcml	opioid binding protein/cell adhesion molecule-like
1426576_at	0.000212531	-1.8	-1.8	Sgms1	sphingomyelin synthase 1
1424635_at	5.85E-08	-1.8	-1.5	Eef1a1	eukaryotic translation elongation factor 1 alpha 1
1416961_at	0.000700533	-1.8	-2.3	Bub1b	budding uninhibited by benzimidazoles 1 homolog, beta (S. cerevisiae)

1434091_at	0.004075222	-1.8	-2.2	Faah	fatty acid amide hydrolase
1426680_at	0.001878537	-1.8	-2.2	Sepr1	selenoprotein N, 1
1437159_at	0.000965561	-1.8	-1.8	Glb1	galactosidase, beta 1
1436691_x_at	1.07E-17	-1.8	-2.4	Prdx1	peroxiredoxin 1
1455022_at	0.002859526	-1.9	-2.5	Strn	striatin, calmodulin binding protein
1438159_x_at	0.001271644	-1.9	-2.0	Ndufv2	NADH dehydrogenase (ubiquinone) flavoprotein 2
1456695_x_at	0.000106082	-1.9	-1.9	Anapc5	anaphase-promoting complex subunit 5
1416105_at	3.80E-05	-1.9	-1.9	Nnt	nicotinamide nucleotide transhydrogenase
1437807_x_at	0.000241738	-1.9	-2.2	Ctnna1	catenin (cadherin associated protein), alpha 1
1448449_at	0.000436008	-1.9	-2.4	Ripk3	receptor-interacting serine-threonine kinase 3
1421870_at	5.54E-07	-1.9	-1.6	Trim44	tripartite motif-containing 44
1423677_at	0.000531338	-1.9	-1.9	Fkbp9	FK506 binding protein 9
1451516_at	3.11E-05	-1.9	-1.8	Rheb1	Ras homolog enriched in brain like 1
1426342_at	0.000634543	-1.9	-1.9	Stt3b	STT3, subunit of the oligosaccharyltransferase complex, homolog B (S. cerevisiae)
1435178_x_at	1.17E-05	-1.9	-2.0	Anapc5	anaphase-promoting complex subunit 5
1436499_at	1.08E-05	-1.9	-2.0	Sgms1	sphingomyelin synthase 1
1424052_at	5.76E-06	-1.9	-1.8	Thap4	THAP domain containing 4
1417842_at	0.000125828	-1.9	-2.7	Caml	calcium modulating ligand
1460387_a_at	0.000181624	-1.9	-1.7	Siae	sialic acid acetyltransferase
1418101_a_at	8.13E-05	-1.9	-2.1	Rtn3	reticulon 3
1455164_at	0.000137574	-2.0	-2.5	Cdgap	CDC42 GTPase-activating protein
1428600_at	0.000139231	-2.0	-3.2	Nin	ninein
1424987_at	6.01E-05	-2.0	-1.9	5430435G22Rik	RIKEN cDNA 5430435G22 gene
1423680_at	4.09E-06	-2.0	-2.2	Fads1	fatty acid desaturase 1
1421375_a_at	0.000314009	-2.0	-2.0	S100a6	S100 calcium binding protein A6 (calcyclin)
1456475_s_at	0.004067997	-2.0	-3.2	Prkar2b	protein kinase, cAMP dependent regulatory, type II beta
1423030_at	0.004652823	-2.0	-3.0	Vcp	valosin containing protein
1450686_at	0.001066087	-2.0	-2.3	Pon2	paraoxonase 2
1423071_x_at	0.001361084	-2.0	-4.1	6720475J19Rik	RIKEN cDNA 6720475J19 gene
1451015_at	0.003817486	-2.0	-2.0	Tkt	transketolase
1416836_at	0.000451209	-2.0	-3.3	Lrp10	low-density lipoprotein receptor-related protein 10
1429019_s_at	2.84E-05	-2.0	-2.0	Pon2	paraoxonase 2
1452147_at	5.45E-06	-2.0	-2.0	Sec24c	Sec24 related gene family, member C (S. cerevisiae)
1434897_a_at	0.000733357	-2.0	-2.1	Slc25a4	solute carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 4
1455350_at	0.004025283	-2.0	-2.5	Tmem62	transmembrane protein 62
1435074_at	6.27E-10	-2.0	-2.1	Tmem106b	transmembrane protein 106B
1433805_at	5.40E-06	-2.0	-1.8	Jak1	Janus kinase 1
1435157_at	0.002894919	-2.0	-2.0	Hook3	hook homolog 3 (Drosophila)
1448526_at	8.65E-05	-2.0	-2.0	Kpnb1	karyopherin (importin) beta 1
1416119_at	0.001469085	-2.0	-2.3	Txn1	thioredoxin 1
1448149_at	7.45E-05	-2.1	-2.1	Ctnna1	catenin (cadherin associated protein), alpha 1
				ENSMUSG0000005	
				0347 ///	
				LOC100048142 ///	predicted gene, ENSMUSG00000050347 /// similar to thymosin, beta 10 /// thymosin, beta 10
1437185_s_at	5.62E-05	-2.1	-3.3	Tmsb10	Tmsb10
1422747_at	0.000846408	-2.1	-3.3	Chek2	CHK2 checkpoint homolog (S. pombe)
1429304_at	1.48E-07	-2.1	-1.6	Ankrd10	ankyrin repeat domain 10
1428270_at	0.004788413	-2.1	-2.4	Glt8d1	glycosyltransferase 8 domain containing 1
1415751_at	0.000205671	-2.1	-2.3	Hp1bp3	heterochromatin protein 1, binding protein 3
					SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c, member 2
1428382_at	9.21E-05	-2.1	-4.0	Smarcc2	SMARCC2
1428103_at	0.004185843	-2.1	-2.6	Adam10	a disintegrin and metalloproteinase domain 10
1426350_at	0.00469351	-2.1	-2.5	Mgat2	mannoside acetylglucosaminyltransferase 2
1428535_at	0.004804956	-2.1	-2.8	9430020K01Rik	RIKEN cDNA 9430020K01 gene
1448619_at	5.13E-07	-2.1	-5.1	Dhcr7	7-dehydrocholesterol reductase
1434478_at	0.000838648	-2.1	-2.9	Heca	headcase homolog (Drosophila)
1448474_at	0.000101421	-2.1	-1.9	Nek7	NIMA (never in mitosis gene a)-related expressed kinase 7
1418506_a_at	0.001018924	-2.1	-2.3	Prdx2	peroxiredoxin 2
1417028_a_at	0.004599224	-2.2	-2.6	Trim2	tripartite motif-containing 2
1439184_s_at	0.002255245	-2.2	-2.3	Txnrc17	thioredoxin domain containing 17
1434395_at	5.19E-05	-2.2	-3.5	Man1a2	mannosidase, alpha, class 1A, member 2
1417090_at	0.001108275	-2.2	-3.6	Rcn1	reticulocalbin 1
1433779_at	0.002853508	-2.2	-2.3	Casc4	cancer susceptibility candidate 4
1455419_at	1.66E-05	-2.2	-2.7	D630045J12Rik	RIKEN cDNA D630045J12 gene
1428412_at	0.001878537	-2.2	-2.9	Tm9sf3	transmembrane 9 superfamily member 3
1448661_at	0.002075857	-2.2	-3.5	Plcb3	phospholipase C, beta 3
1417893_at	0.000534025	-2.2	-3.1	Sfxn3	sideroflexin 3
				100042986 ///	
				OTTMUSG0000001	predicted gene, 100042986 /// predicted gene, OTTMUSG00000015874 /// ribosomal protein L37a
1460543_x_at	6.13E-05	-2.2	-2.4	5874 /// Rpl37a	ribosomal protein L37a
1433908_a_at	0.003677049	-2.3	-4.3	Ctnn	cortactin
1424906_at	3.69E-05	-2.3	-2.7	Pqhc3	PQ loop repeat containing
1452155_a_at	2.33E-06	-2.3	-2.2	Ddx17	DEAD (Asp-Glu-Ala-Asp) box polypeptide 17
1435666_at	1.54E-06	-2.3	-3.3	Mast3	microtubule associated serine/threonine kinase 3
1448486_at	6.09E-18	-2.3	-2.1	Mut	methylmalonyl-Coenzyme A mutase
1418000_a_at	6.73E-08	-2.3	-1.7	Itm2b	integral membrane protein 2B
1424438_a_at	0.000299946	-2.3	-4.4	Leprot	leptin receptor overlapping transcript
				LOC674712 ///	
1416372_at	0.001337056	-2.3	-2.2	Ptdss1	similar to phosphatidylinositol synthase 1 /// phosphatidylinositol synthase 1
1428875_at	4.43E-05	-2.3	-2.5	Golim4	golgi integral membrane protein 4
1451068_s_at	3.85E-07	-2.3	-2.1	Rps25	ribosomal protein S25
1428853_at	7.94E-05	-2.3	-3.8	Ptch1	patched homolog 1
1433887_at	0.000481209	-2.3	-3.3	Dnajc3	DnaJ (Hsp40) homolog, subfamily C, member 3
1420895_at	0.000192193	-2.3	-4.7	Tgfr1	transforming growth factor, beta receptor 1
1451359_at	0.004599224	-2.3	-3.2	Lpcat1	lysophosphatidylcholine acyltransferase 1
1437290_at	0.003245889	-2.4	-2.6	Impad1	inositol monophosphatase domain containing 1
1421824_at	0.00017047	-2.4	-2.4	Bace1	beta-site APP cleaving enzyme 1
1418483_a_at	0.004205228	-2.4	-2.7	Ggta1	glycoprotein galactosyltransferase alpha 1, 3
1418238_at	4.35E-06	-2.4	-2.9	Ivd	isovaleryl coenzyme A dehydrogenase

1423120_at	1.22E-05	-2.4	-3.0	Ide	insulin degrading enzyme
1423846_x_at	2.30E-13	-2.4	-2.9	Tuba1b	tubulin, alpha 1B
1416664_at	0.00404261	-2.4	-2.9	Cdc20	cell division cycle 20 homolog (S. cerevisiae)
1434891_at	0.00395958	-2.4	-4.7	Ptqfrn	prostaglandin F2 receptor negative regulator
1435737_a_at	0.001334051	-2.4	-2.5	Nde1	nuclear distribution gene E homolog 1 (A nidulans)
1429896_at	0.001816642	-2.4	-2.7	5830408B19Rik	RIKEN cDNA 5830408B19 gene
1415707_at	0.000124672	-2.4	-4.0	Anapc2	anaphase promoting complex subunit 2
1450431_a_at	3.04E-06	-2.5	-2.8	Nedd4	neural precursor cell expressed, developmentally down-regulated 4
1448253_at	1.43E-06	-2.5	-2.3	Glud1	glutamate dehydrogenase 1
1417404_at	1.07E-06	-2.5	-4.1	Elov6	ELOVL family member 6, elongation of long chain fatty acids (yeast)
1438847_at	0.0037093	-2.5	-3.2	Mxd3	Max dimerization protein 3
1428624_at	0.000264216	-2.5	-3.4	2810482107Rik	RIKEN cDNA 2810482107 gene
1416750_at	3.51E-05	-2.5	-3.9	Sigmar1	sigma non-opioid intracellular receptor 1
1436747_at	0.000264768	-2.5	-7.0	Fam100b	family with sequence similarity 100, member B
1448592_at	6.88E-05	-2.5	-3.1	Crtap	cartilage associated protein
1448241_at	0.002411532	-2.5	-2.8	Gm2a	GM2 ganglioside activator protein
1415698_at	0.003145224	-2.5	-3.3	Golm1	golgi membrane protein 1
1448647_at	0.000456024	-2.5	-3.1	Man2a1	mannosidase 2, alpha 1
1448960_at	0.002414133	-2.6	-3.3	Cxxc5	CXXC finger 5
1427177_at	0.00077498	-2.6	-2.7	Fyco1	FYVE and coiled-coil domain containing 1
1438976_x_at	0.002419379	-2.6	-3.0	Mat2a	methionine adenosyltransferase II, alpha
1435395_s_at	0.000708421	-2.6	-3.5	Atp5j2	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit f, isoform 2
1448498_at	8.34E-10	-2.6	-3.5	Rps6ka4	ribosomal protein S6 kinase, polypeptide 4
1429189_at	2.14E-12	-2.6	-2.7	Arsb	arylsulfatase B
1439815_at	2.47E-07	-2.6	-3.7	Heatr5b	HEAT repeat containing 5B
1419259_at	0.001682927	-2.6	-2.5	Rsu1	Ras suppressor protein 1
1417420_at	2.91E-05	-2.6	-2.2	Ccnd1	cyclin D1
1423917_a_at	0.000156209	-2.6	-4.0	Cttn	cortactin
1416536_at	1.94E-07	-2.6	-6.6	Mum1	melanoma associated antigen (mutated) 1
1449303_at	0.001003	-2.6	-3.9	Sesn3	Sestrin 3, mRNA (cDNA clone IMAGE:3481673)
1435649_at	0.00494507	-2.7	-3.7	Nexn	nexilin
1426015_s_at	0.00403752	-2.7	-3.5	Asph	aspartate-beta-hydroxylase
1424707_at	1.66E-13	-2.7	-2.4	Tmed10	transmembrane emp24-like trafficking protein 10 (yeast)
1416364_at	7.87E-06	-2.7	-3.0	Hsp90ab1	heat shock protein 90 alpha (cytosolic), class B member 1
1453572_a_at	6.24E-16	-2.7	-3.1	Plp2	proteolipid protein 2
1424828_a_at	1.02E-05	-2.7	-3.3	Fh1	fumarate hydratase 1
1425506_at	0.001272349	-2.7	-4.2	Mylk	myosin, light polypeptide kinase
1434037_s_at	0.001115714	-2.7	-4.7	Kat2b	K(lysine) acetyltransferase 2B
1422438_at	4.05E-32	-2.7	-3.4	Ephx1	epoxide hydrolase 1, microsomal
1428647_at	2.57E-05	-2.7	-4.5	LOC766870 /// Pbx1	1 /// pre B-cell leukemia transcription factor 1
1434123_at	0.000331308	-2.7	-3.9	Fut11	fucosyltransferase 11
1436824_x_at	0.000139033	-2.7	-4.8	Rnf26	ring finger protein 26
1446618_at	0.000410051	-2.7	-2.5	LOC432971	hypothetical gene supported by AK038224
1429739_a_at	0.003995925	-2.7	-4.8	Patz1	POZ (BTB) and AT hook containing zinc finger 1
1435652_a_at	3.53E-09	-2.7	-4.1	Gnai2	guanine nucleotide binding protein (G protein), alpha inhibiting 2
1418318_at	2.05E-07	-2.7	-3.8	Rnf128	ring finger protein 128
1434518_at	1.99E-09	-2.8	-3.2	Phka2	phosphorylase kinase alpha 2
1416217_a_at	0.000175262	-2.8	-3.6	100042986 /// OTTMUSG00000001	predicted gene, 100042986 /// predicted gene, OTTMUSG00000015874 /// ribosomal
1426690_a_at	0.00036641	-2.8	-5.5	5874 /// Rpl37a	protein L37a
1435727_s_at	5.51E-05	-2.8	-4.0	Srebf1	sterol regulatory element binding transcription factor 1
1424093_x_at	1.67E-05	-2.8	-3.0	Lima1	LIM domain and actin binding 1
1450862_at	0.000214831	-2.8	-5.1	Cd151	CD151 antigen
1428431_at	0.000287089	-2.8	-3.1	Rad54l	RAD54 like (S. cerevisiae)
1428432_at	0.002812726	-2.8	-5.6	Zcchc24	zinc finger, CCHC domain containing 24
1438055_at	0.000925112	-2.8	-3.9	Zcchc24	zinc finger, CCHC domain containing 24
1438200_at	0.00403752	-2.8	-6.2	Rarres1	retinoic acid receptor responder (tazarotene induced) 1
1436944_x_at	3.76E-06	-2.9	-7.2	Sulf1	sulfatase 1
1450388_s_at	0.000432347	-2.9	-3.6	4933439C20Rik /// LOC236604 /// Pisd	RIKEN cDNA 4933439C20 gene /// phosphatidylserine decarboxylase pseudogene /// phosphatidylserine decarboxylase
1460409_at	2.78E-06	-2.9	-5.3	Twsg1	twisted gastrulation homolog 1 (Drosophila)
1426778_at	4.31E-05	-2.9	-4.5	Cpt1a	carnitine palmitoyltransferase 1a, liver
1416365_at	0.003893228	-2.9	-4.1	Dag1	dystroglycan 1
1431375_s_at	0.000610427	-2.9	-3.2	Hsp90ab1	heat shock protein 90 alpha (cytosolic), class B member 1
1454843_at	4.92E-05	-2.9	-4.3	Parva	parvin, alpha
1449056_at	0.001729897	-2.9	-6.0	Prps2	phosphoribosyl pyrophosphate synthetase 2
1438634_x_at	4.64E-07	-2.9	-4.7	E330009J07Rik	RIKEN cDNA E330009J07 gene
1423667_at	0.003893228	-2.9	-3.1	Lasp1	LIM and SH3 protein 1
1417027_at	0.00071548	-3.0	-3.8	Mat2a	methionine adenosyltransferase II, alpha
1453634_a_at	0.004205942	-3.0	-6.2	Trim2	tripartite motif-containing 2
1416041_at	1.25E-11	-3.0	-2.8	Erp29	endoplasmic reticulum protein 29
1455481_at	0.001318084	-3.0	-3.5	Sgk1	serum/glucocorticoid regulated kinase 1
1455789_x_at	0.000504054	-3.0	-3.5	Ilds	iduronate 2-sulfatase
1421654_a_at	0.001469337	-3.0	-4.6	Hspa8	heat shock protein 8
1449147_at	0.000306735	-3.1	-10.7	Lmna	lamin A
1422445_at	1.24E-05	-3.1	-4.2	Chst1	carbohydrate (keratan sulfate Gal-6) sulfotransferase 1
1416000_a_at	2.05E-06	-3.1	-3.0	Itga6	integrin alpha 6
1438386_x_at	0.000959732	-3.1	-3.5	Prdx1	peroxiredoxin 1
1437308_s_at	1.41E-08	-3.1	-2.7	Mat2a	methionine adenosyltransferase II, alpha
1434642_at	0.001342399	-3.1	-10.6	F2r	coagulation factor II (thrombin) receptor
1433582_at	3.01E-05	-3.1	-3.8	Hsd17b11	hydroxysteroid (17-beta) dehydrogenase 11
1455470_x_at	0.000174578	-3.2	-4.7	1190002N15Rik /// LOC100044725	RIKEN cDNA 1190002N15 gene /// hypothetical protein LOC100044725
1450852_s_at	0.000101116	-3.2	-2.6	Lasp1	LIM and SH3 protein 1
1451339_at	0.000302995	-3.2	-4.0	F2r	coagulation factor II (thrombin) receptor
1428789_at	0.003900553	-3.2	-4.0	Suox	sulfite oxidase
1434105_at	2.69E-14	-3.2	-4.0	Ralqps2	CDNA clone IMAGE:6828107
				Epm2aip1	EPM2A (laforin) interacting protein 1

