

## **SUPPLEMENTAL MATERIAL**

### **The crowded uterine horn mouse model for examining postnatal metabolic consequences of intrauterine growth restriction vs. macrosomia in siblings**

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#### Contents:

Figure S1: Birth weight and growth of female mice from Block 1,

Figure S2: Glucose tolerance test in 4-hour fasted females,

Figure S3: qPCR quantification of gonadal adipocyte gene expression in 14-hr fast-ed IUGR and macrosomic male mice,

Figure S4: Expression of selected genes of interest from the microarray data set,

Table S1: Outline of Block 1 and Block 2 experiments conducted on male off-spring.

Table S2: Organ weights of 14-hr fasted Block 1 males.

Table S3: Body weights and fat pad weights in 14-hr fasted and non-fasted males,

Table S4: Growth and fat weights of the sub-group of 14-hr fasted males and non-fasted males used in qPCR analyses,

Table S5: Growth and fat weights of animals used in microarray analyses,

Table S6: Gene pathways manually identified as being potentially impacted by either prenatal or postweaning development.

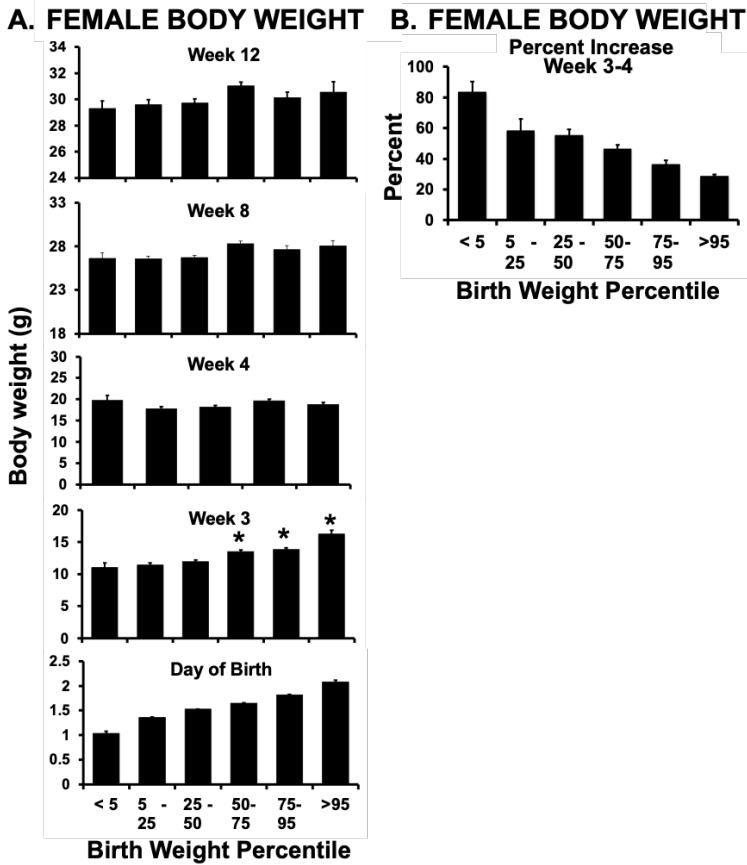
Table S7: Microarray data, differentially expressed genes. A) T-test results and B) Genes identified by clustering analysis.

*Data for female offspring from Block 1 crowded uterus study*

The mean weight for all female mice was  $1.59 \pm 0.23$  g (mean $\pm$ SEM). Of the animals that survived to weaning, the weight range for females with birth weights in the bottom 5<sup>th</sup> percentile (designated as IUGR; n=15) was 0.72-1.21 g (mean $\pm$ SEM:  $1.04 \pm 0.04$  g) (Figure S1). Females categorized as being at the median ( $\sim 1.59$  g) body weight range were in the 43.6-48.8 percentile of all birth weights. The weight range for females with birth weights in the top 5<sup>th</sup> percentile (designated as macrosomic) was 1.96-2.40 g (n=14; mean $\pm$ SEM:  $2.06 \pm 0.03$  g). Overall, the mean weights in each percentile for body weight at birth were slightly lower for females than males. In females there were no differences in week 12 (adult) body weights based on body weight at birth category (Figure S1).

The relationship between bodyweight at birth and adult bodyweight in females was different from that observed in their male siblings. All females, regardless of birth weight, were statistically indistinguishable by weight at 4 weeks of age, and remained statistically similar until the end of the bodyweight measurements at week 12 (Figure S1-A). Specifically, at birth the females had a wide weight distribution, similar to that seen in males, and had similar patterns of pre-weaning weight gain. After weaning, however, the bodyweight differences rapidly disappeared, primarily because the females born in IUGR and median bodyweight categories grew to the same weight as the heavier birth weight animals within the first week after weaning. Thus, an inverse relationship between bodyweight at birth and post-weaning (week 3-4) bodyweight gain was also observed for females (Figure S1-B). However, because there was no difference in week 12 (adult) bodyweight based on bodyweight at birth, we did not continue to examine females from Block 1 and instead focused additional studies on males.

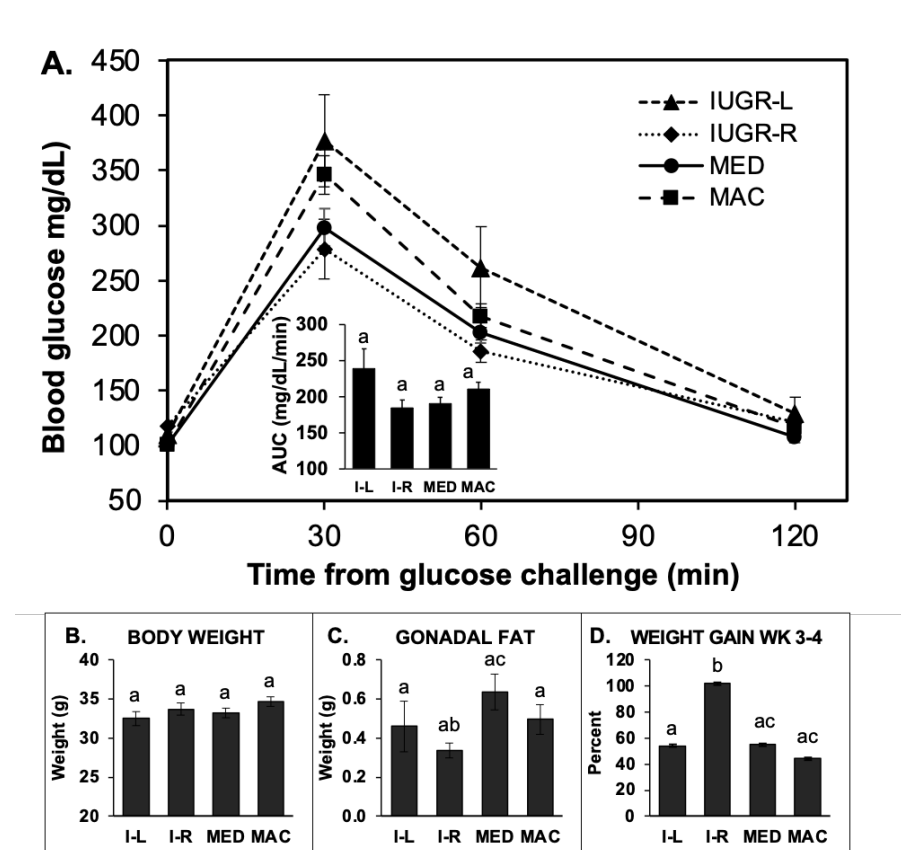
Regarding the postweaning growth rate in IUGR females, using the same postweaning growth rate cutoffs as for males (Figure 3), 33% of IUGR females showed below a 65% increase in bodyweight after weaning, while the remaining 67% of the IUGR females grew faster, similar to what was observed in males (data not shown).



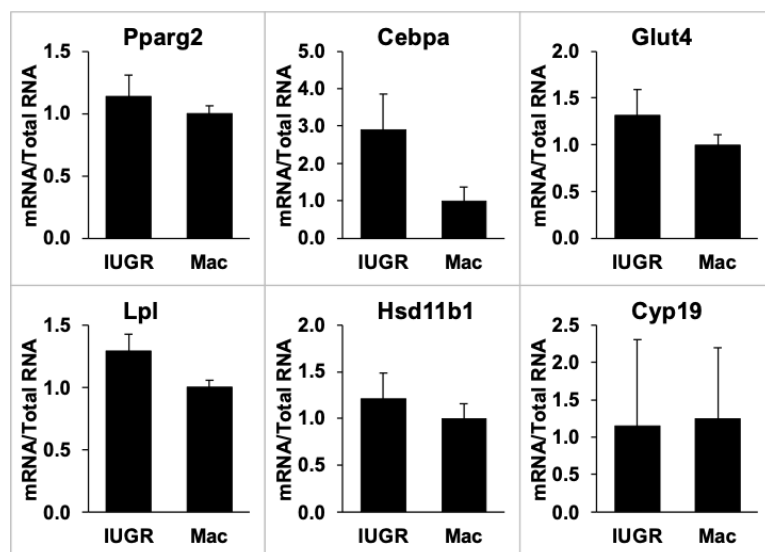
**Figure S1.** Birth weight and growth of female mice from Block 1. **A:** Body weights of female pups produced in 52 litters by Block 1 hemi-ovariectomized females based on birth weight categories, from the  $\leq 5^{\text{th}}$  percentile to  $\geq 95^{\text{th}}$  percentile. Beginning at postnatal week 3 (weaning), body weights were measured for all surviving female offspring until postnatal week 12. **B:** The percent increase in body weight for these females during the first week of free feeding after weaning (week 3-4). \*  $P < 0.05$  compared to females from the bottom 5<sup>th</sup> percentile (IUGR females). Data are mean $\pm$ SEM.

*Data for female offspring from Block 2 crowded uterus study*

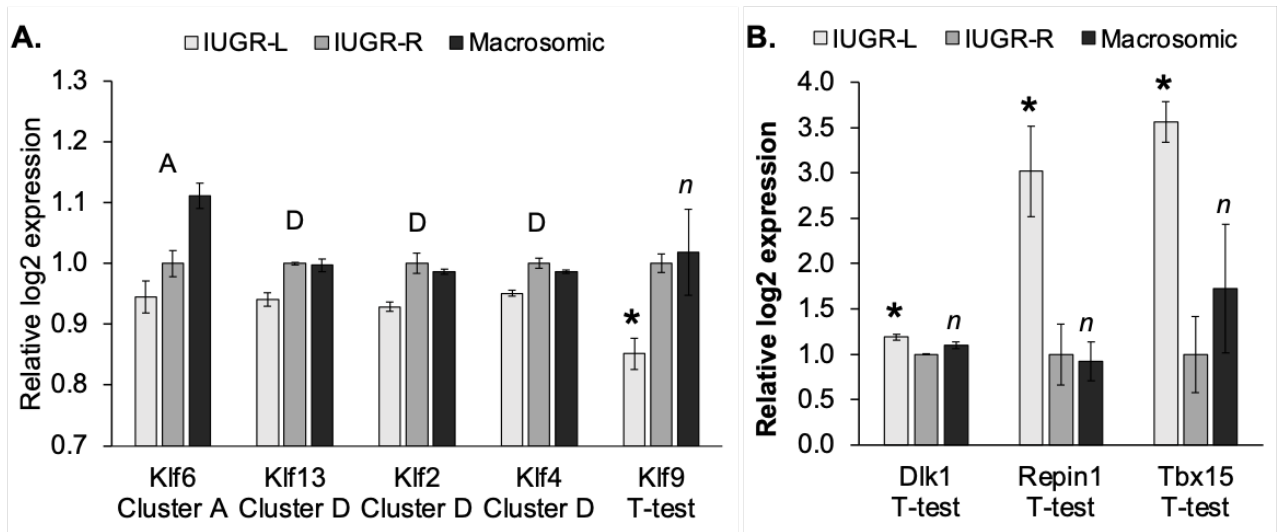
We conducted a GTT on female siblings of the Block 2 males, at the same age and using the same 4-hr fast procedure, and there were no significant effects on glucose tolerance based on analysis of the area under the glucose concentration time curve (AUC). These data are presented in Figure S2. Interestingly, the median birth weight females had significantly heavier gonadal fat pads relative to the IUGR-R(I-R) females (Figure S2-C).