1454677_at	1.17E-06	-3.2	-2.2	Timp2	tissue inhibitor of metalloproteinase 2
1423732_at	4.90E-08	-3.2	-5.0	Tram1	translocating chain-associating membrane protein 1
1422906_at	2.85E-06	-3.2	-3.0	Abcg2	ATP-binding cassette, sub-family G (WHITE), member 2
1428801_at	3.12E-08	-3.3	-3.4	Mgat3	mannoside acetylglucosaminyltransferase 3
1420836_at	6.42E-14	-3.3	-2.8	Slc25a30	solute carrier family 25, member 30
1438630_x_at	1.24E-09	-3.4	-3.9	Mat2a	methionine adenosyltransferase II, alpha
1449145_a_at	5.79E-20	-3.4	-1.8	Cav1	caveolin 1, caveolae protein
1448433_a_at	6.92E-09	-3.4	-3.7	Pcolce	procollagen C-endopeptidase enhancer protein
1453304_s_at	0.002088512	-3.5	-8.6	Ly6e	lymphocyte antigen 6 complex, locus E
1416269_at	0.001378328	-3.5	-4.4	Atp5j2	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit f, isoform 2
1448354_at	1.68E-06	-3.5	-7.1	G6pdx	glucose-6-phosphate dehydrogenase X-linked
1417056_at	0.000197013	-3.5	-7.7	Psme1	proteasome (prosome, macropain) 28 subunit, alpha
1429089_s_at	1.54E-07	-3.5	-5.5	2900026A02Rik LOC100046044 ///	RIKEN cDNA 2900026A02 gene
1418157_at	0.001878537	-3.5	-6.1	Nr2f1	similar to COUP-TFI /// nuclear receptor subfamily 2, group F, member 1
1457446_at	0.000664946	-3.5	-3.4	Opcml	opioid binding protein/cell adhesion molecule-like
1433576_at	3.48E-10	-3.6	-3.8	Mat2a	methionine adenosyltransferase II, alpha
1415984_at	0.00071548	-3.6	-6.5	Acadm	acyl-Coenzyme A dehydrogenase, medium chain
1428082_at	5.65E-15	-3.6	-4.0	Acsf5	acyl-CoA synthetase long-chain family member 5
1452037_at	0.000123779	-3.6	-4.8	Mgat2	mannoside acetylglucosaminyltransferase 2
1448533_at	0.003708743	-3.6	-6.3	Tbcb	tubulin folding cofactor B
1416868_at	0.004984825	-3.6	-7.2	Cdkn2c	cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)
1415770_at	5.51E-05	-3.7	-7.3	Wdr6	WD repeat domain 6
1415818_at	0.00048696	-3.7	-6.8	Anxa6	annexin A6
1423712_a_at	1.00E-06	-3.7	-5.8	Qars	glutaminyl-tRNA synthetase
1433504_at	0.000271796	-3.7	-4.9	Pyqb	brain glycogen phosphorylase
1428795_at	0.00473922	-3.7	-7.6	1110021L09Rik	RIKEN cDNA 1110021L09 gene
1433770_at	2.58E-12	-3.7	-4.1	Dpysl2	dihydropyrimidinase-like 2
1424829_at	8.32E-08	-3.8	-6.0	A830007P12Rik	RIKEN cDNA A830007P12 gene
1424157_at	0.000377997	-3.8	-3.7	Ehd2	EH-domain containing 2
1437760_at	2.00E-05	-3.8	-9.8	Galnt12	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylglucosaminyltransferase 12
1423790_at	0.001185864	-3.8	-4.8	Dap	death-associated protein
1429390_at	0.000118364	-3.8	-7.5	Acpl2	acid phosphatase-like 2
1460173_at	5.24E-08	-3.9	-5.5	Lasp1	LIM and SH3 protein 1
1416167_at	7.37E-06	-3.9	-4.1	Prdx4	peroxiredoxin 4
1433581_at	8.86E-15	-3.9	-5.2	1190002N15Rik ///	RIKEN cDNA 1190002N15 gene /// hypothetical protein LOC100044725
1436029_at	1.23E-05	-4.0	-7.4	Bicc1	bicaudal C homolog 1 (Drosophila)
1435972_at	2.00E-05	-4.1	-10.0	Cast	calpastatin
1456735_x_at	0.000862222	-4.1	-7.9	Acpl2 LOC100044161 ///	acid phosphatase-like 2 hypothetical protein LOC100044161 /// sema domain, immunoglobulin domain (Ig), short
1420416_at	0.003720204	-4.1	-5.2	Sema3a	basic domain, secreted, (semaphorin) 3A
1416256_a_at	7.73E-14	-4.1	-6.0	Tubb5	tubulin, beta 5
1416044_at	3.29E-13	-4.1	-6.0	Flii	flightless I homolog (Drosophila)
1435785_at	4.72E-06	-4.3	-5.7	Ehd2	EH-domain containing 2
1433751_at	1.22E-09	-4.3	-8.1	Slc39a10	solute carrier family 39 (zinc transporter), member 10
1452861_at	0.000870975	-4.3	-8.7	2010300C02Rik	RIKEN cDNA 2010300C02 gene
1424130_a_at	0.00081903	-4.3	-6.1	Ptrf	polymerase I and transcript release factor
1450641_at	4.07E-11	-4.4	-2.2	Vim	vimentin
1450920_at	0.002569922	-4.5	-5.8	Ccnb2	cyclin B2
1433825_at	0.000352248	-4.6	-7.1	Ntrk3	neurotrophic tyrosine kinase, receptor, type 3
1455160_at	2.85E-05	-4.6	-5.1	2610203C20Rik	RIKEN cDNA 2610203C20 gene
1418840_at	0.000479267	-4.7	-7.4	Pdcd4	programmed cell death 4
1426369_at	0.000247398	-4.8	-6.6	Far1	fatty acyl CoA reductase 1
1450062_a_at	1.17E-06	-4.8	-10.1	Maged1 LOC100044161 ///	melanoma antigen, family D, 1 hypothetical protein LOC100044161 /// sema domain, immunoglobulin domain (Ig), short
1449865_at	2.91E-05	-4.8	-5.0	Sema3a	basic domain, secreted, (semaphorin) 3A
1416967_at	0.002074175	-4.9	-5.1	Sox2	SRY-box containing gene 2
1460184_at	1.21E-07	-5.3	-7.1	Hadh	hydroxyacyl-Coenzyme A dehydrogenase
1415822_at	7.16E-05	-5.4	-8.2	Scd2	stearoyl-Coenzyme A desaturase 2
1455940_x_at	0.00077498	-5.5	-19.9	Wdr6	WD repeat domain 6
1455972_x_at	2.44E-08	-5.6	-11.2	Hadh	hydroxyacyl-Coenzyme A dehydrogenase
1459823_at	2.13E-05	-5.8	-9.0	Ehd2	EH-domain containing 2
1420622_a_at	2.33E-07	-6.1	-8.1	Hspa8	heat shock protein 8
1420623_x_at	1.24E-08	-6.2	-7.5	Hspa8	heat shock protein 8
1456393_at	0.000343872	-6.3	-8.8	2310002J21Rik	RIKEN cDNA 2310002J21 gene
1423642_at	0.000197013	-6.6	-8.2	Tubb2c	tubulin, beta 2c
1438195_at	0.000143685	-7.0	-10.5	Gpd1l	glycerol-3-phosphate dehydrogenase 1-like
1417852_x_at	1.80E-07	-7.1	-4.3	Clca1	chloride channel calcium activated 1
1460259_s_at	2.24E-11	-7.7	-5.9	Clca1 /// Clca2	chloride channel calcium activated 1 /// chloride channel calcium activated 2
1455719_at	3.24E-06	-7.7	-8.6	Tubb5	tubulin, beta 5
1436528_at	0.001202866	-9.0	-18.5	Kazald1	Kazal-type serine peptidase inhibitor domain 1
1425789_s_at	7.90E-12	-11.1	-13.5	Anxa8	annexin A8
1416326_at	3.05E-14	-23.2	-70.6	Crip1	cysteine-rich protein 1 (intestinal)

A subset of 434 of the 695 transcripts shown in Table S4 are also differentially expressed after infecting mGEPs with the cancer-associated *H. pylori* isolate.

Table S6. IPA analysis of biological functions (A) and signaling/metabolic pathways (B) that were significantly over-represented in the 695-member 'shared ChAG-signature' mGEP response.

Table S6A.

Category	P-value	Molecules
Cell Death	5.07E-07-1.52E-02	MAGED1, CREM, TGFBR1, F2R, SGK1, CDKN2C, IDE, CCND1, ODC1, MYLK, PEM, HNRNPA1, MXD3, SOD2, MADD, CAV1, ATF4, SMG1, VAPB, TXN, SERPINE1, TIMP2, ETS1, ATG7, NDRG1, ITGA6, TBK1, CSF3, HSPA8, NR1D1, ST3GAL1, HTT, RAD18, RUNX1, EPHX1, PRDX2, GADD45B, PRDX1, CNTF, CTNNA1, CASP4, OARS, SGMS1, PTMA, RASSF1, RNPS1, HSP90AB1, MXD1, BRD4, HLA-B, FGF7, KHDRBS1, ABCG2, TRIM28, MMP10, TIAL1, REV3L, P2RX7, DLC1, GGT1, PRKCG, KITLG, SEMA3A, KLF7, NTRK3, ZEB2, RIPK3, FEN1, TXNDC17, PPARGC1A, PHLDA1, IL15RA, JAK1, LIF, PTPN23, MMP13, TUBB, PLA2G7, CDK5R1, NR2F1, USP7, RPS3A, CAMK2D, AIRE, PIM1, FOSL2, DAG1, CAST, PMAIP1, SLC6A8, PTPRE, FST, DNASE2, YWHAB, BACE1, RAD54L, ABCB1B, BUB1B, MLL, INHBA, RCAN1, PDGFB, CBLB, KAT2B, PTPN11, CD40, NUAQ1, TMSB10, CDKL3, SULF1, S100A6, CDC20, ITM2B, ETS2, NGF, PHKA2, PDCD4, MGAT3, HMOX1, NFKBIA, SDC2, PLK2, FOXO3, VCP, SMO, SMOX, RPS3, CHEK2, PLSCR1, FAAH, DAP, PARVA, SLC25A4, NLRP3, CROP, G6PD, GLUD1, IKBKE, BCL3, EMP1, PRKAR2B, NDUFV2, PPIA (includes EG:268373), EEF1A1, SKIL, TOPORS, CXCL2, CASP8A2, RNF139, DPYSL2, MAGED1, TGFBR1, CREM, EIF1, CCNB2, DNAJC3, CCND1, ODC1, SOD2, MADD, GLB1, CAV1, SERPINE1, ETS1, CLCA1 (includes EG:12722), ITGA6, ANO6, TBK1, HSPA8, ST3GAL1, RAD18, RPS25, RNF139, DPYSL2, MAGED1, TGFBR1, CREM, EIF1, CCNB2, DNAJC3, CCND1, ODC1, SOD2, MADD, GLB1, CAV1, SERPINE1, ETS1, CLCA1 (includes EG:12722), ITGA6, ANO6, TBK1, HSPA8, ST3GAL1, RAD18, RPS25, RUNX1, PRDX2, EPHX1, GADD45B, PRDX1, CNTF, PTPN14, HSD17B11, RASSF1, HSP90AB1, MXD1, BICC1, LY6E, ASPH, OPRS1, TUBB2C, ABCG2, VIM, CPEB4, MCM3, SEMA3A, BAT1, DLEU2, NTRK3, TXNDC17, CSRP3, IL15RA, LIF, JAK1, MMP13, MAP4K4, PVR, SOX2, BDH1, PIM1, CAST, PGLYRP2, KCNK2, OVGP1, PDE4B, BUB1B, MLL, PDGFB, PIP5K1A, PTPN11, TMSB10, CD151, CDKL3, DCBLD2, SULF1, S100A6, CDC20, ADH1C (includes EG:126), ETS2, PHKA2, MGAT3, SDC2, FOXO3, LASP1, PARVA, NLRP3, PSRC1, G6PD, RPL23, NDUFV2, PPIA (includes EG:268373), CXXC5, SKIL, CXCL2, IVD, MALAT1, PRIM1, ATP6V0C, F2R, RSG1, CDKN2C, RPS11, PCOLCE, MYLK, HRH1, HNRNPA1, MXD3, SMG1, TXN, TIMP2, ATG7, NDRG1, PTCH1, CSF3, C10ORF81, NEDD4, CLCN5, HTT, RSU1, FH, STX3, SRD5A1, CASP4, SGMS1, PTMA, PRRX1, HLA-B, MASP1, FGF7, TRIM28, MMP10, P2RX7, REV3L, DLC1, GGT1, PRKCG, KITLG, SREBF1, ZEB2, RIPK3, ADAM10, FEN1, RPL11, PTPN23, PBX1, TUBB, PLA2G7, CDK5R1, NR2F1, USP7, RPS3A, CAMK2D, CRIP1, SDPR, COMT, ACSL5, C9ORF167, CHD1 (includes EG:1105), NEO1, PMAIP1, PTPRE, FST, PDE10A, PPIG, OPCML, INHBA, DDX17, RCAN1, KAT2B, WHSC1L1, CD40, SF1, NUAQ1, CTTN, FLRT2, TRAM1, RARRS1, NGF, PDCD4, HMOX1, NFKBIA, PLK2, RPS16, VCP, SMO, MICALL1, NEK7, SMOX, CHEK2, GLUD1, BCL3, IKBKE, GNAI2, EMP1, PRKAR2B, EEF1A1, FLII, MAT2A, SLC7A3, CASP8A2
Cancer	6.05E-07-1.75E-02	DPYSL2, SULF1, TGFBR1, LIF, PRDX1, SGK1, CDKN2C, TUBB, NGF, CCND1, CDK5R1, PTMA, NR2F1, USP7, MADD, NFKBIA, CAMK2D, SOD2, AIRE, GLB1, MXD1, FOXO3, CAV1, HLA-B, SAFB, CHEK2, ETS1, PSRC1, ABCG2, ABCB1B, CBLB, ZNF423, SEMA3A, PRKAR2B, CD40, NTRK3, RSU1, PPARGC1A
Cellular Function and Maintenance	1.44E-06-1.52E-02	MAGED1, TGFBR1, CREM, DUSP8, F2R, SGK1, EIF1, DNAJC3, CDKN2C, COL8A1, POLM, CCND1, RPS15A, ODC1, FADS3, ZBTB17, HRH1, NR4A3, HNRNPA1, MXD3, SOD2, MADD, CAV1, ATF4, SAFB, TXN, SERPINE1, TIMP2, ETS1, NDRG1, CLCA1 (includes EG:12722), PTCH1, ITGA6, CSF3, MAFF, RPS4X, PATZ1, NR1D1, HTT, ANAPC5, RUNX1, PRDX2, PIM3, GADD45B, PRDX1, CNTF, PRDX4, PTPN14, CTNNA1, H2AFZ, SGMS1, PTMA, MAFG, SEC61A1, RASSF1, PRRX1, MXD1, BRD4, LY6E, ASPH, FGF7, NRP2, KHDRBS1, TRIM28, VIM, TIAL1, P2RX7, DLC1, GGT1, MCM3, KITLG, SEMA3A, SREBF1, NDE1, NTRK3, TBC1D8, ZEB2, ADAM10, CSRP3, PER1, PHLDA1, IL15RA, LIF, JAK1, PBX1, ATP5G2, MAP4K4, CDK5R1, MTTP, PVR, SOX2, USP7, CD164, RPS3A, CRIP1, PIM1, COMT, ACSL5, NEO1, FOSL2, CAST, PMAIP1, PTPRE, FST, GABPB2, KCNK2, LMNA, RPL23A (includes EG:6147), BUB1B, ATAD2, DDX17, PDGFB, INHBA, MLL, RCAN1, CBLB, KAT2B, PTPN11, CD40, SF1, TMSB10, LITAF, S100A6, LILRB4 (includes EG:11006), ETS2, RARRS1, NGF, WDR6 (includes EG:11180), MGAT3, HMOX1, DHCR7, NFKBIA, SDC2, PLK2, FOXO3, SMO, SMOX, CHEK2, PLSCR1, DAP, PSRC1, CHERP, G6PD, ERO1L, IKBKE, BCL3, EMP1, GNAI2, PRKAR2B, PPIA (includes EG:268373), CORO1A, SKIL, TOPORS, CXCL2
Cellular Growth and Proliferation	1.48E-05-1.68E-02	DPYSL2, MAGED1, CREM, F2R, TOM1, SGK1, CDKN2C, IDE, HRH1, MADD, MXD3, SOD2, GLB1, RNASET2, VAPB, TXN, SERPINE1, ATG7, NDRG1, TKT, PTCH1, CSF3, MAFF, HSPA8, ZNF423, RPS4X, NR1D1, HTT, RUNX1, PRDX2, PRDX1, SRD5A1, CNTF, CA13, CTNNA1, RPL31, CASP4, PTMA, MAFG, SEC61A1, HLA-B, ASPH, OPRS1, TUBB2C, VIM, P2RX7, PRKCG, KITLG, SEMA3A, PSME1, KLF7, NPTN, NTRK3, ABCG2, SREBF1, NDE1, ZEB2, PPARGC1A, IL15RA, LIF, PLA2G7, CDK5R1, NR2F1, SOX2, RPS3A, COMT, GABARAPL1, CAST, DAG1, PMAIP1, CPT1A, YWHAB, PDE10A, GM2A, ZNF624, ENO2, RAD54L, LMNA, BACE1, PDE4B, TUBA1B, ATAD2, PDGFB, CBLB, ATP5C1, CD40, LITAF, FLRT2, ITM2B, ADH1C (includes EG:126), TRAM1, NGF, HMOX1, DHCR7, NFKBIA, PLK2, FOXO3, MICALL1, ACADM, IER5, SLC25A4, SCD2, G6PD, GLUD1, PRKAR2B, NDUFV2, TMED10, PPIA (includes EG:268373), EEF1A1, CXCL2, HADH
Neurological Disease	1.6E-05-1.75E-02	MRC1, JAK1, TGFBR1, CREM, F2R, PBX1, MAP4K4, IDE, CCND1, CDK5R1, MTTP, HRH1, NR4A3, MADD, SOD2, TXN, PMAIP1, SERPINE1, ETS1, ATG7, PTCH1, ITGA6, BACE1, TBK1, ABCB1B, CSF3, MAFF, PDGFB, CBLB, KAT2B, CD40, PTPN11, HTT, CNTF, ADH1C (includes EG:126), ETS2, TWSG1, MAFG, HMOX1, NFKBIA, HSP90AB1, FOXO3, BRD4, LY6E, ASPH, FGF7, NRP2, MAN2A1, IKBKE, PISD, REV3L, GGT1, ABCG2, SREBF1, NTRK3, TMED10, FLII, SKIL, CXCL2
Organismal Survival	2.6E-05-3.99E-03	CREM, LIF, F2R, SGK1, CNTF, CDKN2C, NGF, CCND1, HMOX1, NR4A3, HNRNPA1, RASSF1, NFKBIA, BRSK1, COMT, VCP, FOXO3, CAV1, PMAIP1, FGF7, CHEK2, TIMP2, PTPRE, RAD54L, OVGP1, BCL3, CSF3, PDGFB, INHBA, GNAI2, KITLG, PTPN11, CD40, NTRK3, FEN1, TOPORS
DNA Replication, Recombination, and Repair	9.29E-05-4.49E-03	RPL11, MAGED1, LIF, CREM, SGK1, CDKN2C, TUBB, CCND1, RPS15A, PVR, SOX2, NR4A3, ZBTB17, MADD, MXD3, SOD2, CAMK2D, PIM1, BRSK1, CAV1, FOSL2, CAST, TXN, TIMP2, LMNA, RAD54L, CSF3, BUB1B, MLL, INHBA, HSPA8, KAT2B, CD40, PTPN11, RAD18, ANAPC5, SNF1LK, RUNX1, SULF1, JARID1B, GADD45B, CDC20, NGF, WDR6 (includes EG:11180), HMOX1, NFKBIA, RASSF1, SDC2, PLK2, FOXO3, MXD1, BRD4, FGF7, CHEK2, PSRC1, KHDRBS1, TIAL1, RPL23, BCL3, KITLG, GNAI2, NTRK3, NDE1, SKIL
Cell Cycle	1.03E-04-1.75E-02	DPYSL2, MAGED1, TGFBR1, F2R, DNAJC3, CCND1, POLM, ODC1, NR4A3, HRH1, SOD2, CAV1, ATF4, SAFB, SERPINE1, AMHR2, TIMP2, ETS1, NDRG1, ITGA6, CSF3, MAFF, ZNF423, PATZ1, NR1D1, HTT, RUNX1, PRDX2, PIM3, GADD45B, CNTF, PTPN14, CTNNA1, TWSG1, H2AFZ, PTMA, MAFG, RASSF1, PTGFRN, MXD1, BRD4, FGF7, OPRS1, NRP2, KHDRBS1, ABCG2, TIAL1, P2RX7, DLC1, KITLG, SEMA3A, NTRK3, SREBF1, ADAM10, CHD7, CSRP3, PPARGC1A, IL15RA, LIF, JAK1, PBX1, CBX3, MMP13, MAP4K4, CDK5R1, PVR, NR2F1, SOX2, CD164, RPS3A, AIRE, PIM1, BRSK1, CHD1 (includes EG:1105), FOSL2, CAST, DAG1, FST, DNASE2, FBXL10, LMNA, PDGFB, INHBA, MLL, RCAN1, KAT2B, PIP5K1A, PTPN11, CD40, SF1, CTTN, CD151, S100A6, ETS2, NGF, DHCR7, NFKBIA, FOXO3, SMO, ACADM, PLSCR1, PARVA, VEZF1, AP3D1, G6PD, BCL3, PRKAR2B, PPIA (includes EG:268373), CORO1A, SKIL, VGF, CXCL2
Cellular Development	1.03E-04-1.67E-02	IL15RA, LIF, ITGA6, PBX1, ETS2, CSF3, CCND1, MLL, INHBA, MAFG, KITLG, HRH1, SEMA3A, PTPN11, CD40, FOXO3, MXD1, SMO, ATF4, RUNX1, PLSCR1, TIMP2
Hematopoiesis	1.03E-04-1.67E-02	PRIM1, STRN, JAK1, LIF, F2R, AC02, PBX1, NEXN, TUBB, CCND1, CDK5R1, NR4A3, RPS3A, SOD2, CAMK2D, COMT, ABCB8, CAV1, CHD1 (includes EG:1105), ATF4, FOSL2, TXN, SERPINE1, TIMP2, STX11, ETS1, CPT1A, DNASE2, NONO, TKT, PDE4B, CSF3, MLL, INHBA, PDGFB, ZNF423, CD40, PTPN11, RUNX1, CD151, CDC20, PRDX1, TWSG1, HMOX1, NFKBIA, FOXO3, ACADM, CHEK2, PLSCR1, OPRS1, NRP2, G6PD, GLUD1, BCL3, MAN2A1, KITLG, PRKAR2B, ANXA6, SREBF1, ADAM10, FEN1, PPARGC1A
Hematological Disease	1.23E-04-1.38E-02	MAGED1, PRIM1, TGFBR1, CREM, JMJD3, F2R, SGK1, CDKN2C, BAZ1A, CCND1, PEM, ZBTB17, NR4A3, HNRNPA1, MXD3, SOD2, CAV1, ATF4, SMARCC2 (includes EG:6601), SAFB, TXN, SERPINE1, AMHR2, ETS1, FOXH1, ITGA6, TBK1, CSF3, MAFF, ZNF423, PATZ1, NR1D1, SNF1LK, RUNX1, PRDX1, PRDX4, CNTF, PTMA, SEC61A1, RNPS1, PRRX1, MXD1, BTA1F, FGF7, KHDRBS1, TRIM28, TIAL1, KLF7, NTRK3, SREBF1, PTRF, PPARGC1A, PER1, JAK1, LIF, MGA (includes EG:23269), PBX1, CBX3, MAP4K4, SOX2, NR2F1, CAMK2D, PIM1, CHD2, NEO1, FOSL2, CHD1 (includes EG:1105), FST, YWHAB, RAD54L, LMNA, OVGP1, RCAN1, MLL, DDX17, INHBA, KAT2B, CD40, PTPN11, SF1, JARID1B, LITAF, GLIS3, ETS2, NGF, PDCD4, RPL6, NFKBIA, PLK2, FOXO3, NFRKB, VEZF1, NLRP3, SCD2, HIVEP3, AXUD1, IKBKE, BCL3, CHST1, PRKAR2B, PPIA (includes EG:268373), FLII, RPS6KA4, RDH5, TOPORS, SKIL, CXCL2, GARNL1
Gene Expression	1.25E-04-1.71E-02	RNF139, DPYSL2, MAGED1, TGFBR1, ACCN3, EIF1, COL8A1, CCNB2, CCND1, ODC1, SOD2, GLB1, CAV1, RNASET2, SAFB, SERPINE1, AMHR2, ETS1, ITGA6, ANO6, MAFF, HSPA8, RUNX1, PRDX2, EPHX1, SEPNI1 (includes EG:57190), ANAPC2, GADD45B, PRDX1, CNTF, HSD17B11, RASSF1, HSP90AB1, BICC1, LY6E, ASPH, OPRS1, TUBB2C, ABCG2, SLC25A3, VIM, CPEB4, MCM3, SEMA3A, DLEU2, NTRK3, CSRP3, PPARGC1A, IL15RA, LIF, MMP13, MAP4K4, SOX2, PIM1, ABCB8, CPT1A, YWHAB, GM2A, KCNK2, RAD54L, BACE1, PDE4B, BUB1B, ATAD2, TUBA1B, MLL, PDGFB, CBLB, ATP5C1, PTPN11, CRTAP, PRCP, MGAT2, SUOX, SLC11A1, CD151, S100A6, LITAF, GLIS3, CDC20, ADH1C (includes EG:126), DHCR7, RPS3, IER5, LASP1, NLRP3, SCD2, G6PD, AKAP2, NDUFV2, TMED10, PPIA (includes EG:268373), CXCL2, IVD, HADH, MALAT1, MRC1, PRIM1, TOM1, F2R, SGK1, CDKN2C, IDE, RPS11, HRH1, NR4A3, HNRNPA1, KIF21A, VAPB, TXN, TIMP2, CTNS, NDRG1, TKT, PTCH1, CSF3, CLCN5, RPS4X, CLEC4E, NR1D1, CD68, HTT, FH, SRD5A1, CA13, CTNNA1, RPL31, CASP4, TWSG1, PTMA, SEC61A1, HLA-B, FGF7, MMP10, P2RX7, GGT1, PRKCG, KITLG, PSME1, NPTN, SREBF1, NDE1, GPD1L, ZEB2, FEN1, CHD7, PER1, TUBB, PLA2G7, CDK5R1, MTTP, RPS3A, CRIP1, AIRE, COMT, STX11, SLC6A8, FST, NONO, PDE10A, OPCML, ENO2, ZNF624, LMNA, MUT, WHSC1L1, CD40, RLH2, SF1, ITM2B, FLRT2, LILRB4 (includes EG:11006), TRAM1, NGF, PDCD4, HMOX1, NFKBIA, PLK2, VCP, SMO, MICALL1, ARSB, ACADM, CHEK2, FAAH, SLC25A4, GLUD1, ZNF469, MAN2A1, GNAI2, PRKAR2B, EEF1A1, RDH5, TOPORS, VGF
Genetic Disorder	1.51E-04-8.9E-03	DPYSL2, LIF, DGKD (includes EG:8527), TGFBR1, SGK1, IDE, RICTOR, TUBB, CDK5R1, ATG9B, PVR, MADD, SOD2, CAMK2D, EHD2, CAV1, NEO1, DAG1, CAST, SERPINE1, ACAP1, MTSS1, PTCH1, ITGA6, LMNA, BACE1, INHBA, PDGFB, PTPN11, HTT, LIMA1, CTTN, TMSB10, ANXA13, TGNL2 (includes EG:10618), NGF, RASSF1, SDC2, STMN4, SMO, FGF7, LASP1, PARVA, PSRC1, NRP2, PACSIN2, VIM, MAN2A1, P2RX7, DLC1, KITLG, SEMA3A, ANXA6, NTRK3, CORO1A, EEF1A1, FLII, PPARGC1A
Cellular Assembly and Organization	1.59E-04-1.62E-02	IL15RA, LIF, PBX1, ETS2, NGF, CCND1, MAFG, HRH1, NFKBIA, AIRE, PIM1, FOXO3, MXD1, SMO, HLA-B, ATF4, PLSCR1, IKBKE, P2RX7, CSF3, MLL, INHBA, GNAI2, KITLG, CBLB, CD40, PTPN11, RUNX1, CXCL2
Hematological System Development and Function	1.8E-04-1.67E-02	LIF, F2R, CNTF, NGF, PLA2G7, SGMS1, MTTP, MGAT3, HMOX1, DHCR7, GLB1, ACSL5, CAV1, FGF7, PLSCR1, FAAH, LRP10, CPT1A, FST, ABCG2, GM2A, FAR1, SCD2, VIM, PISD, P2RX7, ABCB1B, PDGFB, INHBA, ELOVL6, KITLG, SEMA3A, PIP5K1A, PTPN11, CD40, SREBF1, LPCAT1, HTT, EEF1A1, RUNX1, PPARGC1A, FADS1, PRDX2
Lipid Metabolism	1.8E-04-1.75E-02	