**Figure S2.** Glucose tolerance test in 4-hour fasted females. **A:** Glucose tolerance test for Block 2 female IUGR-L (I-L; n=9), IUGR-R (I-R; n=15), median (MED; n= 26) and macrosomic (MAC; n=22) females that underwent a 4-hr fast prior to glucose challenge. Inset: Area under the curve (AUC) for this test. No differences were seen in glucose tolerance between the four groups. **B:** Body weight at the time of tissue collection following the GTT. **C:** Gonadal fat weight, which was significantly greater in median females compared to IUGR-R females. **D:** The week 3-4 percent weight gain for these females. Groups with different letters are significantly different from each other ( $P<0.05$ ); groups that share a letter in common are not statistically different. Values are mean $\pm$ SEM.



**Figure S3.** qPCR quantification of gonadal adipocyte gene expression in 14-hr fasted IUGR and macrosomic male mice. Values for IUGR animals are expressed relative to values for the macrosomic animals. n=5 per group. All values are mean $\pm$ SEM.



**Figure S4.** Expression of selected genes of interest from the microarray data set. **A:** Expression of differentially expressed Klf family genes; results are from Clustering analysis or T-test as indicated. T-test compares IUGR-L with IUGR-R only; the additional group is included to aid with data interpretation. **B:** Expression of other selected genes of interest; results are from T-tests comparing either Macrosomic with IUGR-R, or IUGR-L with IUGR-R; the additional group is included to aid with data interpretation. For both A and B, log<sub>2</sub> expression values are shown relative to IUGR-R, and values are mean $\pm$ SEM. A, IUGR-R and IUGR-L down-regulated relative to Macrosomic; D, IUGR-R and Macrosomic up-regulated relative to IUGR-L; \*P<0.05 relative to IUGR-R; n = no statistical comparison between Macrosomic and IUGR-L samples. Values are mean  $\pm$  SEM.

**Table S1.** Experimental design for studies with male offspring. Animals used in Block 1 (below) were selected from those shown in Figure 3; 2 IUGR-L animals and 1 median animal from those shown in Figure 3 were not used in these follow-up experiments.

Breeding block	BLOCK 1 (52 litters)	BLOCK 2 (21 litters)
Sample sizes and data collected	<u>Set 1</u> IUGR-L n=6 IUGR-R n=10 Median n=16 Macrosomic n=16  <ul style="list-style-type: none"> <li>• Body weights from weaning to week 12</li> <li>• Glucose tolerance test 14-hour fast)</li> <li>• Fat collection and fat weights (inguinal, renal, gonadal depots)</li> <li>• Organ weights (heart, liver, kidney, spleen, testis, epididymis)</li> <li>• Gonadal adipocyte counts, size distribution</li> </ul>	IUGR-L n=7 IUGR-R n=19 Median n=24 Macrosomic n=25  <ul style="list-style-type: none"> <li>• Body weights, to establish birth and growth category</li> <li>• Glucose tolerance test (4-hr fast)</li> <li>• Gonadal fat pad weight</li> </ul>
	<u>Set 2</u> IUGR-L n=5 IUGR-R n=5 Macrosomic n=5  <ul style="list-style-type: none"> <li>• Fat collection and fat weights (inguinal, renal, gonadal depots)</li> <li>• Gonadal adipocyte counts, size distribution</li> <li>• Gonadal fat qPCR</li> <li>• Gonadal fat microarray</li> </ul>	

Table S2. Organ and body weights at time of collection in 14-hr fasted Block 1 males.

Tissue	IUGR-L	IUGR-R	Median	Macrosomic
Right testis (mg)	123.6 ± 7.7	136.9 ± 5.9	134.4 ± 5.5	137.7 ± 5.5
Right epididymis (mg)	50.9 ± 3.8	57.1 ± 2.9	58.8 ± 2.2 §	60.1 ± 2.7 §
Heart (mg)	200.2 ± 7.8 *	201.2 ± 6 *	206.3 ± 4.5 *	224 ± 5.6
Kidney (mg)	354.0 ± 28.8	353.7 ± 21.9 *	327.3 ± 16.7 ***	432.2 ± 20.5
Liver (g)	1.597 ± 0.109	1.641 ± 0.082	1.496 ± 0.063	1.746 ± 0.077
Spleen (mg)	87.3 ± 7.9	85.6 ± 6.0 *†	103.0 ± 4.6	108.7 ± 5.6
Body weight (g)	41.8 ± 0.6	39.4 ± 1.5	41.7 ± 0.7	47.0 ± 1.0
N	6	9	16	15

Values are based on LS means (± SEM) based on analysis of covariance with body weight as the covariate. \* P<0.05, \*\*\* P<0.001 vs Macrosomic; † P<0.05 vs. Median; § P<0.09 vs. IUGR-L.



**Table S3.** Body weights and fat pad weights in 14-hr fasted and non-fasted Block 1 males. Values are mean±SEM. Statistical significance  $P < 0.05$  indicated by different letters. a' and b'  $P < 0.1$ .

\*Inguinal fat n=4 for IUGR-L.

<b>14-hr FASTED:</b>	<b>IUGR-L</b>	<b>IUGR-R</b>	<b>MEDIAN</b>	<b>MACROSOMIC</b>
Inguinal fat (g)	0.126 ± 0.034	0.110 ± 0.016	0.163 ± 0.020	0.219 ± 0.026
Renal fat (g)	0.120 ± 0.050	0.120 ± 0.034	0.127 ± 0.017	0.271 ± 0.055
Gonadal fat (g)	0.323 ± 0.078 <sup>a</sup>	0.381 ± 0.087 <sup>a</sup>	0.462 ± 0.063 <sup>a,b'</sup>	0.678 ± 0.105 <sup>b</sup>
Total fat (g)	0.568 ± 0.160 <sup>a</sup>	0.611 ± 0.135 <sup>a</sup>	0.752 ± 0.098 <sup>a</sup>	1.168 ± 0.152 <sup>b</sup>
Body weight (g)	34.4 ± 1.3 <sup>a</sup>	38 ± 1 <sup>a'</sup>	37.2 ± 0.7 <sup>a'</sup>	44 ± 0.9 <sup>b</sup>
N	6	9	16	15
<b>NON-FASTED:</b>	<b>IUGR-L</b>	<b>IUGR-R</b>	<b>MACROSOMIC</b>	
Inguinal fat (g)*	0.152 ± 0.022 <sup>a,b</sup>	0.127 ± 0.015 <sup>a</sup>	0.202 ± 0.024 <sup>b</sup>	
Renal fat (g)	0.132 ± 0.025 <sup>a</sup>	0.163 ± 0.038 <sup>a,b</sup>	0.230 ± 0.032 <sup>b</sup>	
Gonadal fat (g)	0.351 ± 0.065 <sup>a</sup>	0.347 ± 0.101 <sup>a</sup>	0.574 ± 0.080 <sup>a'</sup>	
Total fat (g)	0.605 ± 0.093 <sup>a</sup>	0.637 ± 0.118 <sup>a</sup>	1.006 ± 0.125 <sup>b</sup>	
Body weight (g)	38.8 ± 1.2 <sup>a</sup>	39.7 ± 1.5 <sup>a,b</sup>	43.8 ± 1.7 <sup>b</sup>	
N	5	5	5	

Inguinal, renal and gonadal fat pad weights for 14-hr fasted males in were significantly correlated. Specifically, relative to the weight of the gonadal fat pads, renal fat pad weights were approximately 66% lower ( $r^2=0.880$ ), and inguinal fat pads were 60% lower ( $r^2=0.652$ ). Gonadal fat accounted for 58-61% of the total fat measured (summed weights of gonadal, inguinal and renal fat pads). Groups with different letters are significantly different from each other,  $P < 0.05$ . Values are mean±SEM.

**Table S4.** Growth and fat weights of the sub-group of 14-hr fasted males and non-fasted males used in qPCR analyses. Values are mean  $\pm$  SEM. \*P<0.05, \*\*P<0.01, \*\*\*P<0.001 vs IUGR; †P<0.05, †††P<0.001 vs. Median.

<b>Set 1: 14-hr fasted</b>	<b>IUGR</b>	<b>MACROSOMIC</b>
Weight gain week 3-4 (%)	110.5 $\pm$ 13.0	32.2 $\pm$ 5.0 **
Birth Weight (g)	1.16 $\pm$ 0.04	2.20 $\pm$ 0.05 ***
Week 3 weight (g)	12.4 $\pm$ 0.7	17.2 $\pm$ 0.6 **
Week 4 weight (g)	25.9 $\pm$ 0.8	22.7 $\pm$ 1.3
Week 12 weight (g)	39.2 $\pm$ 0.6	41.4 $\pm$ 1.1
Inguinal fat (mg)	0.112 $\pm$ 0.015	0.205 $\pm$ 0
Gonadal fat (mg)	0.302 $\pm$ 0.034	0.594 $\pm$ 0.1 *
Renal fat (mg)	0.093 $\pm$ 0.016	0.189 $\pm$ 0 *
Total Fat (mg)	0.507 $\pm$ 0.054	0.988 $\pm$ 0.2 *
Group N	5	5
<b>Set 2: non-fasted</b>	<b>IUGR</b>	<b>MACROSOMIC</b>
Weight gain week 3-4 (%)	101.0 $\pm$ 11.8	49.1 $\pm$ 8.5 **
Birth Weight (g)	1.28 $\pm$ 0.01	1.99 $\pm$ 0.01 ***
Week 3 weight (g)	10.5 $\pm$ 1.6	16.1 $\pm$ 1.0 **
Week 4 weight (g)	20.7 $\pm$ 2.6	24.1 $\pm$ 2.0
Week 12 weight (g)	36.1 $\pm$ 1.6	39 $\pm$ 1.6
Inguinal fat (mg)	0.121 $\pm$ 0.017	0.202 $\pm$ 0.024 *
Gonadal fat (mg)	0.406 $\pm$ 0.106	0.574 $\pm$ 0.08
Renal fat (mg)	0.133 $\pm$ 0.031	0.23 $\pm$ 0.032
Total Fat (mg)	0.660 $\pm$ 0.150	1.006 $\pm$ 0.125
Group N	4	5

**Table S5.** Growth and fat weights of animals used in Microarray analyses. Values are mean  $\pm$  SEM.  
 \*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001 vs IUGR-L; †P < 0.05, ††† P < 0.001 vs. macrosomic.

<b>MICROARRAY ANIMALS:</b>	<b>IUGR-L</b>	<b>IUGR-R</b>	<b>MACROSOMIC</b>
Weight gain week 3-4 (%)	34.7 $\pm$ 2.9	98.4 $\pm$ 16.1 *†	41.6 $\pm$ 5.1
Birth Weight (g)	1.32 $\pm$ 0.01	1.26 $\pm$ 0.00 **†††	2.00 $\pm$ 0.01 ***
Week 3 weight (g)	10.3 $\pm$ 1.3	11.3 $\pm$ 1.7	16.4 $\pm$ 1.2 *
Week 4 weight (g)	13.8 $\pm$ 1.4	21.8 $\pm$ 1.8 *	23.4 $\pm$ 2.4 *
Week 12 weight (g)	35.1 $\pm$ 2.2	39.0 $\pm$ 1.0	39.0 $\pm$ 2.0
Inguinal fat (mg)	0.132 $\pm$ 0.012	0.148 $\pm$ 0.011	0.191 $\pm$ 0.028 <i>p=0.085</i>
Gonadal fat (mg)	0.25 $\pm$ 0.032	0.427 $\pm$ 0.158	0.579 $\pm$ 0.103
Renal fat (mg)	0.093 $\pm$ 0.005	0.212 $\pm$ 0.044*	0.235 $\pm$ 0.04 *
Total Fat (mg)	0.474 $\pm$ 0.043	0.786 $\pm$ 0.131	1.005 $\pm$ 0.161 *
Group N	3	3	4

**Table S6.** Gene pathways manually identified as being potentially impacted by either prenatal or postweaning development. Drawing from results of both T-tests and cluster analysis, we identified multiple genes that were differentially expressed within these pathways. \*Direction is effect on gene expression in first group named in Comparison column. Where (2) is indicated, two transcripts of the same gene met the criteria but only one is reported.

Pathway	Analysis source	Comparison	Direction*	Gene ID	Gene identifier
<b>Renin-angiotensin system</b>  <i>Trend: heavy vs. light animals</i>	T-test	IUGR-R v IUGR-L	Up	Cpa3	NM_007753
	T-test	IUGR-R v IUGR-L	Down	Mas1	NM_008552
	T-test	IUGR-R v IUGR-L	Down	Agtr2	NM_007429
	T-test	IUGR-R v Mac	Down	Agtr2	NM_007429
	Cluster A	(IUGR-L + IUGR-R) v Macro	Down	Ctsa	NP_032932
	Cluster C	(IUGR-R + Mac) v IUGR-L	Down	Atp6ap2 (2)	NM_027439
	Cluster D	(IUGR-R + Mac) v IUGR-L	Up	Thop1	NP_073144
	Cluster D	(IUGR-R + Mac) v IUGR-L	Up	Anpep	NP_032512
	Cluster D	(IUGR-R + Mac) v IUGR-L	Up	Nln	NP_083723
<b>Ppar signaling</b>  <i>Trend: rapid vs. slow-growing</i>	T-test	IUGR-R v Mac	Up	Apoa1 (2)	AI527359
	T-test	IUGR-R v Mac	Up	Apoc3	BC021776
	T-test	IUGR-R v Mac	Up	Fabp2	NM_007980
	T-test	IUGR-R v IUGR-L	Down	Ubc	BI653033
	Cluster D	(IUGR-R + Mac) v IUGR-L	Up	Acaa1 (2)	NM_130864
<b>Adipocytokine signaling</b>  <i>Trend: heavy vs. light animals</i>	T-test	IUGR-R v IUGR-L	Up	Ptpn11	L08663
	T-test	IUGR-R v IUGR-L	Down	Mapk10	BE947490
	T-test	IUGR-R v IUGR-L	Down	Mapk8	BB184171
	Cluster D	(IUGR-R + Mac) v IUGR-L	Up	Ikbkg (2)	NP_001028333
	Cluster D	(IUGR-R + Mac) v IUGR-L	Up	Tradd	NP_001129539
<b>Glycolysis and gluconeogenesis</b>  <i>Trend: heavy vs. light animals</i>	T-test	IUGR-R v IUGR-L	Up	Hk1	NM_010438
	T-test	IUGR-R v IUGR-L	Up	Bpgm	NM_007563
	T-test	IUGR-R v IUGR-L	Down	Adh7	NM_009626
	Cluster C	(IUGR-R + Mac) v IUGR-L	Down	Gpi1	NM_008155
	Cluster E	(IUGR-L + IUGR-R) v Macro	Up	Eno3	NM_001136062
<b>Fatty acid elongation, fatty acid metabolism</b>  <i>Trend: heavy vs. light animals</i>	T-test	IUGR-R v IUGR-L	Down	Adh7	NM_009626
	T-test	IUGR-R v IUGR-L	Down	Mecr	BB310008
	T-test	IUGR-R v IUGR-L	Down	Elovl	BB829575
	Cluster C	(IUGR-R + Mac) v IUGR-L	Down	Acat2	NM_009338
	Cluster D	(IUGR-R + Mac) v IUGR-L	Up	Acaa2	NM_177470
	Cluster D	(IUGR-R + Mac) v IUGR-L	Up	Adh5	NM_007410
<b>Type II diabetes mellitus</b>  <i>Trend: heavy vs. light animals</i>	T-test	IUGR-R v IUGR-L	Down	Mapk8	BB184171
	T-test	IUGR-R v IUGR-L	Down	Mapk10	BE947490
	T-test	IUGR-R v IUGR-L	Down	Cacna1a	BE943756
	T-test	IUGR-R v IUGR-L	Down	Cacna1d	BB048682
	Cluster C	(IUGR-R + Mac) v IUGR-L	Down	Cacna1d	NM_001083616
	Cluster C	(IUGR-R + Mac) v IUGR-L	Down	Pik3r2	NM_008841

**Table S7-A, Microarray data: T-test results** Differentially expressed genes. All data are log-transformed. The T-test adjustment used is Benjamini and Hochberg correction. \*Direction is for IUGR-R compared to other group (IUGR-L or Macrosomic.)

IUGR-L vs. IUGR-R					Macrosomic vs. IUGR-R				
Gene Identifier	Gene ID	Direction*	p-value	adj. p-value	Gene Identifier	Gene ID	Direction*	p-value	adj. p-value
BB023525	547127	Down	0.0346	0.2602	BB377136	-	Down	0.0019	0.2387
BB125596	100038868	Down	0.0161	0.2105	BB127374	-	Down	0.0000	0.0145
AI256288	100040465	Down	0.0309	0.2546	M55219	-	Down	0.0181	0.3617
AK017006	100043539	Down	0.0349	0.2602	L38424	-	Down	0.0204	0.3617
BM211445	-	Down	0.0257	0.2425	AU022537	-	Down	0.0418	0.3617
BB198943	-	Down	0.0327	0.2564	AV230350	-	Down	0.0007	0.1927
BE634837	-	Down	0.0024	0.1322	BG069010	-	Down	0.0183	0.3617
BB312387	-	Down	0.0006	0.0870	BG064921	-	Down	0.0035	0.2705
AK021269	-	Down	0.0003	0.0844	NM_027028	-	Down	0.0365	0.3617
BG066461	-	Down	0.0007	0.0870	BB138441	-	Down	0.0404	0.3617
BB200185	-	Down	0.0055	0.1553	BB424956	-	Down	0.0026	0.2465
AV106191	-	Down	0.0029	0.1330	BB312387	-	Down	0.0023	0.2465
AW240647	-	Down	0.0006	0.0870	NM_053239	-	Down	0.0166	0.3617
AV209128	-	Down	0.0000	0.0568	BB477142	-	Down	0.0144	0.3617
BG069546	-	Down	0.0002	0.0784	BB083632	-	Down	0.0101	0.3617
AV161067	-	Down	0.0002	0.0784	BB366490	-	Down	0.0049	0.2916
BQ175333	-	Down	0.0060	0.1553	AK020969	-	Down	0.0488	0.3617
AK012219	-	Down	0.0010	0.0898	BB667376	-	Down	0.0011	0.2293
BE953598	-	Down	0.0000	0.0568	AV090440	-	Down	0.0381	0.3617
BG071941	-	Down	0.0262	0.2440	BG076663	-	Down	0.0374	0.3617
BG066492	-	Down	0.0015	0.1125	BB822932	-	Down	0.0006	0.1927
BB361965	-	Down	0.0067	0.1608	BB240193	-	Down	0.0304	0.3617
BB235011	-	Down	0.0112	0.1914	AI666381	-	Down	0.0027	0.2465
AV291496	-	Down	0.0422	0.2698	BB038663	-	Down	0.0461	0.3617
C79035	-	Down	0.0030	0.1330	BB473586	-	Down	0.0430	0.3617
BB799477	-	Down	0.0081	0.1668	BG069002	-	Down	0.0459	0.3617
BG066120	-	Down	0.0041	0.1386	BG066943	-	Down	0.0177	0.3617
BB307421	-	Down	0.0006	0.0870	AI849504	-	Down	0.0188	0.3617
AI666381	-	Down	0.0023	0.1322	AK017840	-	Down	0.0385	0.3617
BB235388	-	Down	0.0048	0.1489	BB829808	-	Down	0.0413	0.3617
AV264531	-	Down	0.0116	0.1928	BM934616	-	Down	0.0462	0.3617
AI448156	-	Down	0.0079	0.1661	AV097026	-	Down	0.0441	0.3617
BC016545	-	Down	0.0016	0.1148	BB009491	-	Down	0.0165	0.3617
BG066943	-	Down	0.0127	0.1959	BE947483	-	Down	0.0474	0.3617
BG063160	-	Down	0.0347	0.2602	AV266901	-	Down	0.0435	0.3617
AK011375	-	Down	0.0149	0.2045	AK016655	-	Down	0.0023	0.2465
BB724383	-	Down	0.0388	0.2645	BG067536	-	Down	0.0335	0.3617
BB311937	-	Down	0.0007	0.0870	AV085233	-	Down	0.0358	0.3617
BG074947	-	Down	0.0105	0.1881	BG071676	-	Down	0.0347	0.3617
AV279288	-	Down	0.0319	0.2564	BE990172	-	Down	0.0336	0.3617
BB349272	-	Down	0.0362	0.2628	BB164560	-	Down	0.0312	0.3617
BB273442	-	Down	0.0004	0.0844	AU022728	-	Down	0.0310	0.3617
BI465596	-	Down	0.0288	0.2506	AW553082	-	Down	0.0129	0.3617
AK015212	-	Down	0.0190	0.2199	BB470919	-	Down	0.0114	0.3617
BB393368	-	Down	0.0418	0.2695	BB335802	-	Down	0.0454	0.3617
X04603	-	Down	0.0091	0.1767	AK017183	-	Down	0.0325	0.3617
AV277330	-	Down	0.0051	0.1514	AV041077	-	Down	0.0351	0.3617
AK019269	-	Down	0.0049	0.1489	BB309880	-	Down	0.0430	0.3617
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AV110775	-	Down	0.0447	0.2731	AV209796	-	Down	0.0106	0.3617
BG069002	-	Down	0.0488	0.2788	BG070409	-	Down	0.0210	0.3617
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AV245300	-	Down	0.0084	0.1700	AK012864	-	Down	0.0460	0.3617
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AV273436	-	Down	0.0274	0.2469	BB497755	-	Down	0.0478	0.3617
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BM222742	-	Down	0.0071	0.1632	AK018840	1700034E13Rik	Down	0.0119	0.3617
AV007867	-	Down	0.0372	0.2643	NM_028494	1700034I23Rik	Down	0.0219	0.3617
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AK019561	-	Down	0.0232	0.2370	BB667186	4930412F15Rik	Down	0.0408	0.3617
AK020548	-	Down	0.0142	0.2033	AV255799	4930523C11Rik	Down	0.0040	0.2723
C76434	-	Down	0.0342	0.2595	AV267411	4930526D03Rik	Down	0.0108	0.3617
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BB555188	-	Down	0.0432	0.2729	AK016218	4930564D02Rik	Down	0.0163	0.3617
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BE985527	-	Down	0.0005	0.0844	AK016488	4931429L15Rik	Down	0.0220	0.3617
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BG073901	-	Down	0.0246	0.2400	NM_008553	Ascl1	Down	0.0238	0.3617
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BB167641	-	Down	0.0252	0.2425	NM_030558	Car15	Down	0.0041	0.2723
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AU067808	-	Down	0.0446	0.2731	BB385581	Cbl	Down	0.0331	0.3617
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BM225255	-	Down	0.0292	0.2513	BB273513	Cdh8	Down	0.0300	0.3617