Small Molecule Biochemistry	1.8E-04-1.75E-02	LIF, JAK1, TGFBR1, F2R, SGK1, MAP4K4, RICTOR, PLA2G7, CCND1, CDK5R1, MTTP, MYLK, SOD2, PIM1, GLB1, BRSK1, ACSL5, CAV1, SAFB, TXN, ETS1, ACAP1, CPT1A, LRP10, FST, GM2A, TKT, PTCH1, ABCB1B, INHBA, PDGFB, ELOVL6, PIP5K1A, CD40, PTPN11, HTT, SNF1LK, PLCB3, RUNX1, FADS1, PRDX2, SRD5A1, PRDX1, CNTF, HSD17B11, NGF, SGMS1, PHKA2, MGAT3, HMOX1, DHCR7, FOXO3, BRD4, SMOX, ACADM, FGF7, CHEK2, PLSCR1, FAAH, ABCG2, SCD2, FAR1, G6PD, VIM, IKBKE, PISD, P2RX7, GGT1, PRKCG, KITLG, GNAI2, SEMA3A, CHST1, PRKAR2B, LPCAT1, SREBF1, EEF1A1, ADAM10, RPS6KA4, VGF, PPARGC1A
Cell Morphology	1.8E-04-1.52E-02	DPYSL2, PHLDA1, ATP6V0C, LIF, CREM, PTPN23, F2R, ACCN3, PBX1, DNAJC3, CCND1, ODC1, CDK5R1, PVR, NR2F1, RPS3A, MXD3, SOD2, PIM1, BRSK1, CAV1, CAST, SERPINE1, PMAIP1, TIMP2, ETS1, PTPRE, FST, MTSS1, ITGA6, LMNA, CSF3, NEDD4, INHBA, MLL, PDGFB, PIP5K1A, CD40, PTPN11, LIMA1, HTT, RUNX1, CTTN, CD151, SULF1, PRDX1, PTPN14, CTNNA1, ETS2, NGF, PDCD4, MGAT3, HMOX1, NFKBIA, RASSF1, PTGFRN, SDC2, FOXO3, MXD1, BRD4, ASPH, FGF7, PLSCR1, PARVA, G6PD, VIM, P2RX7, DLC1, PRKCG, KITLG, SEMA3A, PRKAR2B, NTRK3, CORO1A, CDGAP, SKIL, CXCL2, PPARGC1A
Gastrointestinal Disease	2.24E-04-7.99E-03	DPYSL2, F2R, SRD5A1, SGK1, FLRT2, HSD17B11, CDKN2C, CCNB2, MAP4K4, TUBB, ODC1, PTMA, PCOLCE, PDCD4, NR2F1, HMOX1, MXD3, HSP90AB1, CRIP1, PRRX1, MXD1, FOXO3, ACSL5, CAV1, C9ORF167, NEK7, SERPINE1, TIMP2, FST, NDRG1, TUBB2C, PDE10A, CKNK2, ITGA6, OVGP1, REV3L, BUB1B, CPEB4, MCM3, HSPD8, EMP1, PTPN11, NTRK3, NUAJ1, FEN1, MAT2A, IVD
Cellular Movement	2.27E-04-1.61E-02	DPYSL2, IL15RA, ATP6V0C, LIF, TGFBR1, JAK1, F2R, CCNB2, MMP13, MAP4K4, TUBB, NEXN, PLA2G7, CCND1, ODC1, CDK5R1, PVR, PEM, MYLK, NR2F1, NR4A3, HRH1, SOD2, AIRE, PIM1, CAV1, FOSL2, NEO1, CAST, TXN, SERPINE1, TIMP2, ETS1, FST, PON2, MTSS1, ITGA6, PDE4B, ABCB1B, CSF3, MLL, INHBA, PDGFB, ZNF423, PIP5K1A, PTPN11, CD40, NR1D1, NUAJ1, PLCB3, CTTN, CD34, CD151, DCBLD2, SULF1, S100A6, PTPN14, ETS2, RARRES1, NGF, PDCD4, MGAT3, NFKBIA, RASSF1, HSP90AB1, SDC2, FOXO3, MXD1, SMO, FGF7, LASP1, LIMS2, NRP2, TUBB2C, MRC2, G6PD, VIM, MMP10, DLC1, PRKCG, GNAI2, KITLG, CHST1, SEMA3A, SREBF1, NDE1, PPIA (includes EG:268373), ZEB2, CORO1A, ADAM10, CXCL2
Cell-To-Cell Signaling and Interaction	2.41E-04-1.25E-02	SULF1, LIF, ABCG2, CSF3, NGF, CCND1, PTMA, KITLG, PRKAR2B, CD40, SDC2, NTRK3, FOXO3, MXD1, HTT, RSU1, SAFB
Organismal Development	3.06E-04-1.15E-02	JAK1, TGFBR1, LIF, F2R, PBX1, CDKN2C, CCNB2, RICTOR, CCND1, MTTP, PCOLCE, CD164, NR4A3, PIM1, FOSL2, SERPINE1, TIMP2, FST, FOXH1, TKT, PTCH1, LMNA, BACE1, CSF3, MAFF, NEDD4, MLL, INHBA, ZNF423, KAT2B, RPS4X, PTPN11, CD40, HTT, SF1, RUNX1, SRD5A1, CNTF, CTNNA1, TWSG1, H2AFZ, MAFG, HMOX1, NFKBIA, PLK2, PRRX1, MXD1, BRD4, SMO, LY6E, ARSB, ASPH, FGF7, FAAH, NRP2, TRIM28, MAN2A1, REV3L, EMP1, KITLG, LUC7L, ZEB2, ADAM10, FLII, CHD7
Post-Translational Modification	3.1E-04-1.32E-02	RNF139, DUSP8, LIF, TGFBR1, JAK1, F2R, SGK1, MAP4K4, RICTOR, CCND1, ODC1, CDK5R1, MTTP, MYLK, USP7, FKBP9, CAMK2D, SOD2, PIM1, BRSK1, SMG1, TXN, CAST, PTPRE, ATG7, TBCA, PTCH1, ITGA6, NEDD4, PDGFB, HSPA8, CBLB, KAT2B, WHSC1L1, ERP29, PTPN11, CD40, HTT, SNF1LK, CD34, MGAT2, CDKL3, PIM3, PRDX1, PRDX4, CNTF, PTPN14, NGF, PHKA2, HSP90AB1, BRD4, FGF7, CHEK2, STT3B, ERO1L, IKBKE, P2RX7, PRKCG, KITLG, PRKAR2B, NTRK3, PPIA (includes EG:268373), RIPK3, ADAM10, RPS6KA4, PPARGC1A
Organismal Injury and Abnormalities	4.38E-04-1.42E-02	LIF, F2R, CNTF, CASP4, IDE, NGF, CDK5R1, HMOX1, SOD2, NFKBIA, CAV1, DAG1, SERPINE1, PMAIP1, FGF7, PLSCR1, ETS1, LMNA, BCL3, PDE4B, CSF3, PDGFB, PRKCG, KITLG, PPIA (includes EG:268373), HTT, PRDX2
Nervous System Development and Function	4.46E-04-1.2E-02	DPYSL2, PER1, CREM, LIF, SGK1, CNTF, CTNNA1, ADH1C (includes EG:126), IDE, NGF, CDK5R1, SOX2, HRH1, NFKBIA, MXD3, COMT, SMO, ABCB8, KIF5C, DAG1, CHEK2, SLC6A8, NRP2, GM2A, ITGA6, BACE1, CSF3, INHBA, PDGFB, RCAN1, PRKCG, KITLG, GNAI2, ZNF423, SEMA3A, PIP5K1A, PRKAR2B, NR1D1, NDE1, NTRK3, HTT, PLCB3, RDH5, PPARGC1A
Protein Synthesis	5.33E-04-2.5E-03	ANAPC2, RPL11, PHLDA1, LIF, CDC20, EIF1, MMP13, RPL31, CASP4, IDE, CCND1, H2AFZ, RPS11, PCOLCE, PDCD4, RPL6, RPS3A, RPL18A, VCP, RPL35, RNF128, CAST, SERPINE1, RPS3, TIMP2, ATG7, MMP10, BACE1, BCL3, RPL23A (includes EG:6147), P2RX7, CSF3, NEDD4, INHBA, PRKCG, RPL37, CBLB, RPS4X, RPS10, RPS5, PTPN11, ANAPC5, EEF1A1, RPL41
Tissue Development	7.44E-04-1.56E-02	LIF, PBX1, MMP13, MAP4K4, CDK5R1, SOX2, NR4A3, ZBTB17, CAV1, NEO1, FOSL2, ATF4, DAG1, SERPINE1, TIMP2, NDRG1, FOXH1, PTCH1, ITGA6, BACE1, INHBA, PDGFB, PTPN11, HTT, RUNX1, GADD45B, CNTF, CTNNA1, ETS2, NGF, TWSG1, HMOX1, NFKBIA, PRRX1, SMO, LY6E, ARSB, FGF7, NRP2, P2RX7, REV3L, GGT1, SEMA3A, LUC7L, NDUFB2, NTRK3, SREBF1, FLII, FEN1, CSRP3
Respiratory Disease	8.37E-04-9.92E-03	MALAT1, MAGED1, GADD45B, PSRC1, CDC20, PRDX1, TKT, ACO2, ADH1C (includes EG:126), CCNB2, CDKN2C, BUB1B, TUBB, DLC1, RASSF1, SOD2, PTPN11, CAV1
Skeletal and Muscular System Development and Function	8.53E-04-1.2E-02	SULF1, LIF, FST, MMP13, TWSG1, CSF3, INHBA, RCAN1, KITLG, CAMK2D, CAV1, FOSL2, PPARGC1A
Reproductive System Disease	9.36E-04-1.52E-02	MALAT1, JAK1, LIF, CREM, SGK1, ACCN3, EIF1, CDKN2C, CCND1, RPS23, ODC1, HNRNPA1, MADD, SOD2, AIRE, CRIP1, CAV1, ATF4, FOSL2, TXN, PMAIP1, AMHR2, TIMP2, ETS1, ATG7, FST, ITGA6, TBK1, OVGP1, PDE4B, BUB1B, INHBA, CLCN5, CD40, PTPN11, FH, TMSB10, PRDX2, CD151, DCBLD2, SULF1, GADD45B, CDC20, CTNNA1, RARRES1, ETS2, CASP4, NGF, PDCD4, PTMA, MGAT3, RASSF1, NFKBIA, SDC2, PLK2, VCP, FOXO3, MXD1, FGF7, PARVA, ABCG2, VIM, IKBKE, REV3L, KITLG, PRKAR2B, CXXC5, RIPK3, CXCL2, TXNDC17, CASP8AP2
Embryonic Development	9.94E-04-1.55E-02	JAK1, LIF, F2R, PBX1, CTNNA1, ETS2, MAP4K4, TWSG1, CCND1, ODC1, SOX2, NR4A3, MXD3, RASSF1, PIM1, PRRX1, BRD4, SMO, FOSL2, DAG1, FGF7, CHEK2, FST, NDRG1, NRP2, PTCH1, TIAL1, REV3L, MLL, PDGFB, INHBA, KITLG, PTPN11, NDE1, HTT, FLII, FEN1, RUNX1, SKIL
Connective Tissue Development and Function	1.25E-03-1.68E-02	PIM3, GADD45B, F2R, PBX1, MMP13, TWSG1, CCND1, ODC1, PCOLCE, PTMA, RASSF1, PRRX1, SMO, CAV1, BRD4, FOSL2, TXN, CAST, SERPINE1, FST, KHDRBS1, LMNA, P2RX7, GGT1, PDGFB, INHBA, PIP5K1A, PRKAR2B, SREBF1, NTRK3, SKIL, PPARGC1A
Cardiovascular Disease	1.29E-03-1.71E-02	PER1, CREM, TGFBR1, LIF, F2R, ACCN3, DNAJC3, CCND1, PLA2G7, SOD2, PIM1, CAV1, ABCB8, CAST, TXN, PMAIP1, SERPINE1, TIMP2, ETS1, SLC6A8, PTCH1, LMNA, PDE4B, CSF3, RCAN1, PDGFB, PTPN11, CD40, CD68, CD34, PRCP, EPHX1, S100A6, CA13, CTNNA1, NGF, H2AFZ, HMOX1, NFKBIA, FOXO3, FGF7, OPRS1, TUBB2C, GNAI2, KITLG, GPD1L, PPIA (includes EG:268373), CSRP3, PPARGC1A
Dermatological Diseases and Conditions	1.29E-03-1.35E-02	ANAPC2, ATP6V0C, ETS2, CCND1, SFXN3, ODC1, MAFG, CD164, NFKBIA, RNPS1, PTSS1, KHDRBS1, PTCH1, ITGA6, MPP2, MAFF, NEDD4, KPNB1, CHST1, TRIM44, ZEB2, MAT2A, CAD, CXCL2, RTN3, CD151, DUSP16
Immune Cell Trafficking	1.29E-03-1.61E-02	DPYSL2, JAK1, NGF, CCND1, PVR, MYLK, HRH1, TXN, SERPINE1, TIMP2, PON2, ITGA6, PDE4B, ABCB1B, INHBA, KITLG, GNAI2, SEMA3A, CD40, PPIA (includes EG:268373), CORO1A, ADAM10, PLCB3, CXCL2, CD34, CD151
Inflammatory Response	1.29E-03-7.39E-03	GNAI2, KITLG, CXCL2, CSF3
Organ Morphology	1.29E-03-1.52E-02	LIF, CREM, JAK1, F2R, ADH1C (includes EG:126), CDKN2C, TWSG1, CCND1, MYLK, CAMK2D, PIM1, BRD4, CAV1, KIF5C, SERPINE1, FGF7, TIMP2, ETS1, FST, NRP2, SDC2, LMNA, CSF3, GGT1, PDGFB, INHBA, KITLG, NDE1, HTT
Reproductive System Development and Function	1.29E-03-1.2E-02	KITLG, FST, NRP2, SF1, NGF, GGT1, CCND1, FGF7, INHBA
Tumor Morphology	1.29E-03-1.58E-02	PTPRE, F2R, CLCA1 (includes EG:12722), PTCH1, PBX1, CDKN2C, CSF3, ODC1, MLL, KITLG, NFKBIA, CD40, PIM1, SDC2, CAV1, SKIL, CXCL2, SERPINE1, CSRP3, CD151
Cellular Compromise	1.45E-03-1.36E-02	CREM, SGK1, AP3D1, CNTF, BACE1, LMNA, VIM, TBK1, MAFF, CDK5R1, MAFG, SEMA3A, SOD2, RASSF1, NTRK3, STMN4, LIMA1, HTT, CAV1, CAST, TXN, CTTN, PPARGC1A
Molecular Transport	2.26E-03-1.75E-02	LIF, F2R, PRDX1, CNTF, NGF, SGMS1, MTTP, MGAT3, HMOX1, SOD2, NFKBIA, GLB1, ACSL5, FOXO3, CAV1, TXN, CAST, FGF7, PLSCR1, FAAH, LRP10, CPT1A, PON2, ATG7, FST, GM2A, ABCG2, SCD2, BCL3, P2RX7, ABCB1B, GGT1, INHBA, KPNB1, CLCN5, GNAI2, KITLG, PIP5K1A, PTPN11, SREBF1, HTT, EEF1A1, PLCB3, RUNX1, PPARGC1A
Tissue Morphology	2.71E-03-1.55E-02	PER1, LIF, CNTF, PBX1, NGF, PCOLCE, HMOX1, PRRX1, MXD1, CAV1, SMO, ATF4, CAST, DAG1, PMAIP1, SERPINE1, PTPRE, FST, TKT, P2RX7, CSF3, PDGFB, RCAN1, INHBA, KITLG, PIP5K1A, PRKAR2B, PPIA (includes EG:268373), HTT, RUNX1, PPARGC1A
Connective Tissue Disorders	2.85E-03-1.51E-02	MRC1, IL15RA, PTPN23, F2R, PBX1, MMP13, IDE, CCND1, ODC1, NR4A3, HNRNPA1, RPS3A, SOD2, CAV1, SAFB, DAG1, CAST, TXN, PMAIP1, ETS1, NONO, TBK1, PDE4B, CSF3, NEDD4, MLL, PDGFB, HSPA8, CD68, CD40, PTPN11, CLEC4E, RUNX1, PRDX2, ANAPC2, GADD45B, PRDX1, PTMA, NFKBIA, MXD1, FOXO3, HLA-B, ASPH, RPS3, CHEK2, NLRP3, TUBB2C, G6PD, MMP10, VIM, P2RX7, PRKCG, GNAI2, NTRK3, CXCL2
Endocrine System Development and Function	3.06E-03-1.24E-02	FAAH, FST, LIF, PTPN11, CNTF, HTT, HSD17B11, SAFB, RUNX1, INHBA
Free Radical Scavenging	3.22E-03-3.22E-03	SOD2, PON2, PRDX1, HTT, FOXO3, TXN, NGF, GGT1
Hair and Skin Development and Function	3.31E-03-1.52E-02	MADD, FST, NFKBIA, SOD2, PIM1, PTCH1, CLCA1 (includes EG:12722), SMO, BCL3, CCND1, INHBA, CHEK2
Drug Metabolism	3.78E-03-9.92E-03	CTNS, SOD2, FST, CD40, G6PD, RUNX1, GGT1, PDGFB, INHBA