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BB202185	-	Down	0.0052	0.1517	U20265	Copg2as2	Down	0.0371	0.3617
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AK021364	-	Down	0.0328	0.2564	U21729	Crhr2	Down	0.0282	0.3617
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BG068241	-	Down	0.0123	0.1951	AK006130	Csrmp1	Down	0.0422	0.3617
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AI450773	-	Down	0.0093	0.1767	BG295389	Dhcr24	Down	0.0208	0.3617
BB667885	-	Down	0.0410	0.2684	AF022078	Dlx6	Down	0.0009	0.2236
BB749667	-	Down	0.0289	0.2506	BE952491	Dnajb14	Down	0.0305	0.3617
AK017498	-	Down	0.0421	0.2695	AV161550	Dpysl3	Down	0.0008	0.2026
BG063165	-	Down	0.0212	0.2271	BB293562	Dtl	Down	0.0163	0.3617
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BB323133	-	Down	0.0305	0.2541	NM_007903	Edn3	Down	0.0044	0.2765
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BB531351	-	Down	0.0047	0.1482	BB807687	EG624855	Down	0.0313	0.3617
AU043103	-	Down	0.0042	0.1392	BF227830	Elf4g1	Down	0.0401	0.3617
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BB204558	-	Down	0.0141	0.2030	NM_027828	Fam110c	Down	0.0014	0.2381
BB188646	-	Down	0.0178	0.2166	BG071043	Fbxl13	Down	0.0399	0.3617
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BB209183	-	Down	0.0478	0.2768	AF263536	Fgf23	Down	0.0433	0.3617
BG075843	-	Down	0.0276	0.2469	BI249549	Foxj2	Down	0.0397	0.3617
AV327883	-	Down	0.0482	0.2780	AB032770	Foxo4	Down	0.0020	0.2387
BG066901	-	Down	0.0265	0.2440	NM_008066	Gabra2	Down	0.0041	0.2723
BB528213	-	Down	0.0140	0.2030	BQ175863	Gabra5	Down	0.0144	0.3617
C76358	-	Down	0.0051	0.1514	BB316100	Gabrg3	Down	0.0087	0.3617
BB207470	-	Down	0.0388	0.2645	NM_010275	Gdnf	Down	0.0161	0.3617
BB038556	-	Down	0.0002	0.0844	BB548169	Gm941	Down	0.0388	0.3617
BM196689	-	Down	0.0255	0.2425	BB354676	Gpr150	Down	0.0000	0.0424
AW492692	-	Down	0.0069	0.1617	NM_032399	Gpr87	Down	0.0151	0.3617
BB150912	-	Down	0.0452	0.2741	AK002633	Grlh2	Down	0.0023	0.2465
AI480624	-	Down	0.0050	0.1496	NM_008169	Grin1	Down	0.0043	0.2765
AV381718	-	Down	0.0364	0.2630	BB443417	Gucy1a2	Down	0.0464	0.3617
BB283805	-	Down	0.0131	0.1992	AV018723	H2-Aa	Down	0.0230	0.3617
BB127498	-	Down	0.0110	0.1910	BB786529	Hamp2	Down	0.0230	0.3617
AW120636	-	Down	0.0353	0.2602	BF451327	Hdh2	Down	0.0174	0.3617
BB386165	-	Down	0.0380	0.2645	AV337579	Hes5	Down	0.0209	0.3617
BG066333	-	Down	0.0207	0.2265	BB486740	Hlf3a	Down	0.0395	0.3617
AI615965	-	Down	0.0357	0.2618	AK005588	Hmgb4	Down	0.0175	0.3617
BE949326	-	Down	0.0349	0.2602	NM_008264	Hoxa13	Down	0.0041	0.2723
BB183984	-	Down	0.0078	0.1656	AK017731	Hspbp1	Down	0.0199	0.3617
AK015547	-	Down	0.0419	0.2695	BG066466	Iffo2	Down	0.0072	0.3488
BB534600	-	Down	0.0322	0.2564	BB794657	Igf2bp1	Down	0.0403	0.3617
BI158554	-	Down	0.0146	0.2044	NM_023670	Igf2bp3	Down	0.0297	0.3617
BF020502	-	Down	0.0060	0.1553	BC003727	Il1a	Down	0.0139	0.3617
AI429425	-	Down	0.0150	0.2056	BB042417	Il1r1	Down	0.0328	0.3617
BB471224	-	Down	0.0076	0.1648	AJ277831	Il1rapl2	Down	0.0073	0.3506
W91649	-	Down	0.0039	0.1383	BM220651	Irak4	Down	0.0123	0.3617
AF071431	-	Down	0.0000	0.0568	BG069095	Irf8	Down	0.0365	0.3617
BB165850	-	Down	0.0325	0.2564	AK020772	Itk	Down	0.0066	0.3305
AI464227	-	Down	0.0163	0.2111	BE981282	Kbtbd7	Down	0.0087	0.3617
BB662083	-	Down	0.0168	0.2120	BF322939	Kcnk12	Down	0.0427	0.3617
BB224546	-	Down	0.0325	0.2564	NM_133235	Khdrbs2	Down	0.0404	0.3617
BB381263	-	Down	0.0017	0.1196	NM_019974	Klk11	Down	0.0232	0.3617
BC024928	-	Down	0.0306	0.2541	NM_008457	Klk1b8	Down	0.0392	0.3617
C77957	-	Down	0.0083	0.1684	AF288377	Klra1	Down	0.0448	0.3617
BM218863	-	Down	0.0358	0.2618	AF288379	Klra7	Down	0.0065	0.3289
BB507994	-	Down	0.0021	0.1311	NM_008476	Krt6a	Down	0.0114	0.3617
BB346879	-	Down	0.0489	0.2788	BE987427	Lpgat1	Down	0.0013	0.2346
BG066303	-	Down	0.0406	0.2680	AK017594	Lrfr2	Down	0.0316	0.3617
BB463760	-	Down	0.0310	0.2546	BB437173	Lrp6	Down	0.0250	0.3617
AA517023	-	Down	0.0104	0.1881	AI267139	Lrrc19	Down	0.0134	0.3617
BB324138	-	Down	0.0050	0.1504	AI326034	Lyzl6	Down	0.0455	0.3617
BB320171	-	Down	0.0235	0.2372	AK008018	Mtap7	Down	0.0142	0.3617
BB223643	-	Down	0.0286	0.2506	AJ293626	Myh1	Down	0.0427	0.3617
BB556191	-	Down	0.0346	0.2602	AK002312	Myl3	Down	0.0385	0.3617
AV006589	-	Down	0.0155	0.2075	AK010332	Nanog	Down	0.0394	0.3617
BE957062	-	Down	0.0069	0.1617	BF019797	Nbeal2	Down	0.0238	0.3617
BG067629	-	Down	0.0078	0.1656	AK017458	Neto2	Down	0.0477	0.3617
AK016932	-	Down	0.0457	0.2749	AF289078	Nfatc2	Down	0.0046	0.2863
NM_030247	-	Down	0.0022	0.1311	BC025455	Nipbl	Down	0.0039	0.2723
BE995561	-	Down	0.0182	0.2166	AK018248	Nkain2	Down	0.0378	0.3617
BB525437	-	Down	0.0487	0.2788	NM_008702	Nlk	Down	0.0309	0.3617
NM_008735	-	Down	0.0323	0.2564	BB204913	Nlrc3	Down	0.0320	0.3617
AW557641	-	Down	0.0231	0.2370	D32210	Notch2	Down	0.0034	0.2705
BM939280	-	Down	0.0131	0.1992	NM_010933	Nppc	Down	0.0472	0.3617
BQ175171	-	Down	0.0005	0.0844	NM_016708	Npy5r	Down	0.0033	0.2696
BE992440	-	Down	0.0255	0.2425	BB322941	Nr4a2	Down	0.0307	0.3617
AK017106	-	Down	0.0034	0.1330	NM_020610	Nrip3	Down	0.0221	0.3617
BB751612	-	Down	0.0391	0.2645	BB265776	Pcdha6	Down	0.0199	0.3617
AU043549	-	Down	0.0406	0.2680	NM_009981	Pcyt1a	Down	0.0025	0.2465
BG067678	-	Down	0.0046	0.1477	AK020261	Pdx1	Down	0.0409	0.3617
BB534298	-	Down	0.0088	0.1739	BB315077	Pex5l	Down	0.0469	0.3617
BB246383	-	Down	0.0438	0.2731	AK015656	Pick1	Down	0.0483	0.3617
AK005972	-	Down	0.0085	0.1707	BB490622	Plekha5	Down	0.0363	0.3617
BG064867	-	Down	0.0406	0.2680	AF408412	Pof1b	Down	0.0433	0.3617
BG070395	-	Down	0.0274	0.2469	AW240531	Polr3a	Down	0.0006	0.1927
BB484739	-	Down	0.0060	0.1553	AW455905	Ppp2r2c	Down	0.0187	0.3617
AW124917	-	Down	0.0324	0.2564	BM250725	Pr12c5	Down	0.0003	0.1362
BB271145	-	Down	0.0475	0.2757	AV225384	Pr17a1	Down	0.0059	0.3209
BB084839	-	Down	0.0127	0.1951	AF182065	Prok2	Down	0.0375	0.3617
BB219075	-	Down	0.0309	0.2546	AW060288	Qk	Down	0.0292	0.3617
AI427801	-	Down	0.0353	0.2602	BM214169	Rab8b	Down	0.0490	0.3617

BB466083	-	Down	0.0338	0.2594	BB274058	Rgs6	Down	0.0404	0.3617
BB082509	-	Down	0.0324	0.2564	AV047988	Rhobtb3	Down	0.0349	0.3617
BM120569	-	Down	0.0187	0.2199	AV269723	Rhox13	Down	0.0011	0.2293
AW213766	-	Down	0.0306	0.2541	BM210473	Rhox5	Down	0.0366	0.3617
BB356354	-	Down	0.0263	0.2440	AF155141	Rp1	Down	0.0017	0.2387
AK015242	-	Down	0.0449	0.2738	BC026459	RP23-433P19.11	Down	0.0496	0.3617
BE627942	-	Down	0.0003	0.0844	AW489945	Rundc3a	Down	0.0093	0.3617
AK018213	-	Down	0.0071	0.1632	NM_013650	S100a8	Down	0.0372	0.3617
AI505326	-	Down	0.0455	0.2747	NM_011315	Saa3	Down	0.0196	0.3617
BB247338	-	Down	0.0175	0.2163	BG064756	Sall4	Down	0.0033	0.2696
AV413496	-	Down	0.0004	0.0844	AV259481	Sdk2	Down	0.0363	0.3617
BB702472	-	Down	0.0235	0.2372	AB021291	Sema4f	Down	0.0282	0.3617
AV347837	-	Down	0.0399	0.2678	BB471743	Seld8	Down	0.0307	0.3617
BB201888	-	Down	0.0025	0.1330	BF468072	Slc12a5	Down	0.0328	0.3617
BB546069	-	Down	0.0465	0.2751	C85957	Slc35c2	Down	0.0277	0.3617
AK014957	-	Down	0.0089	0.1749	BG066440	Slc6c1	Down	0.0009	0.2180
BB205102	-	Down	0.0037	0.1349	BB227643	Sifn10	Down	0.0302	0.3617
BB102433	-	Down	0.0014	0.1125	BI684556	Smc2	Down	0.0166	0.3617
BB328387	-	Down	0.0194	0.2213	AK010671	Snrpn	Down	0.0327	0.3617
NM_008735	-	Down	0.0026	0.1330	NM_009237	Sox3	Down	0.0250	0.3617
BE989344	-	Down	0.0470	0.2752	BG070168	Spry4	Down	0.0068	0.3366
BB233502	-	Down	0.0004	0.0844	NM_030237	Spz1	Down	0.0012	0.2293
BE691677	-	Down	0.0181	0.2166	X91043	Stom	Down	0.0354	0.3617
BB076855	-	Down	0.0193	0.2207	BB352105	Tbc1d16	Down	0.0426	0.3617
BB230894	-	Down	0.0077	0.1656	M87849	Tcrb-V13	Down	0.0242	0.3617
BB466114	-	Down	0.0388	0.2645	AK016186	Tmem159	Down	0.0298	0.3617
BG070025	-	Down	0.0142	0.2033	BF138523	Tmprss13	Down	0.0440	0.3617
BB518847	-	Down	0.0155	0.2077	NM_009407	Tnp1	Down	0.0392	0.3617
AU022339	-	Down	0.0019	0.1256	BC025631	Tnrc18	Down	0.0114	0.3617
AK015383	-	Down	0.0233	0.2370	AY034576	Tpbbp	Down	0.0321	0.3617
AI851474	-	Down	0.0285	0.2506	AW554765	Tpr	Down	0.0041	0.2723
BF318475	-	Down	0.0203	0.2265	NM_011635	Trap1a	Down	0.0126	0.3617
BB277721	-	Down	0.0255	0.2425	AF223415	Trdn	Down	0.0147	0.3617
BB735036	-	Down	0.0012	0.1000	AF223417	Trdn	Down	0.0276	0.3617
BE686035	-	Down	0.0282	0.2501	BB762957	Typr1	Down	0.0286	0.3617
AK019900	-	Down	0.0417	0.2694	AK003750	Ucma	Down	0.0000	0.0424
BB467267	-	Down	0.0216	0.2285	BC022133	Uroc1	Down	0.0434	0.3617
BB604994	1110021J02Rik	Down	0.0289	0.2506	NM_053225	V1rb1	Down	0.0147	0.3617
AV023018	1110028C15Rik	Down	0.0094	0.1788	BB551556	Vtcn1	Down	0.0266	0.3617
BC022950	1600029D21Rik	Down	0.0190	0.2199	AW123067	Wapal	Down	0.0257	0.3617
BM214338	1700019G17Rik	Down	0.0211	0.2271	BG067702	Wdfy4	Down	0.0294	0.3617
NM_023064	1700021K02Rik	Down	0.0425	0.2711	NM_009521	Wnt3	Down	0.0260	0.3617
AK006428	1700027J07Rik	Down	0.0441	0.2731	NM_009522	Wnt3a	Down	0.0446	0.3617
AK006746	1700049K14Rik	Down	0.0407	0.2680	BI102531	Wwp1	Down	0.0032	0.2696
AV258486	1700073E17Rik	Down	0.0488	0.2788	AW488774	Zfp287	Down	0.0207	0.3617
AK007082	1700095J03Rik	Down	0.0088	0.1748	AF290196	Zfp352	Down	0.0433	0.3617
AK007241	1700122O11Rik	Down	0.0011	0.0919	AA682050	100042198	Up	0.0263	0.3617
AK010086	2310067E19Rik	Down	0.0306	0.2541	AK015416	100042722	Up	0.0155	0.3617
AK010362	2410003J06Rik	Down	0.0460	0.2749	BG069060	-	Up	0.0002	0.1221
BF467494	2810408A11Rik	Down	0.0444	0.2731	AV298153	-	Up	0.0001	0.0947
AK017673	2810417H13Rik	Down	0.0047	0.1482	BB498027	-	Up	0.0013	0.2346
AK014549	4632404H12Rik	Down	0.0075	0.1643	BE947764	-	Up	0.0293	0.3617
AV278097	4921528O07Rik	Down	0.0442	0.2731	AK015008	-	Up	0.0200	0.3617
AV255799	4930523C11Rik	Down	0.0031	0.1330	BC010208	-	Up	0.0042	0.2765
AK016248	4930568D16Rik	Down	0.0346	0.2602	AW046902	-	Up	0.0000	0.0424
AV381533	5830403L16Rik	Down	0.0211	0.2271	C77533	-	Up	0.0049	0.2916
AV376276	6330416L07Rik	Down	0.0064	0.1570	AI746421	-	Up	0.0058	0.3178
AV133931	6720463M24Rik	Down	0.0105	0.1881	BB189091	-	Up	0.0046	0.2863
BB079733	9330159F19Rik	Down	0.0039	0.1383	BB198406	-	Up	0.0386	0.3617
BB177150	A230065H18Rik	Down	0.0336	0.2593	BG068057	-	Up	0.0093	0.3617
BM243643	A430107P09Rik	Down	0.0376	0.2645	AK018062	-	Up	0.0177	0.3617
BB262224	A830005F24Rik	Down	0.0334	0.2589	AI504240	-	Up	0.0165	0.3617
AK020834	A930009A15Rik	Down	0.0242	0.2388	BB533980	-	Up	0.0487	0.3617
NM_021370	Accn5	Down	0.0354	0.2602	BE630431	-	Up	0.0251	0.3617
BE573407	Acer3	Down	0.0165	0.2119	BG067109	-	Up	0.0476	0.3617
NM_009599	Ache	Down	0.0025	0.1330	BE380915	-	Up	0.0002	0.1221
NM_009626	Adh7	Down	0.0011	0.0935	AK018489	-	Up	0.0028	0.2516
NM_007423	Afp	Down	0.0220	0.2315	BG068598	-	Up	0.0127	0.3617
NM_007429	Agtr2	Down	0.0001	0.0694	BG069718	-	Up	0.0423	0.3617
U39200	Alox12e	Down	0.0465	0.2751	BB337425	-	Up	0.0216	0.3617
AV267870	Als2cr11	Down	0.0228	0.2364	BB247020	-	Up	0.0190	0.3617
NM_009669	Amy2	Down	0.0055	0.1553	BB088844	-	Up	0.0061	0.3217
BM220087	Ank3	Down	0.0491	0.2793	C80868	-	Up	0.0026	0.2465
AI315673	Ankrd44	Down	0.0032	0.1330	BB130655	-	Up	0.0150	0.3617
AW240637	Anxa2	Down	0.0072	0.1635	BG064109	-	Up	0.0346	0.3617
AW493372	Ap2b1	Down	0.0447	0.2731	BC010480	-	Up	0.0050	0.2916
NM_020563	Apbh	Down	0.0436	0.2729	AK009013	-	Up	0.0047	0.2897
AF104416	Aqp3	Down	0.0383	0.2645	BB137915	-	Up	0.0253	0.3617
BM248774	Arhgap5	Down	0.0126	0.1951	BB191623	-	Up	0.0040	0.2723
AV233793	Arnt	Down	0.0139	0.2030	BB125781	-	Up	0.0494	0.3617
AV233423	Asb10	Down	0.0063	0.1570	BC005570	-	Up	0.0414	0.3617
NM_025758	Asb17	Down	0.0233	0.2370	BB304800	-	Up	0.0313	0.3617
C78762	Atp5a1	Down	0.0001	0.0694	BI872156	-	Up	0.0179	0.3617
AK021146	Atp5sl	Down	0.0390	0.2645	AI551151	-	Up	0.0293	0.3617
NM_134157	Atp6v1b1	Down	0.0167	0.2120	BG060698	-	Up	0.0275	0.3617
BB825830	Atrx	Down	0.0125	0.1951	BB026554	-	Up	0.0030	0.2645
BB667330	B230339M05Rik	Down	0.0387	0.2645	AK010967	-	Up	0.0354	0.3617
BB424673	B3gat1	Down	0.0460	0.2749	AK016155	-	Up	0.0206	0.3617
BM945167	B3gat1	Down	0.0197	0.2225	BE851943	-	Up	0.0007	0.1927
NM_007519	Baat	Down	0.0162	0.2111	BG085035	-	Up	0.0352	0.3617
BG069765	Baz2b	Down	0.0293	0.2516	BG072280	-	Up	0.0471	0.3617
NM_022884	Bhmt2	Down	0.0228	0.2364	AK006313	-	Up	0.0088	0.3617
BB658793	Bicd1	Down	0.0189	0.2199	BG076521	-	Up	0.0268	0.3617
AK016125	Boll	Down	0.0288	0.2506	BB041180	-	Up	0.0168	0.3617
BE951353	Btbd17	Down	0.0301	0.2537	M27608	-	Up	0.0488	0.3617
NM_009773	Bub1b	Down	0.0153	0.2061	AK014616	-	Up	0.0372	0.3617
BE981290	C130039O16Rik	Down	0.0010	0.0898	BM239853	-	Up	0.0061	0.3217
BI964419	C530008M17Rik	Down	0.0106	0.1889	BG071002	-	Up	0.0005	0.1927
AF419324	Cabp7	Down	0.0178	0.2166	BG067710	-	Up	0.0096	0.3617
BE943756	Cacna1a	Down	0.0472	0.2752	BF456247	-	Up	0.0135	0.3617
BB048682	Cacna1d	Down	0.0019	0.1275	BB546771	-	Up	0.0418	0.3617
BB333386	Cadm2	Down	0.0036	0.1349	BB525809	-	Up	0.0341	0.3617