Hypersensitivity Response	3.78E-03-3.78E-03	KITLG, NGF
Lymphoid Tissue Structure and Development	3.78E-03-1.19E-02	KITLG, F2R, CD40, PIM1, PBX1, RUNX1, P2RX7, CSF3, FGF7, MLL, MAFG
Nucleic Acid Metabolism	3.78E-03-7.39E-03	SOD2, GLB1, FAR1, ELOVL6
Organ Development	3.78E-03-1.27E-02	FST, CREM, CDKN2C, ETS2, MAN2A1, NGF, CSF3, CCND1, PDGFB, INHBA, CAMK2D, PTPN11, PIM1, LY6E, TXN, FGF7
Skeletal and Muscular Disorders	3.78E-03-1.27E-02	MRC1, ANAPC2, IL15RA, LIF, GADD45B, PRDX1, MMP13, IDE, H2AFZ, PTMA, NR4A3, HNRNPA1, SOD2, NFKBIA, SDC2, KIF21A, FOXO3, CAV1, HLA-B, SAFB, DAG1, TXN, SERPINE1, RPS3, CHEK2, FAAH, FST, NONO, NLRP3, NDRG1, TUBB2C, VIM, MMP10, LMNA, PDE4B, P2RX7, CSF3, GNAI2, HSPA8, KITLG, CD68, CD40, CLEC4E, RUNX1, CXCL2, CSRP3, PRDX2, PPARGC1A
Protein Trafficking	3.99E-03-1.52E-02	KPNB1, CLCN5, PIP5K1A, NFKBIA, SOD2, ATG7, F2R, HTT, BCL3, CAST
Immunological Disease	4.46E-03-1.52E-02	MRC1, RNF139, PER1, PRIM1, JAK1, LIF, ACO2, EIF1, PBX1, MMP13, CDKN2C, IDE, TUBB, PLA2G7, NR4A3, HRH1, HNRNPA1, SOD2, AIRE, PIM1, GLB1, ABCC8, SAFB, CAST, TXN, STX11, ETS1, CPT1A, NONO, TKT, PDE4B, CSF3, MLL, CBLB, HSPA8, CD68, CLEC4E, CD40, RUNX1, SLC11A1, PRDX2, GADD45B, PRDX1, LILRB4 (includes EG:11006), CASP4, TWSG1, NGF, SGMS1, PTMA, NFKBIA, MXD1, FOXO3, HLA-B, RPS3, CHEK2, VIM, BCL3, GGT1, KITLG, PPIA (includes EG:268373), SKIL, CXCL2
Cell-mediated Immune Response	4.64E-03-1.52E-02	DPYSL2, PBX1, ITGA6, ABCB1B, GNAI2, CBLB, SEMA3A, CD40, AIRE, PTPN11, PIM1, ADAM10, HLA-B, PLCB3, TIMP2
Carbohydrate Metabolism	4.89E-03-8.5E-03	CHST1, ACAP1, CPT1A, PTPN11, SREBF1, TKT, HTT, FOXO3, PTCH1, G6PD, VGF, PPARGC1A
Cardiovascular System Development and Function	5.32E-03-1.2E-02	CREM, TGFBFR1, F2R, LMNA, CSF3, INHBA, KITLG, HMOX1, SEMA3A, CAMK2D, PRRX1, FOXO3, CAV1, SERPINE1, TIMP2
Hepatic System Disease	6.63E-03-1.68E-02	FAAH, GADD45B, CPT1A, SLC25A4, CNTF, EIF1, TBK1, NGF, DLC1, CCND1, INHBA, MTTP, HMOX1, SOD2, CD40, SREBF1, PMAIP1, FGF7
Developmental Disorder	6.96E-03-7.39E-03	S100A6, LIF, CREM, F2R, CNTF, PBX1, MMP13, DNAJC3, NGF, TWSG1, CCND1, H2AFZ, CDK5R1, SOX2, HRH1, HMOX1, DHCR7, NFKBIA, PIM1, FOXO3, CAV1, ATF4, FOSL2, DAG1, ASPH, TXN, SERPINE1, OPRS1, ATG7, FST, PTCH1, ITGA6, LMNA, REV3L, BUB1B, CSF3, GGT1, RCAN1, KITLG, GNAI2, SREBF1, CRTAP, HTT, SF1, CSRP3
Endocrine System Disorders	7.39E-03-1.05E-02	MAGED1, SOD2, PRDX1, GLB1, SREBF1, CNTF, ABCC8, GLUD1, IDE, CCND1, HADH, PRDX2
Cell Signaling	9.92E-03-9.92E-03	GNAI2, TGFBFR1, GADD45B, F2R
Metabolic Disease	1.05E-02-1.32E-02	NR4A3, SREBF1, CNTF, ABCC8, GLUD1, IDE, ACADM, HADH, PPARGC1A
Digestive System Development and Function	1.15E-02-1.2E-02	TGFBFR1, PRRX1, ASPH, FGF7, CHD7, PDGFB
Hepatic System Development and Function	1.2E-02-1.2E-02	SREBF1, MMP13
Ophthalmic Disease	1.2E-02-1.2E-02	FAAH, KIF21A
Respiratory System Development and Function	1.2E-02-1.2E-02	NFKBIA, TGFBFR1
Visual System Development and Function	1.2E-02-1.2E-02	FOSL2, INHBA
Inflammatory Disease	1.21E-02-1.21E-02	MRC1, ANAPC2, IL15RA, GADD45B, PRDX1, MMP13, IDE, PTMA, NR4A3, HNRNPA1, NFKBIA, SOD2, FOXO3, HLA-B, SAFB, TXN, RPS3, CHEK2, NLRP3, NONO, TUBB2C, MMP10, VIM, P2RX7, PDE4B, CSF3, GNAI2, HSPA8, CD68, CD40, CLEC4E, RUNX1, CXCL2, PRDX2
Amino Acid Metabolism	1.32E-02-1.32E-02	LIF, JAK1, TGFBFR1, SGK1, MAP4K4, IKBKE, P2RX7, RICTOR, CCND1, PDGFB, PHKA2, CDK5R1, PRKCG, KITLG, MYLK, PRKAR2B, PIM1, BRSK1, BRD4, ADAM10, SNF1LK, RPS6KA4, CHEK2

Table S6B.

Ingenuity Canonical Pathways	P-value	Molecules
Glycosaminoglycan Degradation	0.002951209	SULF1, GLB1, IDS, GM2A, ARSB
NRF2-mediated Oxidative Stress Response	0.009772372	PRDX1, DNAJC3, DNAJC10, MAFF, PRKCG, MAFG, HMOX1, ERP29, SOD2, VCP, ATF4, TXN, EPHX1
N-Glycan Degradation	0.013182567	GLB1, GM2A, MAN2A1, MAN1A2
PPAR Signaling	0.015488166	NR2F1, NFKBIA, HSP90AB1, MAP4K4, BCL3, IKBKE, PDGFB, PPARGC1A
IL-10 Signaling	0.021877616	HMOX1, JAK1, NFKBIA, MAP4K4, BCL3, IKBKE
GM-CSF Signaling	0.023442288	ETS1, CAMK2D, PTPN11, PIM1, RUNX1, CCND1
PI3K/AKT Signaling	0.023988329	JAK1, NFKBIA, HSP90AB1, YWHAB, FOXO3, HLA-B, BCL3, IKBKE, CCND1
Endoplasmic Reticulum Stress Pathway	0.025118864	DNAJC3, ATF4, MBTPS2
Phenylalanine Metabolism	0.029512092	FAAH, PRDX1, SMOX, PRDX2
N-Glycan Biosynthesis	0.030902954	STT3B, MGAT3, MAN2A1, MAN1A2, MGAT2
Glycosphingolipid Biosynthesis - Ganglioseries	0.047863009	GLB1, ST3GAL1, GM2A

Table S7. IPA analysis of the biological functions (A) plus signaling and metabolic pathways (B) that were significantly over-represented in the 434-member 'shared ChAG-cancer signature' mGEP response.

Table S7A.

Category	P-value	Molecules
Cancer	3.75E-13-1.58E-02	MALAT1, DPYSL2, MAGED1, PRIM1, TGFBR1, F2R, SGK1, EIF1, DNAJC3, CCNB2, CDKN2C, CCND1, PCOLCE, MYLK, MXD3, SOD2, GLB1, CAV1, TXN, SERPINE1, TIMP2, ETS1, CLCA1 (includes EG:12722), PTCH1, ITGA6, ANO6, TBK1, NEDD4, C10ORF81, HSPA8, CLCN5, PATZ1, RSU1, RPS25, RUNX1, FH, EPHX1, PRDX2, ANAPC2, GADD45B, PRDX1, CNTF, PTPN14, HSD17B11, CASP4, SGMS1, PTMA, RASSF1, HSP90AB1, BICC1, HLA-B, LY6E, ASPH, OPRS1, TUBB2C, ABCG2, TRIM28, VIM, P2RX7, GGT1, DLC1, CPEB4, SEMA3A, BAT1, SREBF1, NTRK3, ZEB2, RIPK3, ADAM10, FEN1, TXNDC17, JAK1, PBX1, MAP4K4, RNF26, TUBB, PVR, SOX2, NR2F1, USP7, CAMK2D, CRIP1, ASXL2, ACSL5, CHD1 (includes EG:1105), C9ORF167, CAST, PTPRE, GABPB2, PPIG, PGLYRP2, GM2A, OPCML, KCNK2, OVGP1, BUB1B, ATAD2, DDX17, KAT2B, PIP5K1A, PTPN11, SF1, NUAK1, CTTN, TMSB10, CD151, DCBLD2, SULF1, S100A6, CDC20, TRAM1, RARRES1, ETS2, NGF, PHKA2, PDCD4, MGAT3, HMOX1, NFKBIA, PLK2, VCP, NEK7, LASP1, CHEK2, PARVA, PSRC1, G6PD, GLUD1, RPL23, GNAI2, CHST1, PRKAR2B, NDUFV2, CXXC5, EEF1A1, FLII, MAT2A, SKIL, IVD, SLC7A3, CASP8AP2
Cell Death	2.61E-11-1.54E-02	MAGED1, TGFBR1, F2R, SGK1, CDKN2C, IDE, CCND1, PEM, MYLK, SOD2, MXD3, CAV1, ATF4, TXN, SERPINE1, TIMP2, ETS1, ITGA6, TBK1, HSPA8, NR1D1, RUNX1, PRDX2, EPHX1, GADD45B, PRDX1, CNTF, CTNNA1, CASP4, QARS, SGMS1, PTMA, RASSF1, HSP90AB1, RNPS1, BRD4, HLA-B, KHDRBS1, ABCG2, TRIM28, P2RX7, DLC1, GGT1, SEMA3A, KLF7, NTRK3, ZEB2, RIPK3, FEN1, TXNDC17, PPARGC1A, PHLDA1, JAK1, TUBB, NR2F1, USP7, CAMK2D, AIRE, FOSL2, CAST, DAG1, PTPRE, RAD54L, LMNA, BACE1, BUB1B, CBLB, KAT2B, PTPN11, NUAK1, TMSB10, SULF1, S100A6, CDC20, ITM2B, ETS2, NGF, PHKA2, PDCD4, MGAT3, HMOX1, NFKBIA, PLK2, VCP, CHEK2, PLSCR1, FAAH, DAP, PARVA, SLC25A4, G6PD, GLUD1, PRKAR2B, NDUFV2, EEF1A1, SKIL, CASP8AP2
Genetic Disorder	6.53E-11-1.47E-02	MALAT1, DPYSL2, MAGED1, PRIM1, TGFBR1, F2R, SGK1, EIF1, CCNB2, CDKN2C, IDE, CCND1, SOD2, GLB1, KIF21A, CAV1, TXN, SERPINE1, TIMP2, CTNS, ETS1, TKT, PTCH1, ITGA6, ANO6, HSPA8, CLCN5, NR1D1, RUNX1, FH, PRDX2, EPHX1, SEPN1 (includes EG:57190), ANAPC2, GADD45B, PRDX1, CNTF, CA13, CTNNA1, HSD17B11, RPL31, CASP4, TWSG1, PTMA, SEC61A1, RASSF1, HSP90AB1, BICC1, HLA-B, LY6E, ASPH, OPRS1, TUBB2C, ABCG2, VIM, P2RX7, GGT1, CPEB4, SEMA3A, PSME1, NPTN, SREBF1, NTRK3, NDE1, GPD1L, ZEB2, FEN1, PPARGC1A, MAP4K4, TUBB, MTTTP, SOX2, CRIP1, AIRE, ABCC8, NONO, CPT1A, GM2A, KCNK2, OPCML, ZNF624, ENO2, RAD54L, BACE1, LMNA, MUT, BUB1B, ATAD2, TUBA1B, CBLB, PTPN11, CRTAP, SF1, SUOX, MGAT2, CD151, S100A6, LITAF, CDC20, ITM2B, TRAM1, NGF, PDCD4, HMOX1, DHCR7, NFKBIA, PLK2, VCP, ARSB, IER5, ACADM, LASP1, CHEK2, FAAH, SLC25A4, G6PD, SCD2, GLUD1, MAN2A1, GNAI2, PRKAR2B, NDUFV2, TMED10, EEF1A1, IVD, HADH
Cellular Growth and Proliferation	2.97E-08-1.57E-02	MAGED1, TGFBR1, F2R, SGK1, EIF1, DNAJC3, CDKN2C, CCND1, SOD2, MXD3, CAV1, ATF4, TXN, SERPINE1, TIMP2, ETS1, PTCH1, CLCA1 (includes EG:12722), ITGA6, PATZ1, NR1D1, ANAPC5, RUNX1, PRDX2, GADD45B, PRDX1, CNTF, PRDX4, PTPN14, CTNNA1, H2AFZ, SGMS1, PTMA, MAFG, RASSF1, SEC61A1, BRD4, LY6E, ASPH, NRP2, KHDRBS1, TRIM28, VIM, P2RX7, DLC1, GGT1, SEMA3A, SREBF1, NTRK3, NDE1, TBC1D8, ZEB2, ADAM10, PHLDA1, JAK1, PBX1, MAP4K4, ATP5G2, PVR, MTTTP, SOX2, USP7, CRIP1, ACSL5, FOSL2, CAST, PTPRE, GABPB2, KCNK2, LMNA, RPL23A (includes EG:6147), BUB1B, ATAD2, DDX17, CBLB, KAT2B, PTPN11, LIMA1, SF1, TMSB10, FADS1, DCBLD2, S100A6, LITAF, ETS2, RARRES1, NGF, WDR6 (includes EG:11180), MGAT3, HMOX1, DHCR7, NFKBIA, PLK2, CHEK2, PLSCR1, DAP, PSRC1, CHERP, G6PD, ERO1L, GNAI2, PRKAR2B, SKIL
Hematological Disease	4.2E-08-1.58E-02	STRN, PRIM1, JAK1, CDC20, F2R, PRDX1, PBX1, TWSG1, TUBB, NEXN, CCND1, HMOX1, SOD2, NFKBIA, CAMK2D, HSP90AB1, CAV1, ABCC8, ATF4, FOSL2, SERPINE1, ACADM, LASP1, CHEK2, PLSCR1, TIMP2, ETS1, OPRS1, CPT1A, NONO, NRP2, TUBB2C, TKT, G6PD, GLUD1, MAN2A1, P2RX7, ANXA6, PTPN11, NTRK3, SREBF1, FEN1, RUNX1, CD151, PPARGC1A
Gastrointestinal Disease	6.84E-08-1.02E-02	DPYSL2, F2R, SGK1, CNTF, HSD17B11, CCNB2, CDKN2C, MAP4K4, TUBB, PDCD4, PTMA, MTTTP, PCOLCE, MYLK, NR2F1, HMOX1, HSP90AB1, CRIP1, ACSL5, CAV1, C9ORF167, NEK7, SERPINE1, TIMP2, TUBB2C, KCNK2, ITGA6, OVGP1, BUB1B, CPEB4, HSPA8, PTPN11, NUAK1, FEN1, MAT2A, IVD
Cellular Function and Maintenance	1.79E-07-1.27E-02	DPYSL2, SULF1, TGFBR1, PRDX1, SGK1, CDKN2C, NGF, TUBB, CCND1, PTMA, MTTTP, NR2F1, USP7, NFKBIA, SOD2, HSP90AB1, AIRE, GLB1, VCP, CAV1, HLA-B, ABCC8, CHEK2, ETS1, PSRC1, ABCG2, ERO1L, P2RX7, CBLB, SEMA3A, PRKAR2B, NTRK3, RSU1, PPARGC1A
Gene Expression	7.27E-07-1.35E-02	PRIM1, MAGED1, JAK1, JMDJ3, TGFBR1, F2R, SGK1, MGA (includes EG:23269), PBX1, CDKN2C, BAZ1A, MAP4K4, CCND1, SOX2, PEM, NR2F1, SOD2, CAMK2D, MXD3, CHD2, CAV1, ATF4, CHD1 (includes EG:1105), FOSL2, SMARCC2 (includes EG:6601), TXN, SERPINE1, ETS1, ITGA6, RAD54L, LMNA, OVGP1, TBK1, DDX17, KAT2B, PATZ1, PTPN11, NR1D1, SF1, RUNX1, LITAF, PRDX1, PRDX4, CNTF, ETS2, NGF, PTMA, PDCD4, NFKBIA, SEC61A1, RNPS1, PLK2, BTAF1, VEZF1, KHDRBS1, TRIM28, SCD2, AXUD1, HIVEP3, CHST1, PRKAR2B, KLF7, NTRK3, SREBF1, FLII, RPS6KA4, SKIL, PTRF, PPARGC1A
Organismal Survival	1.3E-06-3.19E-03	TGFBR1, JAK1, F2R, CNTF, PBX1, ETS2, MAP4K4, IDE, TWSG1, CCND1, MAFG, MTTTP, HMOX1, SOD2, NFKBIA, HSP90AB1, BRD4, LY6E, ASPH, TXN, SERPINE1, ETS1, NRP2, PTCH1, ITGA6, BACE1, MAN2A1, TBK1, PISD, GGT1, GNAI2, CBLB, KAT2B, PTPN11, SREBF1, NTRK3, TMED10, FLII, SKIL
Post-Translational Modification	1.81E-06-1.58E-02	JAK1, TGFBR1, F2R, PRDX1, SGK1, PRDX4, CNTF, PTPN14, MAP4K4, NGF, CCND1, PHKA2, MTTTP, MYLK, USP7, FKBP9, SOD2, CAMK2D, HSP90AB1, BRD4, TXN, CAST, CHEK2, STT3B, PTPRE, TBCA, PTCH1, ITGA6, GLUD1, ERO1L, P2RX7, NEDD4, HSPA8, CBLB, KAT2B, PRKAR2B, ERP29, PTPN11, NTRK3, ADAM10, RIPK3, RPS6KA4, MGAT2, PPARGC1A
Neurological Disease	5.14E-06-1.54E-02	DPYSL2, MAGED1, F2R, SGK1, CDKN2C, IDE, CCND1, NR2F1, SOX2, MXD3, SOD2, GLB1, GABARAPL1, TXN, DAG1, CAST, SERPINE1, CPT1A, GM2A, TKT, PTCH1, ZNF624, ENO2, BACE1, RAD54L, LMNA, TUBA1B, ATAD2, HSPA8, CBLB, NR1D1, RUNX1, FH, PRDX2, S100A6, LITAF, PRDX1, CNTF, ITM2B, CA13, TRAM1, CTNNA1, RPL31, CASP4, NGF, PTMA, MAFG, HMOX1, DHCR7, SEC61A1, NFKBIA, PLK2, HLA-B, ASPH, IER5, ACADM, OPRS1, SLC25A4, TUBB2C, G6PD, SCD2, GLUD1, VIM, P2RX7, SEMA3A, PSME1, NPTN, PRKAR2B, KLF7, NDUFV2, SREBF1, NTRK3, ZEB2, EEF1A1, HADH, PPARGC1A
Lipid Metabolism	5.99E-06-1.35E-02	F2R, CNTF, IDE, NGF, SGMS1, MTTTP, MGAT3, HMOX1, DHCR7, SOD2, GLB1, ACSL5, CAV1, ACADM, PLSCR1, FAAH, CPT1A, LRP10, GM2A, ABCG2, FAR1, G6PD, SCD2, LMNA, VIM, P2RX7, PISD, ELOVL6, SEMA3A, PIP5K1A, PRKAR2B, PTPN11, LPCAT1, SREBF1, EEF1A1, PPARGC1A, FADS1, PRDX2
Small Molecule Biochemistry	5.99E-06-1.58E-02	TGFBR1, JAK1, F2R, SGK1, MAP4K4, IDE, CCND1, MTTTP, MYLK, SOD2, GLB1, ACSL5, CAV1, TXN, ETS1, PTPRE, LRP10, CPT1A, TKT, GM2A, PTCH1, MAN1A2, ELOVL6, KAT2B, PIP5K1A, PTPN11, PLCB3, PRDX2, FADS1, PRDX1, CNTF, PTPN14, NGF, PHKA2, SGMS1, MGAT3, HMOX1, DHCR7, BRD4, ACADM, CHEK2, PLSCR1, FAAH, ABCG2, FAR1, G6PD, SCD2, GLUD1, VIM, MAN2A1, P2RX7, PISD, GGT1, GNAI2, CHST1, SEMA3A, PRKAR2B, SREBF1, LPCAT1, EEF1A1, ADAM10, RPS6KA4, PPARGC1A

Reproductive System Disease	8.56E-06-1.57E-02	MALAT1, MAGED1, JAK1, TGFBF1, F2R, SGK1, EIF1, CDKN2C, MAP4K4, CCND1, SOX2, USP7, CAMK2D, SOD2, CRIP1, AIRE, CAV1, FOSL2, ATF4, TXN, SERPINE1, TIMP2, ETS1, PTPRE, KCNK2, ITGA6, ANO6, TBK1, OVGP1, BUB1B, C10ORF81, ATAD2, CLCN5, PTPN11, FH, TMSB10, PRDX2, CD151, DCBLD2, SULF1, GADD45B, CDC20, PTPN14, CTNNA1, RARRES1, ETS2, CASP4, NGF, PHKA2, SGMS1, PDCCD4, PTMA, MGAT3, RASSF1, NFKBIA, HSP90AB1, PLK2, VCP, LY6E, NEK7, CHEK2, LASP1, OPRS1, PARVA, TUBB2C, ABCG2, VIM, DLC1, GNAI2, SEMA3A, PRKAR2B, NTRK3, CXXC5, RIPK3, FLII, TXNDC17, CASP8AP2
Cellular Movement	1.15E-05-1.39E-02	DPYSL2, JAK1, TGFBF1, F2R, CCNB2, MAP4K4, NEXN, TUBB, CCND1, PVR, PEM, MYLK, NR2F1, SOD2, AIRE, CAV1, FOSL2, CAST, TXN, SERPINE1, TIMP2, ETS1, PON2, ITGA6, PIP5K1A, NR1D1, PTPN11, PLCB3, NUAQ1, CTTN, CD151, DCBLD2, SULF1, S100A6, PTPN14, RARRES1, ETS2, NGF, PDCCD4, MGAT3, NFKBIA, RASSF1, HSP90AB1, LASP1, LIMS2, NRP2, TUBB2C, G6PD, VIM, DLC1, GNAI2, CHST1, SEMA3A, SREBF1, NDE1, ZEB2, ADAM10
Cellular Development	1.53E-05-1.47E-02	DPYSL2, MAGED1, JAK1, TGFBF1, F2R, PBX1, DNAJC3, MAP4K4, CCND1, PVR, SOX2, NR2F1, SOD2, AIRE, CAV1, ATF4, FOSL2, CHD1 (includes EG:1105), DAG1, CAST, SERPINE1, TIMP2, ETS1, ITGA6, LMNA, KAT2B, PIP5K1A, PATZ1, PTPN11, NR1D1, SF1, RUNX1, CTTN, PRDX2, CD151, S100A6, GADD45B, CNTF, PTPN14, CTNNA1, ETS2, NGF, TWSG1, H2AFZ, PTMA, MAFG, DHCR7, NFKBIA, PTGFRN, RASSF1, BRD4, ACADM, PLSCR1, OPRS1, PARVA, VEZF1, NRP2, KHDRBS1, AP3D1, G6PD, P2RX7, DLC1, SEMA3A, PRKAR2B, SREBF1, NTRK3, ADAM10, SKIL, PPARGC1A
Connective Tissue Development and Function	1.53E-05-1.35E-02	GADD45B, F2R, PRDX1, PBX1, NGF, CCND1, PTMA, PCOLCE, RASSF1, NFKBIA, CAV1, BRD4, FOSL2, CAST, SERPINE1, KHDRBS1, LMNA, P2RX7, GGT1, PIP5K1A, PRKAR2B, PTPN11, SREBF1, NTRK3, SKIL, PPARGC1A
Respiratory Disease	1.82E-05-9.13E-03	MALAT1, MAGED1, GADD45B, PSRC1, CDC20, TUBB2C, PRDX1, TKT, CCNB2, CDKN2C, MAP4K4, BUB1B, TUBB, DLC1, RASSF1, SOD2, HSP90AB1, PTPN11, EEF1A1, CAV1, CHEK2
Cell Morphology	1.93E-05-1.55E-02	DPYSL2, PHLDA1, F2R, PBX1, DNAJC3, CCND1, PVR, NR2F1, MYLK, MXD3, SOD2, CAV1, CAST, TXN, SERPINE1, TIMP2, ETS1, PTPRE, ITGA6, LMNA, NEDD4, PIP5K1A, PTPN11, LIMA1, PLCB3, RSU1, RUNX1, CTTN, CD151, SULF1, PRDX1, CNTF, PTPN14, CTNNA1, ETS2, NGF, PDCCD4, MGAT3, HMOX1, NFKBIA, RASSF1, PTGFRN, BRD4, ASPH, PLSCR1, PARVA, NRP2, G6PD, VIM, P2RX7, DLC1, SEMA3A, PRKAR2B, ANXA6, NTRK3, ADAM10, CDGAP, SKIL, PPARGC1A
Cell Cycle	4.2E-05-1.59E-02	SULF1, MAGED1, GADD45B, CDC20, SGK1, CDKN2C, NGF, TUBB, WDR6 (includes EG:11180), CCND1, PVR, SOX2, HMOX1, SOD2, NFKBIA, RASSF1, MXD3, CAMK2D, PLK2, BRD4, CAV1, FOSL2, TXN, CAST, CHEK2, TIMP2, PSRC1, KHDRBS1, LMNA, RAD54L, RPL23, BUB1B, HSPA8, GNAI2, KAT2B, PTPN11, NTRK3, NDE1, ANAPC5, SKIL, RUNX1
Molecular Transport	6.22E-05-1.47E-02	F2R, PRDX1, CNTF, NGF, SGMS1, MTTP, MGAT3, HMOX1, CAMK2D, NFKBIA, SOD2, GLB1, ACSL5, CAV1, TXN, PLSCR1, FAAH, LRP10, CPT1A, PON2, GM2A, ABCG2, SCD2, P2RX7, GGT1, GNAI2, KPNB1, PIP5K1A, PTPN11, SREBF1, EEF1A1, PLCB3, PRDX2, PPARGC1A
Cellular Assembly and Organization	6.44E-05-1.55E-02	DPYSL2, TGFBF1, F2R, SGK1, CNTF, PTPN14, IDE, TUBB, NGF, CCND1, PVR, HOOK3, SOD2, RASSF1, STMN4, EHD2, ABCC8, CAV1, DAG1, ARSB, CAST, TXN, SERPINE1, LASP1, PARVA, PSRC1, PACSIN2, ITGA6, LMNA, VIM, BACE1, MAN2A1, P2RX7, DLC1, GNAI2, SEMA3A, PIP5K1A, ANXA6, PTPN11, NTRK3, LIMA1, EEF1A1, ADAM10, FLII, RSU1, CTTN, TMSB10, PPARGC1A
Organismal Development	8.87E-05-1.35E-02	TGFBF1, F2R, CNTF, PBX1, CTNNA1, CCNB2, TWSG1, CCND1, H2AFZ, MTTP, PCOLCE, MAFG, HMOX1, NFKBIA, GLB1, PLK2, BRD4, CAV1, FOSL2, ATF4, LY6E, ASPH, SERPINE1, TIMP2, FAAH, PON2, NRP2, TKT, TRIM28, PTCH1, ITGA6, LMNA, MAN2A1, NEDD4, KAT2B, PIP5K1A, LUC7L, PTPN11, ZEB2, ADAM10, SF1, FLII, RUNX1
Cell Signaling	1.23E-04-1.47E-02	LITAF, TGFBF1, GADD45B, JAK1, F2R, CNTF, TBK1, MAP4K4, P2RX7, NGF, GNAI2, HMOX1, CAMK2D, PLK2, CXXC5, CAV1, RIPK3, RPS6KA4, TIMP2
Metabolic Disease	1.48E-04-1.14E-02	SGK1, CNTF, CA13, IDE, CCND1, MTTP, HMOX1, DHCR7, SOD2, NFKBIA, GLB1, VCP, ABCC8, ARSB, TXN, SERPINE1, ACADM, FAAH, CTNS, ETS1, CPT1A, LMNA, GLUD1, MUT, CBLB, SREBF1, FH, IVD, SUOX, MGAT2, HADH, PPARGC1A
Developmental Disorder	2.57E-04-5.08E-03	S100A6, F2R, CNTF, PBX1, DNAJC3, NGF, TWSG1, CCND1, H2AFZ, SOX2, HMOX1, DHCR7, NFKBIA, CAV1, FOSL2, ATF4, ASPH, TXN, DAG1, SERPINE1, OPRS1, PTCH1, ITGA6, LMNA, BUB1B, GGT1, GNAI2, PTPN11, CRTAP, SREBF1, SF1
Endocrine System Disorders	2.83E-04-7.96E-03	MAGED1, PRDX1, CNTF, G6PD, GLUD1, IDE, NGF, CCND1, SOD2, NFKBIA, SREBF1, GLB1, ABCC8, HADH, PRDX2
Hepatic System Disease	2.83E-04-1.47E-02	FAAH, SLC25A4, GADD45B, CPT1A, TUBB2C, ABCG2, CNTF, TBK1, MUT, NGF, GGT1, CCND1, MTTP, HMOX1, SOD2, PTPN11, SREBF1, BICC1, TIMP2
Cellular Compromise	3.07E-04-1.09E-02	JAK1, SGK1, IDE, RNF26, SFXN3, SOD2, ASXL2, CAV1, CAST, TXN, DAG1, SERPINE1, TIMP2, PON2, GABPB2, GM2A, LMNA, BACE1, TBK1, NEDD4, LIMA1, CTTN, ANAPC2, PRDX1, CNTF, ETS2, MAFG, HMOX1, RASSF1, RNPS1, STMN4, PTDSS1, FAAH, PARVA, KHDRBS1, AP3D1, VIM, P2RX7, KPNB1, SEMA3A, CHST1, NTRK3, TRIM44, ADAM10, FLII, CAD, MAT2A, RTN3, PPARGC1A
Dermatological Diseases and Conditions	3.31E-04-8.61E-03	ANAPC2, KHDRBS1, ITGA6, ETS2, CCND1, SFXN3, NEDD4, KPNB1, CHST1, NFKBIA, RNPS1, TRIM44, ZEB2, PTDSS1, CAD, MAT2A, RTN3, CD151
Nervous System Development and Function	3.31E-04-1.55E-02	DPYSL2, TGFBF1, F2R, SGK1, ITM2B, CNTF, CTNNA1, NGF, TWSG1, NR2F1, SOX2, SOD2, MXD3, ARSB, TXN, DAG1, SERPINE1, CTNS, OPRS1, PTPRE, NRP2, SH3GL3, CHERP, ITGA6, VIM, BACE1, DLC1, GNAI2, SEMA3A, PIP5K1A, KLF7, NDUFV2, PTPN11, NR1D1, NTRK3, NDE1, ZEB2, ADAM10, PLCB3, RSU1, RUNX1
Tumor Morphology	3.31E-04-1.09E-02	PTPRE, F2R, CLCA1 (includes EG:12722), PTCH1, PBX1, CDKN2C, BUB1B, CCND1, MGAT3, NFKBIA, RASSF1, CAV1, SKIL, SERPINE1, CD151
Cardiovascular System Development and Function	3.51E-04-1.09E-02	ETS1, TGFBF1, F2R, KCNK2, G6PD, LMNA, HMOX1, SEMA3A, CAMK2D, CAV1, SERPINE1, CD151, TIMP2
Organ Morphology	3.51E-04-5.43E-03	MYLK, CAMK2D, NRP2, F2R, CAV1, SCD2, LMNA, GGT1, SERPINE1, CCND1, TIMP2
Protein Folding	3.97E-04-3.97E-04	HSPA8, FKBP9, ERP29, HSP90AB1, TBCA, ERO1L, TXN
Protein Synthesis	4.48E-04-1.58E-02	ANAPC2, PHLDA1, DGKD (includes EG:8527), CDC20, CNTF, CTNNA1, EIF1, RPL31, CASP4, IDE, H2AFZ, CCND1, PCOLCE, PDCCD4, VCP, CAV1, RNF128, CAST, SERPINE1, TIMP2, BACE1, RPL23A (includes EG:6147), P2RX7, NEDD4, RPL37, CBLB, PTPN11, ANAPC5, EEF1A1, IVD, RPL41
DNA Replication, Recombination, and Repair	4.54E-04-6.54E-03	PTPRE, F2R, SGK1, CNTF, RAD54L, CDKN2C, OVGP1, NGF, CCND1, GNAI2, NFKBIA, RASSF1, SOD2, PTPN11, NTRK3, VCP, CAV1, FEN1, CHEK2, TIMP2
Tissue Morphology	5.21E-04-1.4E-02	F2R, CNTF, G6PD, P2RX7, NGF, PCOLCE, GNAI2, MYLK, HMOX1, PIP5K1A, PRKAR2B, KLF7, CAMK2D, ANXA6, NTRK3, CAV1, FLII, DAG1, ASPH, SERPINE1, PPARGC1A
Embryonic Development	5.35E-04-1.35E-02	ANAPC2, TGFBF1, CTNNA1, PBX1, ETS2, CCNB2, MAP4K4, TWSG1, CCND1, SFXN3, MAFG, SOX2, RASSF1, MXD3, RNPS1, PTDSS1, LY6E, ASPH, DAG1, CHEK2, KHDRBS1, NRP2, PTCH1, MAN2A1, NEDD4, KPNB1, CHST1, NDE1, TRIM44, ZEB2, ADAM10, RUNX1, CAD, MAT2A, RTN3