AW557885	Calb1	Down	0.0029	0.1330	AK017366	-	Up	0.0081	0.3617
BC017646	Calb2	Down	0.0289	0.2506	AW121350	-	Up	0.0157	0.3617
BF660296	Camk4	Down	0.0151	0.2061	AK020414	-	Up	0.0079	0.3617
AF127766	Capn3	Down	0.0117	0.1936	AB001737	-	Up	0.0485	0.3617
AK014839	Ccdc39	Down	0.0074	0.1636	BG070662	-	Up	0.0156	0.3617
AF091432	Ccne2	Down	0.0238	0.2386	BI732990	-	Up	0.0433	0.3617
AJ131357	Ccr9	Down	0.0258	0.2433	BG074029	-	Up	0.0471	0.3617
BB543291	Ccr11	Down	0.0046	0.1466	AI646399	-	Up	0.0025	0.2465
L24495	Cd27	Down	0.0242	0.2388	BB215043	-	Up	0.0081	0.3617
NM_007650	Cd5	Down	0.0294	0.2516	BB041802	-	Up	0.0418	0.3617
BB154331	Cd8a	Down	0.0221	0.2323	AV166476	-	Up	0.0448	0.3617
BB483759	Cd93	Down	0.0105	0.1881	AA619999	-	Up	0.0325	0.3617
BB041150	Cdc20	Down	0.0436	0.2729	BG064321	-	Up	0.0102	0.3617
BG143419	Cdc45l	Down	0.0386	0.2645	AK013759	-	Up	0.0097	0.3617
BB273513	Cdh8	Down	0.0289	0.2506	BB614236	-	Up	0.0220	0.3617
BB191966	Cdk5rap2	Down	0.0107	0.1896	BM234751	-	Up	0.0424	0.3617
BB371618	Cdkn2aiip	Down	0.0072	0.1634	BB388293	-	Up	0.0465	0.3617
BB546429	Chka	Down	0.0256	0.2425	BB787201	-	Up	0.0393	0.3617
NM_007697	Chl1	Down	0.0354	0.2602	BG072474	-	Up	0.0350	0.3617
BB748443	Chrna4	Down	0.0349	0.2602	BG076300	-	Up	0.0379	0.3617
BE627927	Cldnd1	Down	0.0013	0.1043	AK007172	-	Up	0.0228	0.3617
BB425924	Clint1	Down	0.0068	0.1608	BB082380	-	Up	0.0397	0.3617
NM_025469	Clps	Down	0.0230	0.2370	AK017568	-	Up	0.0043	0.2765
BB207504	Cmah	Down	0.0474	0.2757	AK020658	-	Up	0.0253	0.3617
BC006866	Cntd1	Down	0.0111	0.1912	BE948587	-	Up	0.0462	0.3617
AK010095	Col22a1	Down	0.0265	0.2440	AV228155	-	Up	0.0422	0.3617
BB631643	Colq	Down	0.0312	0.2546	BG075663	-	Up	0.0062	0.3239
BB283617	Cops3	Down	0.0121	0.1951	BB279619	-	Up	0.0216	0.3617
BG067914	Crygb	Down	0.0059	0.1553	AK014899	-	Up	0.0197	0.3617
NM_025583	Ctrb1	Down	0.0003	0.0844	BF581125	-	Up	0.0468	0.3617
NM_021445	Cts6	Down	0.0230	0.2370	BG066316	-	Up	0.0482	0.3617
BC012653	Cx3cr1	Down	0.0342	0.2595	BC002257	-	Up	0.0206	0.3617
NM_133657	Cyp2a12	Down	0.0137	0.2028	BG070525	-	Up	0.0455	0.3617
BF783609	Cyp2j5	Down	0.0187	0.2199	AK020016	-	Up	0.0422	0.3617
AK021319	D530049N12Rik	Down	0.0465	0.2751	BF456117	-	Up	0.0489	0.3617
BB136172	Depdc1b	Down	0.0426	0.2718	AV274143	-	Up	0.0024	0.2465
AW554652	Diap1	Down	0.0409	0.2684	BG069104	-	Up	0.0463	0.3617
NM_010052	Dlk1	Down	0.0058	0.1553	NM_019509	-	Up	0.0292	0.3617
AF022078	Dlx6	Down	0.0032	0.1330	AU022864	-	Up	0.0492	0.3617
AV129500	Dnajc1	Down	0.0489	0.2788	AV274889	-	Up	0.0180	0.3617
C77692	Dpm1	Down	0.0313	0.2546	AK017949	-	Up	0.0175	0.3617
AV161550	Dpysl3	Down	0.0059	0.1553	BQ176688	-	Up	0.0060	0.3216
NM_031174	Dscam	Down	0.0243	0.2388	BB055532	-	Up	0.0403	0.3617
BB293562	Dtl	Down	0.0121	0.1951	BG066485	-	Up	0.0213	0.3617
AI509011	Dzip1	Down	0.0205	0.2265	C87101	-	Up	0.0313	0.3617
BM231657	Dzip3	Down	0.0070	0.1625	AK015368	-	Up	0.0401	0.3617
BM936291	Dzip3	Down	0.0018	0.1211	AV352500	-	Up	0.0311	0.3617
BB536333	E030049G20Rik	Down	0.0087	0.1739	AK016792	-	Up	0.0481	0.3617
BB539070	E130016E03Rik	Down	0.0167	0.2120	BM121794	-	Up	0.0274	0.3617
BB426176	E130307A14Rik	Down	0.0355	0.2602	AV324577	-	Up	0.0282	0.3617
AV285272	E330016A19Rik	Down	0.0056	0.1553	AI551328	-	Up	0.0386	0.3617
BB356446	Efr3b	Down	0.0380	0.2645	AK016327	-	Up	0.0359	0.3617
BB668107	EG218444	Down	0.0256	0.2425	BB429200	-	Up	0.0485	0.3617
AI504688	EG240038	Down	0.0317	0.2564	BM936732	-	Up	0.0094	0.3617
BC028643	EG245174	Down	0.0176	0.2163	AW125829	-	Up	0.0384	0.3617
BB807687	EG624855	Down	0.0252	0.2425	AV169581	-	Up	0.0055	0.3129
BF463689	EG668525	Down	0.0401	0.2679	BF471100	-	Up	0.0295	0.3617
BI439550	Ela3	Down	0.0052	0.1515	AK021065	-	Up	0.0364	0.3617
AV060902	Ela3	Down	0.0282	0.2501	BG075835	-	Up	0.0214	0.3617
BB829575	Elov14	Down	0.0112	0.1914	BB346592	-	Up	0.0469	0.3617
ENSMUSG0000									
AK010698	0074075	Down	0.0435	0.2729	AI551889	-	Up	0.0348	0.3617
NM_053103	Entpd7	Down	0.0203	0.2265	NM_023450	-	Up	0.0447	0.3617
X79084	Epha7	Down	0.0239	0.2386	AK011368	-	Up	0.0432	0.3617
NM_133245	Eraf	Down	0.0037	0.1349	BM114149	-	Up	0.0275	0.3617
BB131270	Fam13c	Down	0.0005	0.0844	NM_026351	-	Up	0.0330	0.3617
AI480750	Fam54b	Down	0.0010	0.0898	AK016607	-	Up	0.0342	0.3617
BB499286	Fancm	Down	0.0461	0.2749	NM_016793	-	Up	0.0421	0.3617
NM_010177	Fasl	Down	0.0336	0.2593	BG071123	-	Up	0.0096	0.3617
AW048300	Fat2	Down	0.0406	0.2680	BG072095	-	Up	0.0224	0.3617
BM120467	Fat3	Down	0.0304	0.2541	BG795494	-	Up	0.0418	0.3617
BE947102	Fbxl7	Down	0.0126	0.1951	NM_025376	1110002H13Rik	Up	0.0390	0.3617
AK011118	Fgb	Down	0.0300	0.2537	AK004439	1190002A17Rik	Up	0.0212	0.3617
M92416	Fgf6	Down	0.0151	0.2061	AK005650	1700003M02Rik	Up	0.0087	0.3617
AV283456	Fhl4	Down	0.0041	0.1392	BB546123	1700008O03Rik	Up	0.0159	0.3617
BB318003	Fibcd1	Down	0.0015	0.1125	AV044666	1700018G05Rik	Up	0.0364	0.3617
AK021261	Fndc3b	Down	0.0443	0.2731	AK006434	1700027L20Rik	Up	0.0002	0.1221
AW557298	Fnfp1	Down	0.0000	0.0123	BB256666	1700041C02Rik	Up	0.0328	0.3617
BB662927	Foxd1	Down	0.0291	0.2513	AK007013	1700086D15Rik	Up	0.0468	0.3617
BQ175863	Gabra5	Down	0.0305	0.2541	BI526033	1700086L19Rik	Up	0.0169	0.3617
AF276754	Gcg	Down	0.0228	0.2364	AK018926	1700094C09Rik	Up	0.0381	0.3617
BC018297	Gont3	Down	0.0066	0.1603	AK010406	2410004P03Rik	Up	0.0025	0.2465
AU017649	Gdap1	Down	0.0430	0.2729	BC020160	4833422F24Rik	Up	0.0028	0.2516
BB824003	Gemin5	Down	0.0125	0.1951	AK015309	4930434E21Rik	Up	0.0312	0.3617
BB183081	Glap	Down	0.0234	0.2370	BC024760	4930529M08Rik	Up	0.0411	0.3617
NM_010278	Gli1	Down	0.0324	0.2564	NM_133689	4930579J09Rik	Up	0.0113	0.3617
NM_080438	Gira3	Down	0.0489	0.2789	AI414902	5033428B15Rik	Up	0.0033	0.2696
BB535531	Gpr146	Down	0.0024	0.1322	AK017258	5430402E10Rik	Up	0.0345	0.3617
AK002633	Grlh2	Down	0.0163	0.2114	AV258949	6430537H07Rik	Up	0.0368	0.3617
AV231424	Grlh3	Down	0.0042	0.1404	AV342060	6430571L13Rik	Up	0.0436	0.3617
X03051	H2-D1	Down	0.0433	0.2729	BB751940	9130014G24Rik	Up	0.0437	0.3617
M16810	H2-D1	Down	0.0420	0.2695	AK020284	9130221D24Rik	Up	0.0063	0.3249
X03052	H2-D1	Down	0.0443	0.2731	AF319955	9530002B09Rik	Up	0.0491	0.3617
M16810	H2-D1	Down	0.0259	0.2434	AV255758	A330021E22Rik	Up	0.0498	0.3617
NM_010398	H2-D1	Down	0.0117	0.1936	NM_023383	Aadac	Up	0.0206	0.3617
U96752	H2-K1	Down	0.0383	0.2645	NM_028514	Actrl1	Up	0.0328	0.3617
BB786529	Hamp2	Down	0.0049	0.1489	BB171354	Adcyap1	Up	0.0357	0.3617
BB803143	Hcrt1	Down	0.0105	0.1881	AI323434	Adcyap1	Up	0.0041	0.2723
C80147	Hdgf	Down	0.0083	0.1684	BB155250	Agps	Up	0.0318	0.3617
NM_053149	Hemgn	Down	0.0162	0.2111	BC023499	Agr3	Up	0.0322	0.3617
AK019671	Hhipl2	Down	0.0390	0.2645	AK006382	Akap13	Up	0.0153	0.3617
BB486740	Hif3a	Down	0.0362	0.2628	NM_033603	Amn	Up	0.0127	0.3617