Infectious Disease	5.35E-04-3.26E-03	ANAPC2, PARVA, JAK1, KHDRBS1, GABPB2, GM2A, ETS2, TBK1, RNF26, NEDD4, SFXN3, KPNB1, CHST1, RNPS1, ASXL2, TRIM44, ADAM10, CAV1, PTDSS1, FLII, DAG1, CAD, MAT2A, RTN3
Cell-To-Cell Signaling and Interaction	5.47E-04-1.27E-02	DPYSL2, SULF1, JAK1, PRDX1, CNTF, PTPN14, NGF, CCND1, PTMA, HMOX1, SOD2, CAV1, ABCC8, ARSB, VEZF1, ABCG2, ITGA6, G6PD, VIM, GNAI2, CBLB, PRKAR2B, NTRK3, RSU1, SUOX, PRDX2, CD151
Organismal Injury and Abnormalities	5.81E-04-8.61E-03	ETS1, HMOX1, NFKBIA, SOD2, CNTF, LMNA, NGF, SERPINE1, PLSCR1
Immune Cell Trafficking	6.55E-04-1.39E-02	DPYSL2, PON2, JAK1, F2R, ITGA6, NGF, CCND1, PVR, MYLK, GNAI2, CHST1, SEMA3A, NFKBIA, SREBF1, ADAM10, PLCB3, CAST, TXN, SERPINE1, TIMP2, CD151
Connective Tissue Disorders	6.75E-04-1.36E-02	FAAH, ETS1, F2R, PBX1, G6PD, TBK1, NGF, NEDD4, CCND1, PTPN11, NTRK3, CAV1, DAG1, CAST, RUNX1, ASPH, TIMP2
Drug Metabolism	7.29E-04-7.29E-04	CTNS, SOD2, G6PD, GGT1
Protein Degradation	7.6E-04-6.74E-03	ANAPC2, CDC20, BACE1, CASP4, P2RX7, IDE, NEDD4, PCOLCE, CBLB, VCP, ANAPC5, CAST, SERPINE1, TIMP2
Nucleic Acid Metabolism	9.8E-04-4.68E-03	SOD2, GLB1, FAR1, IDE, ELOVL6
Skeletal and Muscular Disorders	9.8E-04-1.54E-02	SEPN1 (includes EG:57190), ANAPC2, GADD45B, PRDX1, CNTF, CA13, IDE, NGF, PTMA, SOD2, NFKBIA, VCP, KIF21A, HLA-B, DAG1, TXN, SERPINE1, CHEK2, ETS1, FAAH, NONO, TUBB2C, VIM, LMNA, P2RX7, GGT1, GNAI2, CLCN5, HSPA8, CRTAP, RUNX1, PRDX2, PPARGC1A
Skeletal and Muscular System Development and Function	9.8E-04-1.47E-02	SULF1, JAK1, F2R, CNTF, ITGA6, LMNA, TWSG1, GNAI2, MYLK, NFKBIA, ANXA6, CAMK2D, CAV1, FOSL2, FLII, CAST, DAG1, ASPH, GADD45B, F2R, CNTF, PBX1, CTNNA1, ETS2, MAP4K4, NGF, TWSG1, SOX2, HMOX1, NFKBIA, CAV1, ATF4, LY6E, FOSL2, CAST, ARSB, DAG1, SERPINE1, TIMP2, ARHGAP22, NRP2, PTCH1, ITGA6, BACE1, P2RX7, GGT1, GNAI2, SEMA3A, LUC7L, NDUFV2, PTPN11, SREBF1, NTRK3, PLCB3, FLII, FEN1, RUNX1
Tissue Development	9.8E-04-1.58E-02	
Amino Acid Metabolism	1.01E-03-1.58E-02	PTPRE, TGFBF1, JAK1, SGK1, PTPN14, GLUD1, MAP4K4, P2RX7, CCND1, PHKA2, MYLK, KAT2B, PRKAR2B, PTPN11, BRD4, ADAM10, RPS6KA4, CHEK2
Cell-mediated Immune Response	1.05E-03-1.88E-03	CBLB, DPYSL2, GNAI2, SEMA3A, AIRE, HLA-B, ITGA6, ADAM10, PLCB3, TIMP2
Hematological System Development and Function	1.17E-03-1.39E-02	TGFBF1, JAK1, F2R, PBX1, NGF, TWSG1, CCND1, PVR, MYLK, SOD2, NFKBIA, AIRE, HLA-B, CAV1, TXN, CAST, SERPINE1, TIMP2, PLSCR1, ETS1, PON2, AP3D1, G6PD, CBLB, GNAI2, CHST1, SEMA3A, PATZ1, PTPN11, SREBF1, ADAM10, PLCB3, RUNX1, CD151, PRDX2
Free Radical Scavenging	1.17E-03-1.07E-02	ETS1, JAK1, PON2, SOD2, F2R, PRDX1, P2RX7, TXN, NGF, GGT1
Cardiovascular Disease	1.57E-03-1.35E-02	S100A6, TGFBF1, F2R, CA13, CTNNA1, DNAJC3, NGF, H2AFZ, CCND1, HMOX1, SOD2, NFKBIA, CAV1, ABCC8, CAST, TXN, SERPINE1, TIMP2, ETS1, OPRS1, TUBB2C, PTCH1, LMNA, GNAI2, PTPN11, GPD1L, PPARGC1A, EPHX1
Renal and Urological Disease	1.8E-03-9.13E-03	ANAPC2, SGK1, CA13, ETS2, CCND1, SFXN3, HMOX1, NFKBIA, RNPS1, BICC1, PTDSS1, SERPINE1, TIMP2, CTNS, OPRS1, KHDRBS1, TUBB2C, PTCH1, NEDD4, CLCN5, KPNB1, CHST1, SREBF1, TRIM44, MAT2A, CAD, FH, RTN3, CD151
Hair and Skin Development and Function	1.88E-03-8.61E-03	MAGED1, NFKBIA, SOD2, ABCG2, CLCA1 (includes EG:12722), PTCH1, PBX1, CCND1, CHEK2, PTMA
Hematopoiesis	1.88E-03-1.88E-03	SEMA3A, ITGA6, TIMP2
Lymphoid Tissue Structure and Development	2.04E-03-2.04E-03	TGFBF1, PBX1, CCNB2, PRDX2
Organ Development	2.04E-03-1.57E-02	TGFBF1, PBX1, ETS2, CDKN2C, CCNB2, NGF, TWSG1, CCND1, SOX2, NR2F1, DHCR7, CAMK2D, SOD2, HSP90AB1, LY6E, FOSL2, TXN, ACADM, TIMP2, CTNS, NRP2, ITGA6, MAN2A1, DLC1, PTPN11, NTRK3, NDE1, RUNX1, PRDX2
Protein Trafficking	2.04E-03-2.04E-03	KPNB1, NFKBIA, SOD2, F2R
Immunological Disease	2.31E-03-1.11E-02	PRIM1, JAK1, GADD45B, PRDX1, EIF1, PBX1, CDKN2C, CASP4, IDE, TWSG1, TUBB, NGF, SGMS1, PTMA, SOD2, NFKBIA, AIRE, GLB1, HLA-B, ABCC8, TXN, CHEK2, ETS1, CPT1A, NONO, TKT, VIM, GGT1, CBLB, HSPA8, RUNX1, SKIL, PRDX2
Ophthalmic Disease	3.19E-03-3.19E-03	FAAH, KIF21A
Respiratory System Development and Function	3.19E-03-3.19E-03	NFKBIA, TGFBF1
Inflammatory Response	3.37E-03-7.08E-03	GNAI2, SEMA3A, F2R, PLCB3, CAST, TIMP2
Carbohydrate Metabolism	3.67E-03-1.35E-02	CHST1, CPT1A, PTPN11, SREBF1, TKT, PTCH1, EEF1A1, G6PD, MAN1A2, MAN2A1, NGF, PPARGC1A
Reproductive System Development and Function	5.43E-03-5.43E-03	NRP2, GGT1, CCND1
Hepatic System Development and Function	6.54E-03-1.57E-02	MGAT3, SOD2, BRD4, MAN2A1, RUNX1, ACADM
Organismal Functions	8.61E-03-8.61E-03	CNTF, SERPINE1
RNA Post-Transcriptional Modification	9.51E-03-9.51E-03	NONO, RNPS1, PPIG, RBMS1, DDX17, PPARGC1A
Nutritional Disease	1.04E-02-1.04E-02	SREBF1, CNTF, ABCC8, SERPINE1
Endocrine System Development and Function	1.09E-02-1.35E-02	MAGED1, PBX1, LY6E, CCND1
Renal and Urological System Development and Function	1.09E-02-1.09E-02	SOD2, CLCA1 (includes EG:12722)
Vitamin and Mineral Metabolism	1.47E-02-1.47E-02	CAMK2D, F2R, P2RX7, NGF
Digestive System Development and Function	1.57E-02-1.57E-02	SOD2, MAN2A1, RUNX1, ACADM

Table S7B.

Ingenuity Canonical Pathways	P-value	Molecules
Glycosaminoglycan Degradation	0.000190546	SULF1, GLB1, IDS, GM2A, ARSB

NRF2-mediated Oxidative Stress Respo	0.000204174	HMOX1, SOD2, ERP29, PRDX1, VCP, DNAJC3, ATF4, DNAJC10, TXN, EPHX1, MAFG
N-Glycan Degradation	0.001348963	GLB1, GM2A, MAN2A1, MAN1A2
N-Glycan Biosynthesis	0.001737801	STT3B, MGAT3, MAN2A1, MAN1A2, MGAT2
Endoplasmic Reticulum Stress Pathway	0.003981072	DNAJC3, ATF4, MBTPS2
Valine, Leucine and Isoleucine Degradat	0.005011872	IWS1, MUT, IVD, ACADM, HADH
GM-CSF Signaling	0.005011872	ETS1, CAMK2D, PTPN11, RUNX1, CCND1
CNTF Signaling	0.010471285	JAK1, PTPN11, CNTF, RPS6KA4
Selenoamino Acid Metabolism	0.011481536	MAT2A, GGT1, SCLY
β -alanine Metabolism	0.012022644	DPYSL2, IWS1, IVD, ACADM
Fatty Acid Metabolism	0.012589254	CPT1A, IWS1, ACSL5, IVD, ACADM, HADH
Glycerophospholipid Metabolism	0.013489629	HMOX1, DGKD (includes EG:8527), GPD1L, LPCAT1, PLCB3, PISD
Protein Ubiquitination Pathway	0.015135612	ANAPC2, HSPA8, USP7, PSME1, CDC20, HLA-B, ANAPC5, NEDD4
Sphingolipid Metabolism	0.015848932	SULF1, GLB1, ARSB, SGMS1
PPAR Signaling	0.019498446	NR2F1, NFKBIA, HSP90AB1, MAP4K4, PPARGC1A
Propanoate Metabolism	0.019952623	IWS1, MUT, IVD, ACADM
Phenylalanine Metabolism	0.019952623	FAAH, PRDX1, PRDX2
IL-10 Signaling	0.022387211	HMOX1, JAK1, NFKBIA, MAP4K4
α -Adrenergic Signaling	0.023442288	GNAI2, PRKAR2B, HLA-B, PYGB, PHKA2
Pentose Phosphate Pathway	0.023442288	PRPS2, TKT, G6PD
PPAR α /RXR α Activation	0.025118864	PRKAR2B, TGFBR1, NFKBIA, HSP90AB1, PLCB3, MAP4K4, PPARGC1A
Insulin Receptor Signaling	0.025118864	PRKAR2B, JAK1, PTPN11, PPP1R10, SGK1, HLA-B
Glutamate Metabolism	0.025703958	GLUD1, CAD, QARS
Methane Metabolism	0.02630268	PRDX1, PRDX2
Neurotrophin/TRK Signaling	0.027542287	PTPN11, NTRK3, ATF4, NGF
Huntington's Disease Signaling	0.029512092	HSPA8, SGK1, SH3GL3, ATF4, PLCB3, CASP4, NGF, NAPB
Cell Cycle: G2/M DNA Damage Checkp	0.031622777	KAT2B, CCNB2, CHEK2
Cyanoamino Acid Metabolism	0.033884416	FAAH, GGT1
Melatonin Signaling	0.033884416	GNAI2, PRKAR2B, CAMK2D, PLCB3
Caveolar-mediated Endocytosis	0.037153523	CAV1, HLA-B, ITGA6, PTRF
Synaptic Long Term Potentiation	0.041686938	PRKAR2B, CAMK2D, PPP1R10, ATF4, PLCB3
Stilbene, Coumarine and Lignin Biosynt	0.050118723	PRDX1, PRDX2
PI3K/AKT Signaling	0.05370318	JAK1, NFKBIA, HSP90AB1, HLA-B, CCND1

Table S8. GeneChip based dataset of *H. pylori* HPAG1's transcriptional responses to infection of mGEP cells (fdr threshold 0.05).

HPAG1 GeneChip probeset	fold-change	gene symbol	gene description
HPAG1_0038	8.4		comB9 competence protein
HPAG1_0017	6.5		ATPase/DNA transfer protein
HPAG1_0037	5.2		comB8 competence protein
HPAG1_0016	4.4		hypothetical protein
HPAG1_1157	3.6		hypothetical protein
HPAG1_0015	3.5		hypothetical protein
HPAG1_0258	3.3		hypothetical protein
HPAG1_0475	3.1		phospholipase A1
HPAG1_1106	2.9		outer membrane protein HofH
HPAG1_0966	2.9		hypothetical protein
HPAG1_1343	2.9		hypothetical protein
HPAG1_1366	2.7		hypothetical protein
HPAG1_0645	2.7		hypothetical protein
HPAG1_1317	2.6		rod shape-determining protein
HPAG1_1143	2.5	secE	preprotein translocase subunit SecE
HPAG1_0140	2.5		A/G-specific adenine glycosylase
HPAG1_1158	2.4		glycinamide ribonucleotide synthetase
HPAG1_1156	2.4		organic solvent tolerance protein
HPAG1_0310	2.3		hypothetical protein
HPAG1_0523	2.3		cag pathogenicity island protein B
HPAG1_1023	2.3		putative type II DNA modification enzyme
HPAG1_1223	2.3		nicotinamide mononucleotide transporter
HPAG1_1113	2.3		glucose/galactose transporter
HPAG1_1519	2.3		hypothetical protein
HPAG1_0252	2.3		hypothetical protein
HPAG1_0572	2.2		hypothetical protein
HPAG1_0633	2.2		UDP-N-acetylglucosamine 1-carboxyvinyltransferase
HPAG1_0108	2.2		hypothetical protein
HPAG1_0009	2.2		outer membrane protein HopZ
HPAG1_1377	2.2		hypothetical protein
HPAG1_0527	2.2		glutamate racemase
HPAG1_0464	2.2		hypothetical protein
HPAG1_1378	2.1	trmE	tRNA modification GTPase TrmE
HPAG1_1174	2.1		dihydropteroate synthase
HPAG1_0481	2.1		hypothetical protein
HPAG1_0390	2.0		hypothetical protein
HPAG1_0227	2.0		hypothetical protein
HPAG1_0987	2.0		nifS-like protein
HPAG1_1323	2.0		flagellar assembly protein FliW
HPAG1_0313	1.9		type II restriction enzyme
HPAG1_0657	1.9		hypothetical protein
HPAG1_0531	1.9		hypothetical protein
HPAG1_0899	1.9		hypothetical protein
HPAG1_0986	1.9		hypothetical protein
HPAG1_0532	1.8		hypothetical protein
HPAG1_0976	1.8		hypothetical protein
HPAG1_0658	1.8		integrase-recombinase protein
HPAG1_1502	1.7		ATP-dependent nuclease
HPAG1_1084	1.7		hypothetical protein
HPAG1_0955	1.7		phosphoglyceromutase
HPAG1_1279	1.7		hypothetical protein
HPAG1_0425	1.7		hypothetical protein
HPAG1_1342	1.7		lipopolysaccharide 1,2-glucosyltransferase
HPAG1_0492	1.7		hypothetical protein
HPAG1_1369	1.7		4-diphosphocytidyl-2-C-methyl-D-erythritol kinase

HPAG1_1508	1.7	flgB	flagellar basal body rod protein FlgB
HPAG1_1318	1.7		rod shape-determining protein
HPAG1_0692	1.7	mraW	S-adenosyl-methyltransferase MraW
HPAG1_0744	1.6		hypothetical protein
HPAG1_0218	1.6		beta-1,4-N-acetylgalactosamyltransferase
HPAG1_1376	1.6		putative inner membrane protein translocase component YidC
HPAG1_0606	1.6	murC	UDP-N-acetylmuramate--L-alanine ligase
HPAG1_0760	1.6		penta-phosphate guanosine-3'-pyrophosphohydrolase
HPAG1_0781	1.6		outer membrane protein HorG
HPAG1_1390	1.6		hypothetical protein
HPAG1_0975	1.6		hypothetical protein
HPAG1_1408	1.5		hypothetical protein
HPAG1_1137	1.5		DNA-directed RNA polymerase subunit beta/beta'
HPAG1_0631	1.5		UDP-glucose pyrophosphorylase
HPAG1_0746	1.5		hypothetical protein
HPAG1_0327	1.5		outer membrane protein HorC
HPAG1_0224	1.5		hypothetical protein
HPAG1_1406	1.5		sodium/glutamate symport carrier protein/glutamate permease
HPAG1_1189	1.5	rpsF	30S ribosomal protein S6
HPAG1_0891	1.5		hypothetical protein
HPAG1_1523	1.4		riboflavin synthase subunit alpha
HPAG1_1073	1.4		F0F1 ATP synthase subunit delta
HPAG1_0392	1.4		hypothetical protein
HPAG1_0684	1.4		hypothetical protein
HPAG1_1071	1.4		F0F1 ATP synthase subunit gamma
HPAG1_0125	1.4	rplT	50S ribosomal protein L20
HPAG1_0793	1.4	acpS	4'-phosphopantetheinyl transferase
HPAG1_1238	1.4		DNA-directed RNA polymerase subunit alpha
HPAG1_1320	1.4		ATP-dependent protease ATPase subunit
HPAG1_1507	1.3	flgC	flagellar basal body rod protein FlgC
HPAG1_1356	1.3	ksgA	dimethyladenosine transferase
HPAG1_0628	1.3		glutamyl-tRNA synthetase
HPAG1_0472	1.3		hypothetical protein
HPAG1_0473	1.3		sodium- and chloride-dependent transporter
HPAG1_1217	1.3		NADH dehydrogenase subunit N
HPAG1_0097	1.2		hypothetical protein
HPAG1_0053	1.1		proline/delta 1-pyrroline-5-carboxylate dehydrogenase
HPAG1_0190	1.1	lpxD	UDP-3-O-[3-hydroxymyristoyl] glucosamine N-acyltransferase
HPAG1_0656	-1.1		hypothetical protein
HPAG1_0069	-1.2		urease accessory protein UreG
HPAG1_0691	-1.2		outer membrane protein HopE
HPAG1_1151	-1.2		iceA1
HPAG1_0234	-1.2		hypothetical protein
HPAG1_1456	-1.2		hypothetical protein
HPAG1_0449	-1.2		outer membrane protein HorE
HPAG1_0822	-1.2		hypothetical protein
HPAG1_0776	-1.2		cadmium-transporting ATPase
HPAG1_0937	-1.3		hypothetical protein
HPAG1_0389	-1.3	panB	3-methyl-2-oxobutanoate hydroxymethyltransferase
HPAG1_0404	-1.3		putative transcriptional regulator
HPAG1_0402	-1.3		acetyl-CoA synthetase
HPAG1_1303	-1.3		quinolinate synthetase
HPAG1_0972	-1.3		arginine decarboxylase
HPAG1_0307	-1.3		hypothetical protein
HPAG1_0522	-1.3		cag pathogenicity island protein C
HPAG1_0931	-1.3		hypothetical protein
HPAG1_0857	-1.3		hypothetical protein
HPAG1_0182	-1.3		hypothetical protein
HPAG1_0842	-1.3		ADP-L-glycero-D-mannoheptose-6-epimerase
HPAG1_0276	-1.3		hypothetical protein
HPAG1_0816	-1.4	gatA	aspartyl/glutamyl-tRNA amidotransferase subunit A

HPAG1_0810	-1.4		thioredoxin
HPAG1_0025	-1.4		isocitrate dehydrogenase
HPAG1_0960	-1.4		cell division protein FtsZ
HPAG1_0895	-1.4		outer membrane protein HopC
HPAG1_1325	-1.4		ATP-dependent protease
HPAG1_1475	-1.4		outer membrane protein HorL
HPAG1_0143	-1.4		cytochrome c oxidase monoheme subunit
HPAG1_0747	-1.4		hypothetical protein
HPAG1_0320	-1.4		outer membrane protein
HPAG1_1125	-1.4		sugar efflux transporter
HPAG1_0577	-1.4		penicillin-binding protein 1A
HPAG1_0270	-1.4		hypothetical protein
HPAG1_0267	-1.4		cytochrome c biogenesis protein
HPAG1_0066	-1.4		ATP-binding protein
HPAG1_1460	-1.4		hypothetical protein
HPAG1_1512	-1.4		alkyl hydroperoxide reductase
HPAG1_1133	-1.4		hypothetical protein
HPAG1_0145	-1.4		cytochrome c oxidase diheme subunit
HPAG1_0271	-1.4		putative ATP-binding protein
HPAG1_0126	-1.5		outer membrane protein HorB
HPAG1_0652	-1.5		hypothetical protein
HPAG1_0384	-1.5	gidB	glucose-inhibited division protein B
HPAG1_0378	-1.5		cell division protein
HPAG1_0028	-1.5		hypothetical protein
HPAG1_0434	-1.5		putative zinc protease
HPAG1_0113	-1.5		hypothetical protein
HPAG1_0598	-1.5	aspS	aspartyl-tRNA synthetase
HPAG1_0579	-1.5		hemolysin secretion protein
HPAG1_0409	-1.5		3-dehydroquinone dehydratase
HPAG1_0095	-1.5		hypothetical protein
HPAG1_0489	-1.5		ATP-dependent protease peptidase subunit
HPAG1_1176	-1.5		hypothetical protein
HPAG1_0296	-1.5	amiE	acylamide amidohydrolase
HPAG1_0461	-1.6		catalase like protein
HPAG1_0457	-1.6		GTP-binding protein
HPAG1_0603	-1.6		inorganic pyrophosphatase
HPAG1_0927	-1.6		hypothetical protein
HPAG1_0096	-1.6		2-hydroxyacid dehydrogenase
HPAG1_0321	-1.6		hypothetical protein
HPAG1_0821	-1.6		DNA-binding protein HU
HPAG1_1419	-1.6	murE	UDP-N-acetylmuramoylalanyl-D-glutamate--2,6-diaminopimelate ligase
HPAG1_1458	-1.6		hypothetical protein
HPAG1_0325	-1.6		poly E-rich protein
HPAG1_0407	-1.6	rpsO	30S ribosomal protein S15
HPAG1_0752	-1.6		hypothetical protein
HPAG1_0639	-1.6		hypothetical protein
HPAG1_1459	-1.6		membrane-associated lipoprotein
HPAG1_0209	-1.6		lipopolysaccharide 1,2-glycosyltransferase
HPAG1_0609	-1.6		tetrahydrodipicolinate N-succinyltransferase
HPAG1_0837	-1.6		ABC transporter, ATP-binding protein
HPAG1_0911	-1.6	surE	stationary phase survival protein SurE
HPAG1_0089	-1.6		RNA polymerase sigma factor RpoD
HPAG1_0615	-1.6		quinone-reactive Ni/Fe hydrogenase HydB
HPAG1_0571	-1.7	oorC	2-oxoglutarate-acceptor oxidoreductase subunit OorC
HPAG1_0110	-1.7		co-chaperone and heat shock protein 24
HPAG1_0135	-1.7		hypothetical protein
HPAG1_0041	-1.7		GDP-D-mannose dehydratase
HPAG1_0453	-1.7	gltX	glutamyl-tRNA synthetase
HPAG1_0146	-1.7		hypothetical protein
HPAG1_0269	-1.7		chlorohydrolase
HPAG1_0497	-1.7		cag pathogenicity island protein 3

HPAG1_1250	-1.7	rpsH	30S ribosomal protein S8
HPAG1_0858	-1.7		catalase
HPAG1_1289	-1.7		outer membrane protein
HPAG1_0445	-1.7		hypothetical protein
HPAG1_0784	-1.7	mogA	molybdenum cofactor biosynthesis protein
HPAG1_0111	-1.7		heat-inducible transcription repressor
HPAG1_1510	-1.7		iron(III) ABC transporter, periplasmic iron-binding protein
HPAG1_1447	-1.7		branched-chain amino acid aminotransferase
HPAG1_1446	-1.8		outer membrane protein HorJ
HPAG1_1455	-1.8	dnaE	DNA polymerase III subunit alpha
HPAG1_0565	-1.8		hypothetical protein
HPAG1_1100	-1.8		flavodoxin FldA
HPAG1_0002	-1.8	ribH	riboflavin synthase subunit beta
HPAG1_0319	-1.8		hypothetical protein
HPAG1_1400	-1.8		iron-regulated outer membrane protein
HPAG1_1350	-1.8		hypothetical protein
HPAG1_1404	-1.8		ferredoxin-like protein
HPAG1_0410	-1.8		proline peptidase
HPAG1_0159	-1.8		hypothetical protein
HPAG1_0879	-1.8		hydrogenase expression/formation protein HypC
HPAG1_0246	-1.9		neutrophil activating protein
HPAG1_0553	-1.9		ribose-5-phosphate isomerase B
HPAG1_0105	-1.9		S-ribosylhomocysteinase
HPAG1_1119	-1.9		pyrimidine nucleoside transport protein
HPAG1_1328	-1.9		putative type III restriction enzyme M protein
HPAG1_1042	-1.9		mannitol dehydrogenase
HPAG1_0067	-1.9		ATP-binding protein
			tyrosine-regulated 3-deoxy-D-arabino-heptulosonate 7-phosphate synthase
HPAG1_0132	-1.9		molecular chaperone DnaK
HPAG1_0109	-1.9		hypothetical protein
HPAG1_0166	-1.9		hypothetical protein
HPAG1_0570	-2.0	oorB	2-oxoglutarate-acceptor oxidoreductase subunit OorB
HPAG1_1004	-2.0		hypothetical protein
HPAG1_1049	-2.0	porA	pyruvate flavodoxin oxidoreductase subunit alpha
HPAG1_1313	-2.0		type III restriction enzyme M protein
HPAG1_1080	-2.0		hypothetical protein
HPAG1_0133	-2.0		hypothetical protein
HPAG1_1053	-2.0		excinuclease ABC subunit B
HPAG1_0768	-2.0		outer membrane protein HofE
HPAG1_1117	-2.0		purine-nucleoside phosphorylase
HPAG1_0938	-2.0		oxygen-insensitive NADPH nitroreductase
HPAG1_0758	-2.0		hypothetical protein
HPAG1_0872	-2.0		hypothetical protein
HPAG1_1118	-2.0		phosphopentomutase
HPAG1_0662	-2.0		ribonucleotide-diphosphate reductase subunit alpha
HPAG1_0083	-2.0		methyl-accepting chemotaxis protein
HPAG1_1330	-2.0		biotin synthase
HPAG1_0372	-2.0		hypothetical protein
HPAG1_1267	-2.0		hypothetical protein
HPAG1_1050	-2.0		ferredoxin oxidoreductase beta subunit
HPAG1_0524	-2.1		cytotoxin-associated protein A
HPAG1_0869	-2.1		iron(III) dicitrate ABC transporter, ATP-binding protein
HPAG1_1111	-2.1		glutamine ABC transporter, periplasmic glutamine-binding protein
HPAG1_0279	-2.1		ferredoxin
HPAG1_0176	-2.1		ABC transporter
HPAG1_1178	-2.1		hypothetical protein
HPAG1_0616	-2.1		quinone-reactive Ni/Fe hydrogenase HydC
HPAG1_0880	-2.1		hydrogenase expression/formation protein HypB
HPAG1_0428	-2.1		protease DO
HPAG1_0280	-2.1		guanosine pentaphosphate phosphohydrolase
HPAG1_0970	-2.2		hypothetical protein

HPAG1_0107	-2.2		cysteine synthetase
HPAG1_0001	-2.2	nusB	transcription antitermination protein NusB
HPAG1_1002	-2.2		adhesin-thiol peroxidase
HPAG1_0923	-2.3		amino acid ABC transporter, periplasmic binding protein
HPAG1_1418	-2.3		transaldolase
HPAG1_0312	-2.3		hypothetical protein
HPAG1_0382	-2.3		hypothetical protein
HPAG1_0614	-2.4		quinone-reactive Ni/Fe hydrogenase HydA
HPAG1_0085	-2.4	rplM	50S ribosomal protein L13
HPAG1_1329	-2.4		putative type III restriction enzyme R protein
HPAG1_0569	-2.5	oorA	2-oxoglutarate-acceptor oxidoreductase subunit OorA
HPAG1_1169	-2.5		hypothetical protein
HPAG1_0005	-2.5		orotidine 5'-phosphate decarboxylase
HPAG1_0207	-2.6		ATP-binding protein
HPAG1_0625	-2.6		putative 3-hydroxyacid dehydrogenase
HPAG1_0750	-2.6		hypothetical protein
HPAG1_1105	-2.7		glucose-6-phosphate isomerase
HPAG1_0708	-2.7		L-asparaginase II
HPAG1_0544	-2.8		hypothetical protein
HPAG1_0882	-2.8		hypothetical protein
HPAG1_0101	-2.8		hypothetical protein
HPAG1_0099	-3.0		methyl-accepting chemotaxis transmembrane sensory protein
HPAG1_1278	-3.0		hypothetical protein
HPAG1_0830	-3.1		hydroxyethylthiazole kinase
HPAG1_0222	-3.2		cysteine desulfurase
HPAG1_1009	-3.3		hypothetical protein
HPAG1_0855	-3.3		alkylphosphonate uptake protein
HPAG1_0223	-3.3		nifU-like protein
HPAG1_0487	-3.4		hypothetical protein
HPAG1_1003	-3.4		iron-dependent superoxide dismutase
HPAG1_0230	-3.4		outer membrane protein HopM
HPAG1_0595	-3.4		hypothetical protein
HPAG1_0751	-3.5		hypothetical protein
HPAG1_0468	-3.8		neuraminylactose-binding hemagglutinin
HPAG1_0613	-4.0		modulator of drug activity
HPAG1_0198	-4.0		hypothetical protein
HPAG1_0079	-4.6		reminiscent outer membrane protein HorA

Table S9. Genes in wild-type and isogenic Δ hopZ strains whose expression *in vitro* is pH-dependent.

Table S9A. Wild-type, pH7 vs pH5 (fdr threshold 0.05)

HPAG1 GeneChip probeset	fold-change	gene symbol	gene description
HPAG1_0859	5.4		iron-regulated outer membrane protein
HPAG1_1531	3.8	pdxA	4-hydroxythreonine-4-phosphate dehydrogenase
HPAG1_0259	2.7		hypothetical protein
HPAG1_0260	2.4		hypothetical protein
HPAG1_0258	2.4		hypothetical protein
HPAG1_0635	2.4		hypothetical protein
HPAG1_0046	2.1		adenine specific DNA methyltransferase
HPAG1_0669	2.1		iron(III) dicitrate transport protein
HPAG1_0257	2.0		adenylosuccinate synthetase
HPAG1_0783	1.9	moaC	molybdenum cofactor biosynthesis protein C
HPAG1_0647	1.9	rnc	ribonuclease III
HPAG1_0114	1.9		hypothetical protein
HPAG1_0786	1.8		molybdopterin converting factor, subunit 1
HPAG1_0998	1.7		hypothetical protein
HPAG1_0371	1.7		hypothetical protein
HPAG1_0280	1.7		guanosine pentaphosphate phosphohydrolase
HPAG1_0603	1.6		inorganic pyrophosphatase
HPAG1_1067	1.6		biopolymer transport protein
HPAG1_1306	1.6		hypothetical protein
HPAG1_1397	1.6		hypothetical protein
HPAG1_1305	1.5		hypothetical protein
HPAG1_1383	1.5	thyX	FAD-dependent thymidylate synthase
HPAG1_1314	1.5		adenine-specific DNA methylase
HPAG1_0718	1.4		hypothetical protein
HPAG1_0225	1.4		DNA repair protein RadA
HPAG1_0499	1.4		cag pathogenicity island protein 5
HPAG1_0627	1.4		NAD(P)H-flavin oxidoreductase
HPAG1_1140	1.4	rplA	50S ribosomal protein L1
HPAG1_1535	1.3		hypothetical protein
HPAG1_0626	1.3		NAD(P)H-flavin oxidoreductase
HPAG1_0181	1.3		hypothetical protein
HPAG1_0995	1.3		D-3-phosphoglycerate dehydrogenase
HPAG1_1124	-1.1		hypothetical protein
HPAG1_0025	-1.2		isocitrate dehydrogenase
HPAG1_0593	-1.3		ABC transporter, ATP-binding protein
HPAG1_1050	-1.3		ferredoxin oxidoreductase beta subunit
HPAG1_0011	-1.3	groES	co-chaperonin GroES
HPAG1_1226	-1.3		putative transcriptional regulator
HPAG1_1049	-1.3	porA	pyruvate flavodoxin oxidoreductase subunit alpha
HPAG1_0027	-1.4		dethiobiotin synthetase
HPAG1_0831	-1.4		type I restriction enzyme R protein
HPAG1_0446	-1.5		oligoendopeptidase F
HPAG1_0389	-1.5	panB	3-methyl-2-oxobutanoate hydroxymethyltransferase
HPAG1_1017	-1.6		hypothetical protein

HPAG1_1475	-1.6		outer membrane protein HorL
HPAG1_0746	-1.6		hypothetical protein
HPAG1_0771	-1.7	lolA	outer-membrane lipoprotein carrier protein
HPAG1_0620	-1.8		hypothetical protein
HPAG1_0364	-2.1		outer membrane protein HofB
HPAG1_1454	-2.1		cytochrome c551 peroxidase
HPAG1_1410	-2.2		hypothetical protein
HPAG1_0638	-2.6		nonheme iron-containing ferritin
HPAG1_0617	-2.6		quinone-reactive Ni/Fe hydrogenase HydD
HPAG1_0232	-2.6		outer membrane protein HopA
HPAG1_0420	-3.9		ferric uptake regulation protein
HPAG1_0110	-4.2		co-chaperone and heat shock protein 24
HPAG1_1272	-4.3		hypothetical protein
HPAG1_0111	-4.6		heat-inducible transcription repressor
HPAG1_0637	-6.3		phosphoserine phosphatase

Table S9B. Δ hopZ, pH7 vs pH5 (fdr threshold 0.05)

HPAG1 GeneChip probeset	fold-change	gene symbol	gene description
HPAG1_0259	2.7		hypothetical protein
HPAG1_0004	2.3		beta-carbonic anhydrase
HPAG1_0787	2.2	ribA	GTP cyclohydrolase II
HPAG1_0978	2.2		cyclopropane fatty acid synthase
HPAG1_1296	2.2		hypothetical protein
HPAG1_0107	2.2		cysteine synthetase
HPAG1_0785	2.1		molybdopterin converting factor, subunit 2
HPAG1_1279	2.1		hypothetical protein
HPAG1_1311	2.1		putative histidine kinase sensor protein
HPAG1_1303	2.1		quinolinate synthetase
HPAG1_0693	2.0		hypothetical protein
HPAG1_1399	2.0		selenocysteine synthase
HPAG1_1227	2.0		hypothetical protein
HPAG1_0864	2.0		hypothetical protein
HPAG1_0293	2.0		hypothetical protein
HPAG1_0294	2.0		hypothetical protein
HPAG1_1294	2.0		uracil-DNA glycosylase
HPAG1_0827	2.0		hypothetical protein
HPAG1_0923	2.0		amino acid ABC transporter, periplasmic binding protein
HPAG1_1304	2.0		phosphatidylserine decarboxylase
HPAG1_0898	2.0		iron-regulated outer membrane protein
HPAG1_0280	1.9		guanosine pentaphosphate phosphohydrolase
HPAG1_0123	1.9	infC	translation initiation factor IF-3
HPAG1_0257	1.9		adenylosuccinate synthetase
HPAG1_0786	1.9		molybdopterin converting factor, subunit 1
HPAG1_0329	1.9		CMP-N-acetylneuraminic acid synthetase
HPAG1_0922	1.9		amino acid ABC transporter, permease protein
HPAG1_0048	1.8		type II DNA modification enzyme
HPAG1_0328	1.8	flgH	flagellar basal body L-ring protein
HPAG1_0038	1.8		comB9 competence protein
HPAG1_0627	1.8		NAD(P)H-flavin oxidoreductase

HPAG1_1306	1.8		hypothetical protein
HPAG1_1109	1.7		glutamine ABC transporter, permease protein
HPAG1_0440	1.7		type I restriction enzyme R protein
HPAG1_0222	1.7		cysteine desulfurase
HPAG1_1386	1.7		purine nucleoside phosphorylase
HPAG1_0407	1.7	rpsO	30S ribosomal protein S15
HPAG1_0791	1.7		hypothetical protein
HPAG1_0279	1.7		ferredoxin
HPAG1_1517	1.6		hypothetical protein
HPAG1_0196	1.6		3-oxoacyl-(acyl carrier protein) synthase III
HPAG1_1209	1.6		NADH-ubiquinone oxidoreductase chain F
HPAG1_0751	1.6		hypothetical protein
HPAG1_1355	1.6		ATP/GTP binding protein
HPAG1_1516	1.6		GTPase EngB
HPAG1_1205	1.6		NADH dehydrogenase subunit B
HPAG1_0094	1.5		alpha-1,2-fucosyltransferase
HPAG1_1505	1.5		cell division protein
HPAG1_0777	1.5		DNA transformation competence protein
HPAG1_0122	1.5	thrS	threonyl-tRNA synthetase
HPAG1_0195	1.5		putative glycerol-3-phosphate acyltransferase PlsX
HPAG1_1532	1.5		O-sialoglycoprotein endopeptidase
HPAG1_0049	1.5		type II restriction enzyme
HPAG1_0106	1.5		cystathionine gamma-synthase/cystathionine beta-lyase
HPAG1_0208	1.5		lipopolysaccharide 1,2-glycosyltransferase
HPAG1_0160	1.5		delta-aminolevulinic acid dehydratase
HPAG1_1356	1.4	ksgA	dimethyladenosine transferase
HPAG1_1206	1.4		NADH dehydrogenase subunit C
HPAG1_1508	1.4	flgB	flagellar basal body rod protein FlgB
HPAG1_1045	1.4		hypothetical protein
HPAG1_0384	1.4	gidB	glucose-inhibited division protein B
HPAG1_0156	1.4		hypothetical protein
HPAG1_1504	1.4	tsf	elongation factor Ts
HPAG1_1405	1.4		hypothetical protein
HPAG1_1118	1.4		phosphopentomutase
HPAG1_1384	1.4		D-fructose-6-phosphate amidotransferase
HPAG1_1318	1.4		rod shape-determining protein
HPAG1_0778	1.4	def	peptide deformylase
HPAG1_1063	1.4		hypothetical protein
HPAG1_1149	1.4		type II adenine specific DNA methyltransferase
HPAG1_1432	1.4		hypothetical protein
HPAG1_1523	1.4		riboflavin synthase subunit alpha
HPAG1_1204	1.4		NADH dehydrogenase subunit A
HPAG1_1263	1.4	rplD	50S ribosomal protein L4
HPAG1_0068	1.3		urease accessory protein UreH
HPAG1_0237	1.3		hypothetical protein
HPAG1_0909	1.3	folE	GTP cyclohydrolase I
HPAG1_0159	1.3		hypothetical protein
HPAG1_1527	1.3		hypothetical protein
HPAG1_0868	1.3		lipopolysaccharide 1,2-glycosyltransferase
HPAG1_0003	1.3		2-dehydro-3-deoxyphosphooctonate aldolase
HPAG1_0776	1.3		cadmium-transporting ATPase