AV127319	Hist2h2be	Down	0.0009	0.0898	Al194999	Apoa1	Up	0.0478	0.3617
BB281327	Hkdc1	Down	0.0484	0.2781	Al527359	Apoa1	Up	0.0058	0.3178
X64550	Hmnr	Down	0.0098	0.1835	BC021776	Apoc3	Up	0.0457	0.3617
BB552443	Hoxa10	Down	0.0033	0.1330	BB193413	Aqp4	Up	0.0445	0.3617
AV116521	Hoxa11as	Down	0.0396	0.2666	AF297029	Arhgap10	Up	0.0019	0.2387
NM_008264	Hoxa13	Down	0.0036	0.1349	AK014880	Armc3	Up	0.0025	0.2465
NM_008275	Hoxd13	Down	0.0119	0.1951	BG069160	Atp10b	Up	0.0083	0.3617
NM_008294	Hsd3b4	Down	0.0175	0.2161	BC027319	Atp1b1	Up	0.0371	0.3617
NM_013821	Hsd3b6	Down	0.0493	0.2799	BC027319	Atp1b1	Up	0.0425	0.3617
NM_019960	Hspb3	Down	0.0064	0.1570	BB456872	Atp8a2	Up	0.0140	0.3617
BB446602	Igdc3	Down	0.0016	0.1157	AV274423	B230396O12Rik	Up	0.0019	0.2387
BB794657	Igf2bp1	Down	0.0001	0.0694	BB178985	B3gnt6	Up	0.0116	0.3617
NM_023670	Igf2bp3	Down	0.0149	0.2045	BE979636	Bai3	Up	0.0143	0.3617
BG092043	Igf2bp3	Down	0.0323	0.2564	NM_019446	Barhl1	Up	0.0408	0.3617
X88902	Igh	Down	0.0242	0.2388	BB001852	BC033915	Up	0.0384	0.3617
NM_008355	Il13	Down	0.0247	0.2400	BG066622	Brwd3	Up	0.0179	0.3617
AJ277831	Il1rapl2	Down	0.0159	0.2093	BB467799	Bzrap1	Up	0.0171	0.3617
AV301185	Incenp	Down	0.0467	0.2752	NM_021415	Cacna1h	Up	0.0402	0.3617
BQ176731	Inpp4b	Down	0.0035	0.1349	AF247140	Cacna2d2	Up	0.0219	0.3617
BI083036	Iqgap3	Down	0.0310	0.2546	BM238658	Cand2	Up	0.0027	0.2465
NM_029926	Irak4	Down	0.0211	0.2271	BG093811	Ccdc102a	Up	0.0192	0.3617
BM245932	Itk	Down	0.0291	0.2513	AV275573	Ccdc108	Up	0.0421	0.3617
C78652	Jmjd6	Down	0.0064	0.1570	AV279772	Ccdc113	Up	0.0408	0.3617
BF322939	Kcnk12	Down	0.0118	0.1937	Al845986	Ccdc28b	Up	0.0481	0.3617
AV133559	Kcnt2	Down	0.0267	0.2448	AV280756	Ccdc40	Up	0.0305	0.3617
BB239851	Kdm6a	Down	0.0193	0.2207	AW208904	Ccdc88b	Up	0.0328	0.3617
BG082186	Khdc1b	Down	0.0003	0.0844	BB479310	Cdc14a	Up	0.0108	0.3617
NM_024245	Klf23	Down	0.0139	0.2030	Al425726	Cdh4	Up	0.0303	0.3617
NM_019974	Klk11	Down	0.0043	0.1404	NM_021050	Cfr	Up	0.0063	0.3239
BC013660	Klk1b11	Down	0.0140	0.2030	BB184676	Chfr	Up	0.0004	0.1927
AU020154	Krr1	Down	0.0246	0.2400	BC011490	Chrna2	Up	0.0363	0.3617
NM_016880	Krt35	Down	0.0275	0.2469	AF486651	Cldn19	Up	0.0307	0.3617
NM_008476	Krt6a	Down	0.0303	0.2541	NM_016675	Cldn2	Up	0.0401	0.3617
BB144669	Krt78	Down	0.0353	0.2602	NM_025469	Clps	Up	0.0192	0.3617
AK014635	Krtap31-1	Down	0.0130	0.1988	BC024605	Cml5	Up	0.0192	0.3617
AK012581	Limd2	Down	0.0472	0.2752	AW553181	Cntn4	Up	0.0451	0.3617
BB518473	Lrat	Down	0.0180	0.2166	BQ173923	Cobl	Up	0.0025	0.2465
BB494139	Lrba	Down	0.0346	0.2602	AU019881	Cphx	Up	0.0356	0.3617
AV231827	Lrch2	Down	0.0076	0.1648	BC027090	Crocc	Up	0.0430	0.3617
BB093349	Lrfn4	Down	0.0301	0.2537	AU045294	Crxos1	Up	0.0209	0.3617
AK006656	Lrrc50	Down	0.0396	0.2666	BB698378	D15Wsu169e	Up	0.0325	0.3617
AK014850	Lrrc63	Down	0.0145	0.2038	NM_028146	Dnnd1	Up	0.0274	0.3617
NM_008522	Ltf	Down	0.0132	0.1993	BB179083	Disp2	Up	0.0430	0.3617
Al326034	Lyzl6	Down	0.0440	0.2731	AW492102	Dnahc9	Up	0.0320	0.3617
AV284857	Maf	Down	0.0256	0.2425	AV276323	E130009J12Rik	Up	0.0166	0.3617
BQ176021	Maneal	Down	0.0384	0.2645	BE947444	E230016M11Rik	Up	0.0272	0.3617
BE947490	Mapk10	Down	0.0376	0.2645	AV380908	EG627821	Up	0.0276	0.3617
AF128892	Mapk14	Down	0.0322	0.2564	BC026387	Eppk1	Up	0.0213	0.3617
BB184171	Mapk8	Down	0.0451	0.2741	NM_133191	Eps8l2	Up	0.0180	0.3617
NM_008552	Mas1	Down	0.0261	0.2440	NM_007950	Ereg	Up	0.0472	0.3617
BB328498	Mast4	Down	0.0162	0.2111	AB073079	Erg	Up	0.0480	0.3617
AK010648	Mcm10	Down	0.0327	0.2564	NM_007954	Es1	Up	0.0400	0.3617
BB310008	Mecr	Down	0.0279	0.2498	NM_007980	Fabp2	Up	0.0154	0.3617
NM_053172	Mepe	Down	0.0306	0.2541	BB474395	Fam179a	Up	0.0058	0.3178
NM_010795	Mgat3	Down	0.0092	0.1767	Al595406	Fbl1	Up	0.0342	0.3617
BG063791	Mib1	Down	0.0044	0.1430	NM_008011	Fgfr4	Up	0.0260	0.3617
BG095454	Mocs3	Down	0.0226	0.2354	BB234926	Foxn1	Up	0.0226	0.3617
BM115860	Morf4l1	Down	0.0440	0.2731	NM_013521	Fpr1	Up	0.0431	0.3617
NM_010824	Mpo	Down	0.0004	0.0844	BB468955	Garnl1	Up	0.0336	0.3617
BB390252	Mtmr3	Down	0.0399	0.2678	NM_008127	Gjb4	Up	0.0465	0.3617
NM_010850	Mycs	Down	0.0011	0.0926	AU041329	Gnb5	Up	0.0058	0.3178
BB011213	Mylh8	Down	0.0141	0.2030	BE947846	Gpr125	Up	0.0283	0.3617
BB251623	Nanos1	Down	0.0149	0.2045	BB028100	Gprasp2	Up	0.0447	0.3617
Al451602	Nav1	Down	0.0478	0.2768	NM_008165	Gria1	Up	0.0439	0.3617
AU067780	Nav2	Down	0.0494	0.2801	NM_133256	Gsx2	Up	0.0181	0.3617
BF019797	Nbeal2	Down	0.0141	0.2030	BB821611	Gtf3c1	Up	0.0218	0.3617
AK010307	Ndufab1	Down	0.0142	0.2033	BB347007	Hecw1	Up	0.0291	0.3617
M20480	Nefl	Down	0.0213	0.2271	AB008174	Hnf1b	Up	0.0006	0.1927
NM_021360	Neurl1a	Down	0.0400	0.2678	NM_010483	Htr5b	Up	0.0398	0.3617
AW049749	Neurl1a	Down	0.0034	0.1330	AF065324	Igh-6	Up	0.0361	0.3617
AF369980	Nfat5	Down	0.0218	0.2310	M28052	Il2rb	Up	0.0295	0.3617
AF289078	Nfatc2	Down	0.0460	0.2749	NM_018885	Irx4	Up	0.0465	0.3617
BB485864	Nfia	Down	0.0036	0.1349	NM_008423	Kcnd1	Up	0.0148	0.3617
NM_008694	Ngp	Down	0.0207	0.2265	AU067277	Kif5a	Up	0.0014	0.2387
BB204913	Nirc3	Down	0.0236	0.2380	NM_010915	Klk1b4	Up	0.0237	0.3617
AK005959	Nol4	Down	0.0031	0.1330	AK009086	Krtap26-1	Up	0.0383	0.3617
NM_010933	Nppc	Down	0.0293	0.2516	AK013209	Lhx9	Up	0.0194	0.3617
NM_016708	Npy5r	Down	0.0073	0.1636	NM_010727	Lnx1	Up	0.0255	0.3617
NM_008734	Nrg3	Down	0.0387	0.2645	NM_020028	Lpar2	Up	0.0424	0.3617
NM_018766	Ntsr1	Down	0.0414	0.2688	AK015164	Lrrc67	Up	0.0113	0.3617
Al853080	Nudt10	Down	0.0281	0.2501	AW541674	Map2k7	Up	0.0328	0.3617
AV270366	Nup210l	Down	0.0286	0.2506	M18775	Mapt	Up	0.0348	0.3617
AB067535	Oas2	Down	0.0434	0.2729	NM_008629	Msi1	Up	0.0481	0.3617
AA144866	Oaz3	Down	0.0464	0.2751	AW743000	Mybpc1	Up	0.0245	0.3617
BM118129	Odz3	Down	0.0470	0.2752	BC003985	Myo5c	Up	0.0157	0.3617
OTTMUSG0000									
Al461774	O015160	Down	0.0040	0.1383	NM_032394	Myo7b	Up	0.0187	0.3617
BB370469	Pcbp2	Down	0.0038	0.1358	BB049667	Nek5	Up	0.0256	0.3617
C76364	Pdcd6ip	Down	0.0009	0.0898	AK018265	Nhs1l	Up	0.0162	0.3617
BE981897	Pfkfb2	Down	0.0379	0.2645	Al527293	Nlrp12	Up	0.0288	0.3617
AK014380	Phf19	Down	0.0285	0.2506	BM225203	Nlrp4e	Up	0.0404	0.3617
BB490622	Plekha5	Down	0.0149	0.2045	BB071996	Nlrp6	Up	0.0392	0.3617
BB280013	Plekkg3	Down	0.0452	0.2741	AV323033	Nol4	Up	0.0229	0.3617
Al326372	Pnlip	Down	0.0060	0.1553	BE980583	Nr4a3	Up	0.0306	0.3617
NM_011128	Pnliprp2	Down	0.0467	0.2752	AK020731	Nrip3	Up	0.0097	0.3617
BB501129	Pnpt1	Down	0.0444	0.2731	BE647993	Nrn1l	Up	0.0011	0.2293
NM_030715	Polh	Down	0.0138	0.2030	AB067530	Oas1h	Up	0.0020	0.2387
AK005318	Pot1a	Down	0.0471	0.2752	BB132229	Olf78	Up	0.0372	0.3617
AK004360	Ppp3cb	Down	0.0002	0.0784	BB101283	Pappa2	Up	0.0094	0.3617
BB283625	Prdm14	Down	0.0284	0.2501	BB745015	Pcdh24	Up	0.0482	0.3617
AB062122	Prkcg	Down	0.0344	0.2599	NM_008795	Pctk3	Up	0.0140	0.3617
X75557	Pr12c2	Down	0.0055	0.1553	AV174487	Pdzm4	Up	0.0089	0.3617