HPAG1_0069	1.3		urease accessory protein UreG
HPAG1_0194	1.3	rpmF	50S ribosomal protein L32
HPAG1_0040	1.3		mannose-6-phosphate isomerase
HPAG1_0912	1.3		hypothetical protein
HPAG1_0087	1.2		hypothetical protein
HPAG1_0974	1.2		hypothetical protein
HPAG1_0995	1.2		D-3-phosphoglycerate dehydrogenase
HPAG1_1075	1.2		F0F1 ATP synthase subunit B'
HPAG1_1447	1.2		branched-chain amino acid aminotransferase
HPAG1_0006	1.1	panC	pantoate--beta-alanine ligase
HPAG1_0549	-1.2		leucyl aminopeptidase
HPAG1_0954	-1.2		hypothetical protein
HPAG1_0025	-1.2		isocitrate dehydrogenase
HPAG1_0496	-1.2		HP0521B-like protein
HPAG1_0091	-1.3		acyl-carrier-protein S-malonyltransferase
HPAG1_0932	-1.3		hypothetical protein
HPAG1_0703	-1.3		hypothetical protein
HPAG1_0344	-1.3		CTP synthetase
HPAG1_0702	-1.3		DNA polymerase III subunits gamma and tau
HPAG1_1184	-1.3		hypothetical protein
HPAG1_0204	-1.3		hypothetical protein
HPAG1_0113	-1.3		hypothetical protein
HPAG1_1455	-1.3	dnaE	DNA polymerase III subunit alpha
HPAG1_1292	-1.4	pgk	phosphoglycerate kinase
HPAG1_0679	-1.4		putative outer membrane protein
HPAG1_0529	-1.4	rpmE	50S ribosomal protein L31
HPAG1_0324	-1.4	gmk	guanylate kinase
HPAG1_0816	-1.4	gatA	aspartyl/glutamyl-tRNA amidotransferase subunit A
HPAG1_0842	-1.4		ADP-L-glycero-D-mannoheptose-6-epimerase
HPAG1_0445	-1.4		hypothetical protein
HPAG1_0325	-1.4		poly E-rich protein
HPAG1_0489	-1.5		ATP-dependent protease peptidase subunit
HPAG1_0019	-1.5		chemotaxis protein
HPAG1_0674	-1.5		hypothetical protein
HPAG1_0517	-1.5		cag pathogenicity island protein G
HPAG1_1178	-1.5		hypothetical protein
HPAG1_1299	-1.5		hypothetical protein
HPAG1_1457	-1.5		thioredoxin
HPAG1_0092	-1.5		HrgA protein
HPAG1_0680	-1.5		hydantoin utilization protein A
HPAG1_0453	-1.6	gltX	glutamyl-tRNA synthetase
HPAG1_1164	-1.6		D-lactate dehydrogenase
HPAG1_0709	-1.6		outer membrane protein SabA
HPAG1_1480	-1.6		hypothetical protein
HPAG1_1278	-1.6		hypothetical protein
HPAG1_0402	-1.6		acetyl-CoA synthetase
HPAG1_1037	-1.6		2-keto-3-deoxy-6-phosphogluconate aldolase
HPAG1_0488	-1.6	rplI	50S ribosomal protein L9
HPAG1_0891	-1.6		hypothetical protein
HPAG1_0266	-1.7		ATP-dependent protease binding subunit/heat shock protein
HPAG1_0813	-1.7		RNA binding protein

HPAG1_0966	-1.7		hypothetical protein
HPAG1_0212	-1.7		cysteine-rich protein A
HPAG1_0746	-1.7		hypothetical protein
HPAG1_0215	-1.8		sodium-dependent transporter
HPAG1_1081	-1.8		hypothetical protein
HPAG1_0131	-1.8		L-serine transporter
HPAG1_0683	-1.8		hypothetical protein
HPAG1_0771	-1.8	lolA	outer-membrane lipoprotein carrier protein
HPAG1_0965	-1.8		hypothetical protein
HPAG1_1475	-1.8		outer membrane protein HorL
HPAG1_0672	-1.8		putative type II cytosine specific methyltransferase
HPAG1_0963	-1.9		hypothetical protein
HPAG1_1395	-1.9		type IIS restriction-modification protein
HPAG1_0545	-1.9	dapF	diaminopimelate epimerase
HPAG1_0636	-1.9		alpha 1,3-fucosyltransferase
HPAG1_0639	-2.0		hypothetical protein
HPAG1_0620	-2.1		hypothetical protein
HPAG1_0873	-2.1		hypothetical protein
HPAG1_0930	-2.2		hypothetical protein
HPAG1_0874	-2.3		hypothetical protein
HPAG1_0861	-2.3		hypothetical protein
HPAG1_0617	-2.3		quinone-reactive Ni/Fe hydrogenase HydD
HPAG1_0318	-2.5		hypothetical protein
HPAG1_0615	-2.6		quinone-reactive Ni/Fe hydrogenase HydB
HPAG1_0364	-2.8		outer membrane protein HofB
HPAG1_0319	-2.8		hypothetical protein
HPAG1_1396	-3.0		hypothetical protein
HPAG1_1116	-3.1		hypothetical protein
HPAG1_0110	-3.2		co-chaperone and heat shock protein 24
HPAG1_0638	-3.3		nonheme iron-containing ferritin
HPAG1_0111	-3.4		heat-inducible transcription repressor
HPAG1_0448	-3.6		hypothetical protein
HPAG1_0420	-4.1		ferric uptake regulation protein
HPAG1_0637	-5.1		phosphoserine phosphatase
HPAG1_1358	-5.6		hypothetical protein
HPAG1_1271	-6.3		hypothetical protein

Table S10. *H. pylori* HPAG1 genes whose expression *in vitro* is pH- and HopZ-dependent.

HPAG1 GeneChip probeset	fold-change	gene symbol	gene description
HPAG1_0004	2.3		beta-carbonic anhydrase
HPAG1_0787	2.2	ribA	GTP cyclohydrolase II
HPAG1_0978	2.2		cyclopropane fatty acid synthase
HPAG1_1296	2.2		hypothetical protein
HPAG1_0107	2.2		cysteine synthetase
HPAG1_0785	2.1		molybdopterin converting factor, subunit 2
HPAG1_1279	2.1		hypothetical protein
HPAG1_1311	2.1		putative histidine kinase sensor protein
HPAG1_1303	2.1		quinolinate synthetase
HPAG1_0693	2.0		hypothetical protein
HPAG1_1399	2.0		selenocysteine synthase
HPAG1_1227	2.0		hypothetical protein
HPAG1_0864	2.0		hypothetical protein
HPAG1_0293	2.0		hypothetical protein
HPAG1_0294	2.0		hypothetical protein
HPAG1_1294	2.0		uracil-DNA glycosylase
HPAG1_0827	2.0		hypothetical protein
HPAG1_0923	2.0		amino acid ABC transporter, periplasmic binding protein
HPAG1_1304	2.0		phosphatidylserine decarboxylase
HPAG1_0898	2.0		iron-regulated outer membrane protein
HPAG1_0123	1.9	infC	translation initiation factor IF-3
HPAG1_0329	1.9		CMP-N-acetylneuraminic acid synthetase
HPAG1_0922	1.9		amino acid ABC transporter, permease protein
HPAG1_0048	1.8		type II DNA modification enzyme
HPAG1_0328	1.8	flgH	flagellar basal body L-ring protein
HPAG1_0038	1.8		comB9 competence protein
HPAG1_1109	1.7		glutamine ABC transporter, permease protein
HPAG1_0440	1.7		type I restriction enzyme R protein
HPAG1_0222	1.7		cysteine desulfurase
HPAG1_1386	1.7		purine nucleoside phosphorylase
HPAG1_0407	1.7	rpsO	30S ribosomal protein S15
HPAG1_0791	1.7		hypothetical protein
HPAG1_0279	1.7		ferredoxin
HPAG1_1517	1.6		hypothetical protein
HPAG1_0196	1.6		3-oxoacyl-(acyl carrier protein) synthase III
HPAG1_1209	1.6		NADH-ubiquinone oxidoreductase chain F
HPAG1_0751	1.6		hypothetical protein
HPAG1_1355	1.6		ATP/GTP binding protein
HPAG1_1516	1.6		GTPase EngB
HPAG1_1205	1.6		NADH dehydrogenase subunit B
HPAG1_0094	1.5		alpha-1,2-fucosyltransferase
HPAG1_1505	1.5		cell division protein
HPAG1_0777	1.5		DNA transformation competence protein
HPAG1_0122	1.5	thrS	threonyl-tRNA synthetase
HPAG1_0195	1.5		putative glycerol-3-phosphate acyltransferase PlsX
HPAG1_1532	1.5		O-sialoglycoprotein endopeptidase
HPAG1_0049	1.5		type II restriction enzyme
HPAG1_0106	1.5		cystathionine gamma-synthase/cystathionine beta-lyase
HPAG1_0208	1.5		lipopolysaccharide 1,2-glycosyltransferase
HPAG1_0160	1.5		delta-aminolevulinic acid dehydratase

HPAG1_1356	1.4	ksgA	dimethyladenosine transferase
HPAG1_1206	1.4		NADH dehydrogenase subunit C
HPAG1_1508	1.4	flgB	flagellar basal body rod protein FlgB
HPAG1_1045	1.4		hypothetical protein
HPAG1_0384	1.4	gidB	glucose-inhibited division protein B
HPAG1_0156	1.4		hypothetical protein
HPAG1_1504	1.4	tsf	elongation factor Ts
HPAG1_1405	1.4		hypothetical protein
HPAG1_1118	1.4		phosphopentomutase
HPAG1_1384	1.4		D-fructose-6-phosphate amidotransferase
HPAG1_1318	1.4		rod shape-determining protein
HPAG1_0778	1.4	def	peptide deformylase
HPAG1_1063	1.4		hypothetical protein
HPAG1_1149	1.4		type II adenine specific DNA methyltransferase
HPAG1_1432	1.4		hypothetical protein
HPAG1_1523	1.4		riboflavin synthase subunit alpha
HPAG1_1204	1.4		NADH dehydrogenase subunit A
HPAG1_1263	1.4	rplD	50S ribosomal protein L4
HPAG1_0068	1.3		urease accessory protein UreH
HPAG1_0237	1.3		hypothetical protein
HPAG1_0909	1.3	folE	GTP cyclohydrolase I
HPAG1_0159	1.3		hypothetical protein
HPAG1_1527	1.3		hypothetical protein
HPAG1_0868	1.3		lipopolysaccharide 1,2-glycosyltransferase
HPAG1_0003	1.3		2-dehydro-3-deoxyphosphooctonate aldolase
HPAG1_0776	1.3		cadmium-transporting ATPase
HPAG1_0069	1.3		urease accessory protein UreG
HPAG1_0194	1.3	rpmF	50S ribosomal protein L32
HPAG1_0040	1.3		mannose-6-phosphate isomerase
HPAG1_0912	1.3		hypothetical protein
HPAG1_0087	1.2		hypothetical protein
HPAG1_0974	1.2		hypothetical protein
HPAG1_1075	1.2		F0F1 ATP synthase subunit B'
HPAG1_1447	1.2		branched-chain amino acid aminotransferase
HPAG1_0006	1.1	panC	pantoate--beta-alanine ligase
HPAG1_0549	-1.2		leucyl aminopeptidase
HPAG1_0954	-1.2		hypothetical protein
HPAG1_0496	-1.2		HP0521B-like protein
HPAG1_0091	-1.3		acyl-carrier-protein S-malonyltransferase
HPAG1_0932	-1.3		hypothetical protein
HPAG1_0703	-1.3		hypothetical protein
HPAG1_0344	-1.3		CTP synthetase
HPAG1_0702	-1.3		DNA polymerase III subunits gamma and tau
HPAG1_1184	-1.3		hypothetical protein
HPAG1_0204	-1.3		hypothetical protein
HPAG1_0113	-1.3		hypothetical protein
HPAG1_1455	-1.3	dnaE	DNA polymerase III subunit alpha
HPAG1_1292	-1.4	pgk	phosphoglycerate kinase
HPAG1_0679	-1.4		putative outer membrane protein
HPAG1_0529	-1.4	rpmE	50S ribosomal protein L31
HPAG1_0324	-1.4	gmk	guanylate kinase
HPAG1_0816	-1.4	gatA	aspartyl/glutamyl-tRNA amidotransferase subunit A
HPAG1_0842	-1.4		ADP-L-glycero-D-mannoheptose-6-epimerase
HPAG1_0445	-1.4		hypothetical protein
HPAG1_0325	-1.4		poly E-rich protein
HPAG1_0489	-1.5		ATP-dependent protease peptidase subunit

HPAG1_0019	-1.5		chemotaxis protein
HPAG1_0674	-1.5		hypothetical protein
HP0710_at	-1.5		
HPAG1_0517	-1.5		cag pathogenicity island protein G
HPAG1_1178	-1.5		hypothetical protein
HPAG1_1299	-1.5		hypothetical protein
HPAG1_1457	-1.5		thioredoxin
HPAG1_0092	-1.5		HrgA protein
HPAG1_0680	-1.5		hydantoin utilization protein A
HPAG1_0453	-1.6	gltX	glutamyl-tRNA synthetase
HPAG1_1164	-1.6		D-lactate dehydrogenase
HPAG1_0709	-1.6		outer membrane protein SabA
HPAG1_1480	-1.6		hypothetical protein
HPAG1_1278	-1.6		hypothetical protein
HPAG1_0402	-1.6		acetyl-CoA synthetase
HPAG1_1037	-1.6		2-keto-3-deoxy-6-phosphogluconate aldolase
HPAG1_0488	-1.6	rplI	50S ribosomal protein L9
HPAG1_0891	-1.6		hypothetical protein
HPAG1_0266	-1.7		ATP-dependent protease binding subunit/heat shock protein
HPAG1_0813	-1.7		RNA binding protein
HPAG1_0966	-1.7		hypothetical protein
HPAG1_0212	-1.7		cysteine-rich protein A
HPAG1_0215	-1.8		sodium-dependent transporter
HPAG1_1081	-1.8		hypothetical protein
HPAG1_0131	-1.8		L-serine transporter
HPAG1_0683	-1.8		hypothetical protein
HPAG1_0965	-1.8		hypothetical protein
HPAG1_0672	-1.8		putative type II cytosine specific methyltransferase
HPAG1_0963	-1.9		hypothetical protein
HPAG1_1395	-1.9		type IIS restriction-modification protein
HPAG1_0545	-1.9	dapF	diaminopimelate epimerase
HPAG1_0636	-1.9		alpha 1,3-fucosyltransferase
HPAG1_0639	-2.0		hypothetical protein
HPAG1_0873	-2.1		hypothetical protein
HPAG1_0930	-2.2		hypothetical protein
HPAG1_0874	-2.3		hypothetical protein
HPAG1_0861	-2.3		hypothetical protein
HPAG1_0318	-2.5		hypothetical protein
HPAG1_0615	-2.6		quinone-reactive Ni/Fe hydrogenase HydB
HPAG1_0319	-2.8		hypothetical protein
HPAG1_1396	-3.0		hypothetical protein
HPAG1_1116	-3.1		hypothetical protein
HPAG1_0448	-3.6		hypothetical protein
HPAG1_1358	-5.6		hypothetical protein
HPAG1_1271	-6.3		hypothetical protein

Genes that are down- or up-regulated in the Δ *hopZ* compared to wild-type strain at pH 7.0 versus pH 5.0 are shown.

Table S11. PAML analysis of positive selection in *H. pylori* genes.

	Gene	Systematic	Annotation	Recombination	Aligned nt	M1 lnL	M2 lnL	LRT	ω	p
Outer membrane proteins	hopA	HPAG1_0232	HopA	N	720	-2757.90	-2740.20	0.00	3.67	0.07
	hopP	HPAG1_0709	SabA	N	354	-1244.14	-1233.01	0.00	4.33	0.12
					606	-2496.87	-2491.33	0.00	4.52	0.04
	hopZ	HPAG1_0009	HopZ	Y	288	-811.87	-804.38	0.00	4.99	0.11
				294	-642.01	-642.01	1.00			
Housekeeping functions	atpA	HPAG1_1072	ATP synthase F1, subunit alpha	Y	501	-1097.04	-1095.56	0.23		
					48	-64.52	-64.52	1.00		
					558	-1109.56	-1108.74	0.44		
					399	-692.82	-692.85	1.00		
	efp	HPAG1_0173	translation elongation factor EF-P	N	561	-1128.24	-1123.36	0.01	12.25	0.01
	mutY	HPAG1_0140	A/G-specific adenine glycosylase	Y	984	-2949.29	-2939.56	0.00	12.49	0.00
	ppa	HPAG1_0603	inorganic pyrophosphatase	N	519	-1061.02	-1060.80	0.81		
trpC	HPAG1_1233	N-(5'-phospho- ribosyl)anthranilate isomerase	N	1203	-3625.18	-3610.99	0.00	5.08	0.02	
ureI	HPAG1_0072	urease accessory protein/pH-dependent urea-transporter UreI	N	585	-1284.02	-1284.02	1.00			
Known virulence factors	cagA	HPAG1_0524	cytotoxin-associated protein A	N	2100	-5846.60	-5790.89	0.00	5.97	0.08
	vacA	HPAG1_0867	vacuolating cytotoxin A	N	3513	-11777.11	-11736.18	0.00	4.39	0.03
Randomly chosen HPAG1 genes	--	HPAG1_0101	hypothetical protein	N	753	-2129.87	-2125.87	0.02	4.66	0.01
	infC	HPAG1_0123	translation initiation factor IF-3	N	609	-1275.22	-1273.36	0.16		
					219	-417.44	-417.44	1.00		
	ftsH	HPAG1_0288	cell division protein	Y	399	-955.29	-954.83	0.63		
					258	-758.64	-758.12	0.59		
	--	HPAG1_0311	putative N-carbamoyl-D-amino acid amidohydrolase	N	540	-1538.01	-1537.70	0.74		
	gmk	HPAG1_0324	5'-guanylate kinase	N	483	-863.95	-863.90	0.96		
	--	HPAG1_0455	type II adenine specific methyltransferase	N	708	-1817.71	-1810.87	0.00	8.64	0.01
					96	-161.10	-161.07	0.97		
					153	-338.08	-338.04	0.96		
					180	-361.96	-361.96	1.00		
	--	HPAG1_0480	putative outer membrane protein	Y	99	-184.08	-183.96	0.88		
					33	-46.92	-46.92	1.00		
					117	-314.26	-314.26	1.00		
					147	-363.22	-363.20	0.98		
	flaG	HPAG1_0736	putative polar flagellin	N	357	-887.66	-887.56	0.90		
	fecE	HPAG1_0869	iron(III) dicitrate ABC transporter, ATP-binding protein	N	765	-1665.08	-1665.08	1.00		
	htpX	HPAG1_0908	heat shock protein	N	390	-930.19	-921.40	0.00	8.20	0.02
	--	HPAG1_0958	peptidyl-prolyl cis-trans isomerase D	N	504	-1194.66	-1192.40	0.10		
	rpsA	HPAG1_0993	ribosomal protein S1	N	1596	-3617.91	-3616.28	0.20		
					87	-279.54	-273.15	0.00	6.98	0.17
	--	HPAG1_1018	hypothetical protein	Y	105	-261.10	-261.10	1.00		
					210	-697.30	-694.14	0.04	2.13	0.21
	--	HPAG1_1227	conserved hypothetical secreted protein	Y	531	-1449.55	-1449.25	0.74		
					18	-29.53	-29.53	1.00		
	lpxA	HPAG1_1321	UDP-N-acetylglucosamine acyltransferase	Y	180	-352.35	-352.35	1.00		
					300	-670.68	-670.22	0.63		
				156	-302.39	-302.39	1.00			
exbD	HPAG1_1372	biopolymer transport protein	Y	48	-89.38	-89.38	1.00			
				105	-180.55	-180.55	1.00			
				90	-162.99	-162.99	1.00			
--	HPAG1_1402	dihydroneopterin aldolase	N	351	-1065.81	-1060.09	0.00	4.00	0.11	
				72	-129.45	-129.06	0.67			
--	HPAG1_1427	hypothetical protein	Y	312	-840.02	-839.71	0.73			
				195	-534.33	-532.32	0.13			
--	HPAG1_1476	inorganic polyphosphate/ATP-NAD kinase	N	543	-1494.11	-1493.82	0.75			
secF	HPAG1_1498	protein-export membrane protein	N	537	-1252.63	-1252.62	0.98			

Genes are divided into four categories: (i) specific outer membrane proteins of interest, (ii) housekeeping genes, (iii) known virulence factors, and (iv) randomly chosen HPAG1 genes. The trivial gene name, HPAG1 systematic gene name, and HPAG1 annotation are given. Genes that had evidence for recombination ($p < 0.05$ according to GENECONV) were analyzed as fragments; resulting in multiple rows for several genes, which are shown in order from the 5' fragment to the 3' fragment. The amount of aligned sequence is shown for each ortholog set or fragment set. M1 lnL and M2 lnL are the logarithm (base e) of the likelihood reported by PAML for the respective evolutionary model. LRT is the likelihood ratio test p-value, indicating the amount of statistical support for rejecting the null hypothesis (of no positive selection). ω is the dn/ds value and p is the proportion of codons under positive selection for those genes that had significant evidence of positive selection. Genes with significant evidence of positive selection are highlighted in bold type.