NM_013639	Prph	Down	0.0169	0.2120	NM_008827	Pgf	Up	0.0451	0.3617
AK014289	Prr8	Down	0.0026	0.1330	AK020902	Pigh	Up	0.0079	0.3617
AW537978	Prtg	Down	0.0126	0.1951	NM_008840	Pik3cd	Up	0.0188	0.3617
AF113598	Psg28	Down	0.0085	0.1707	AV275795	Plb1	Up	0.0017	0.2387
NM_011195	Ptcrs	Down	0.0273	0.2469	AV257260	Plcd4	Up	0.0383	0.3617
AU044268	Ptdss1	Down	0.0190	0.2199	BB274799	Plcl1	Up	0.0210	0.3617
AU018448	Pttg1ip	Down	0.0069	0.1617	BC026410	Pls1	Up	0.0450	0.3617
BM239661	Pum2	Down	0.0311	0.2546	BM119522	Plxnb1	Up	0.0439	0.3617
BB474318	Pvr	Down	0.0471	0.2752	M22958	Prlr	Up	0.0018	0.2387
AV060288	Qk	Down	0.0100	0.1855	AV329802	Prrt3	Up	0.0128	0.3617
NM_134050	Rab15	Down	0.0126	0.1951	D28531	Ptprs	Up	0.0013	0.2346
BB817863	Rabgap1	Down	0.0368	0.2637	AV216875	Ran	Up	0.0128	0.3617
AA990557	Raf1	Down	0.0022	0.1312	BC008101	Rasl11b	Up	0.0017	0.2387
NM_009019	Rag1	Down	0.0010	0.0919	NM_009040	Rdh16	Up	0.0198	0.3617
U27178	Rbl1	Down	0.0058	0.1553	NM_017473	Rdh7	Up	0.0431	0.3617
NM_133242	Rbm39	Down	0.0025	0.1322	BB427703	RP23-100C5.8	Up	0.0164	0.3617
BB449095	Rbm5	Down	0.0212	0.2271	BB335578	RP23-12124.6	Up	0.0271	0.3617
NM_011252	RbmX	Down	0.0231	0.2370	NM_029987	Rpe65	Up	0.0011	0.2293
NM_030598	Rcan2	Down	0.0412	0.2686	BB449218	Rps6ka6	Up	0.0089	0.3617
BE986062	Repin1	Down	0.0283	0.2501	AI413817	Rsph10b2	Up	0.0155	0.3617
BB041370	Rhobtb1	Down	0.0148	0.2045	BB739342	Sall1	Up	0.0165	0.3617
AV269723	Rhox13	Down	0.0021	0.1311	BI133839	Scube2	Up	0.0282	0.3617
NM_021300	Rhox4b	Down	0.0041	0.1392	AK003320	Shroom3	Up	0.0299	0.3617
NM_008955	Rhox6	Down	0.0109	0.1901	AK005699	Slc16a13	Up	0.0305	0.3617
AK018316	Rif1	Down	0.0369	0.2637	NM_009202	Slc22a1	Up	0.0422	0.3617
BG065807	Rif1	Down	0.0461	0.2749	AI847460	Slc24a2	Up	0.0159	0.3617
BE956483	Rlbp1l1	Down	0.0022	0.1311	NM_019741	Slc2a5	Up	0.0278	0.3617
BB144036	Rnf185	Down	0.0160	0.2098	BF661644	Smc2	Up	0.0370	0.3617
AF155141	Rp1	Down	0.0214	0.2272	C80870	Smg1	Up	0.0430	0.3617
AF155141	Rp1	Down	0.0303	0.2541	BF160651	Smyd5	Up	0.0388	0.3617
AV536522	Rpap1	Down	0.0131	0.1992	BM214097	Snap91	Up	0.0165	0.3617
X57960	Rpl7	Down	0.0414	0.2688	BC024958	Sox9	Up	0.0359	0.3617
BG143502	Rreb1	Down	0.0136	0.2015	X81633	Spag5	Up	0.0458	0.3617
BB053418	Rsf1	Down	0.0057	0.1553	NM_027609	Speer4f	Up	0.0003	0.1362
BB700837	Rttm	Down	0.0037	0.1349	AV360142	Sptlc3	Up	0.0254	0.3617
AW489945	Rundc3a	Down	0.0351	0.2602	BB189586	Stoml3	Up	0.0449	0.3617
AK012504	Rwdd1	Down	0.0479	0.2769	NM_011902	Tekt2	Up	0.0383	0.3617
NM_053190	S1pr5	Down	0.0469	0.2752	BG075369	Tmem174	Up	0.0006	0.1927
AK015593	Samd8	Down	0.0312	0.2546	BB528158	Tmem44	Up	0.0317	0.3617
BB706191	Saps3	Down	0.0373	0.2643	NM_015775	Tmprss2	Up	0.0337	0.3617
NM_018732	Scn3a	Down	0.0009	0.0898	NM_080727	Tmprss3	Up	0.0322	0.3617
AV540070	Seh1l	Down	0.0022	0.1311	AK016101	Tomm20l	Up	0.0212	0.3617
NM_011345	Sele	Down	0.0006	0.0870	U42405	Tpsab1	Up	0.0247	0.3617
AI462524	Serpinb5	Down	0.0112	0.1914	AV272776	Ttc21a	Up	0.0408	0.3617
AV225626	Serpinb9d	Down	0.0140	0.2030	BC027099	Ubxn10	Up	0.0393	0.3617
AI466898	Setd2	Down	0.0001	0.0568	BC027099	Ubxn10	Up	0.0475	0.3617
BB410394	Sfmbt2	Down	0.0364	0.2630	NM_023649	Ush1c	Up	0.0245	0.3617
BB410537	Sgol1	Down	0.0367	0.2637	NM_021408	Ush2a	Up	0.0123	0.3617
BI714008	Shc2	Down	0.0029	0.1330	NM_009509	Vil1	Up	0.0386	0.3617
AI893638	Six4	Down	0.0251	0.2424	AW553039	Vps29	Up	0.0239	0.3617
AI647939	Slc16a5	Down	0.0289	0.2506	BB212004	Vwce	Up	0.0183	0.3617
NM_009200	Slc1a6	Down	0.0219	0.2315	BC027038	Wasf3	Up	0.0323	0.3617
BB448377	Slc4a1	Down	0.0007	0.0880	AW909375	Wbp11	Up	0.0104	0.3617
NM_011403	Slc4a1	Down	0.0004	0.0844	AK006118	Wdr16	Up	0.0460	0.3617
BB003029	Slc5a9	Down	0.0302	0.2541	AF334269	Wfdc2	Up	0.0479	0.3617
NM_020519	Slurp1	Down	0.0123	0.1951	BC026460	Wfikn1	Up	0.0433	0.3617
BB135507	Smarca5	Down	0.0115	0.1926	BB045268	Zbtb12	Up	0.0404	0.3617
M60510	Smarca2	Down	0.0002	0.0844	AW413620	Zfp704	Up	0.0362	0.3617
BB238756	Snai3	Down	0.0484	0.2781					
BF318702	Spag17	Down	0.0033	0.1330					
BG066112	Spata5	Down	0.0445	0.2731					
NM_007463	Speg	Down	0.0184	0.2188					
BC027796	Spin4	Down	0.0005	0.0844					
AI593292	Spred2	Down	0.0289	0.2506					
BB440691	Srcap	Down	0.0013	0.1043					
AV369536	Steap2	Down	0.0419	0.2695					
AW146083	Stfa1	Down	0.0005	0.0844					
BB667930	Stfa2l1	Down	0.0053	0.1533					
AW536442	Suz12	Down	0.0162	0.2111					
BB087539	Svopl	Down	0.0206	0.2265					
NM_009317	Tal2	Down	0.0343	0.2595					
BB352105	Tbc1d16	Down	0.0409	0.2684					
NM_009323	Tbx15	Down	0.0058	0.1553					
NM_009331	Tcf7	Down	0.0021	0.1311					
AK017244	Tchhl1	Down	0.0446	0.2731					
BF318536	Tcrb-V13	Down	0.0498	0.2804					
M16120	Tcrb-V13	Down	0.0339	0.2595					
M11456	Tcrb-V13	Down	0.0452	0.2741					
U46841	Tcrb-V13	Down	0.0164	0.2114					
U63547	Tcrb-V13	Down	0.0072	0.1634					
BB217651	Terf2ip	Down	0.0232	0.2370					
BI134710	Tigd5	Down	0.0313	0.2546					
BG066908	Timm8a2	Down	0.0188	0.2199					
NM_011904	Tll2	Down	0.0015	0.1125					
AW545765	Tmed7	Down	0.0023	0.1322					
AW551464	Tmem19	Down	0.0122	0.1951					
BF138523	Tmprss13	Down	0.0363	0.2628					
AW045551	Tnik	Down	0.0034	0.1330					
AF307746	Tnk1	Down	0.0145	0.2038					
AV007148	Tnni2	Down	0.0081	0.1668					
AA119213	Tnpo1	Down	0.0038	0.1373					
AY034576	Tpbpb	Down	0.0030	0.1330					
BB224683	Traf6	Down	0.0485	0.2781					
BG069740	Trim61	Down	0.0096	0.1803					
BQ174474	Trim9	Down	0.0028	0.1330					
AK018525	Trub1	Down	0.0196	0.2224					
BE628523	Tsepa	Down	0.0472	0.2753					
BG806300	Tsix	Down	0.0048	0.1482					
AF138745	Tsix	Down	0.0475	0.2757					
BB711506	Ttc14	Down	0.0372	0.2643					
BF715463	Tube1	Down	0.0427	0.2721					
AV100095	Tube1	Down	0.0058	0.1553					

BB762957	Tyrrp1	Down	0.0272	0.2469
U46068		Down	0.0089	0.1748
BB397001	Ubash3a	Down	0.0059	0.1553
BI653033	Ubc	Down	0.0027	0.1330
BE950186	Ubqln2	Down	0.0396	0.2666
AW494942	Ubxn10	Down	0.0027	0.1330
AK003750	Ucma	Down	0.0171	0.2128
BG069400	Unc13c	Down	0.0196	0.2224
AW107924	Usp14	Down	0.0028	0.1330
BB771589	Usp19	Down	0.0433	0.2729
NM_053225	V1rb1	Down	0.0050	0.1504
AW123067	Wapal	Down	0.0047	0.1482
AU017197	Wwc1	Down	0.0226	0.2354
L04961	Xist	Down	0.0368	0.2637
BQ176814	Xkr4	Down	0.0465	0.2751
AW558771	Xrcc6	Down	0.0048	0.1482
NM_009535	Yes1	Down	0.0497	0.2804
BB201861	Yod1	Down	0.0065	0.1589
BI665246	Yy1	Down	0.0033	0.1330
BE986026	Zbtb7a	Down	0.0372	0.2643
BG076273	Zc3h4	Down	0.0250	0.2418
AV041291	Zdhhc25	Down	0.0114	0.1918
NM_021307	Zfp112	Down	0.0065	0.1589
AF281141	Zfp287	Down	0.0126	0.1951
NM_013889	Zfp292	Down	0.0003	0.0844
BG073454	Zfp462	Down	0.0033	0.1330
BF729651	2-Mar	Up	0.0260	0.2437
AV269187	-	Up	0.0124	0.1951
BB255007	-	Up	0.0010	0.0898
BB278809	-	Up	0.0028	0.1330
BE630431	-	Up	0.0027	0.1330
AV210911	-	Up	0.0003	0.0844
BG069060	-	Up	0.0104	0.1881
BB013007	-	Up	0.0389	0.2645
M35669	-	Up	0.0438	0.2731
BE943696	-	Up	0.0229	0.2366
BQ176223	-	Up	0.0090	0.1755
BB250300	-	Up	0.0360	0.2622
AK017941	-	Up	0.0177	0.2166
BB041802	-	Up	0.0052	0.1517
BB137915	-	Up	0.0302	0.2541
AW121529	-	Up	0.0034	0.1330
AK007161	-	Up	0.0033	0.1330
AI662851	-	Up	0.0382	0.2645
AV244995	-	Up	0.0374	0.2643
BE994109	-	Up	0.0100	0.1865
AK006226	-	Up	0.0203	0.2265
BG067318	-	Up	0.0058	0.1553
BB219601	-	Up	0.0164	0.2114
BM228792	-	Up	0.0191	0.2199
BG067908	-	Up	0.0497	0.2804
BB076574	-	Up	0.0105	0.1881
NM_026351	-	Up	0.0005	0.0844
AK020729	-	Up	0.0435	0.2729
BM123577	-	Up	0.0170	0.2128
BB180782	-	Up	0.0166	0.2119
AK010967	-	Up	0.0031	0.1330
AK017366	-	Up	0.0054	0.1540
BF159226	-	Up	0.0082	0.1669
AA517858	-	Up	0.0092	0.1767
BC023100	-	Up	0.0009	0.0898
AI481875	-	Up	0.0414	0.2688
AK011086	-	Up	0.0170	0.2123
BB375376	-	Up	0.0262	0.2440
AK015891	-	Up	0.0073	0.1636
BB125729	-	Up	0.0067	0.1608
AK012683	-	Up	0.0010	0.0919
BB275292	-	Up	0.0034	0.1330
BB253608	-	Up	0.0338	0.2594
AK021053	-	Up	0.0436	0.2729
AK013567	-	Up	0.0144	0.2037
BG065774	-	Up	0.0009	0.0898
AK021412	-	Up	0.0500	0.2809
BB110590	-	Up	0.0179	0.2166
BB430390	-	Up	0.0160	0.2099
AK015097	-	Up	0.0220	0.2315
AW047760	-	Up	0.0234	0.2370
AI649303	-	Up	0.0177	0.2166
BE986579	-	Up	0.0018	0.1226
BB614236	-	Up	0.0060	0.1553
AU022616	-	Up	0.0453	0.2741
AW124794	-	Up	0.0014	0.1093
BB718075	-	Up	0.0062	0.1570
BB663137	-	Up	0.0168	0.2120
AK010815	-	Up	0.0153	0.2061
AK016834	-	Up	0.0419	0.2695
BB627097	-	Up	0.0032	0.1330
AK019632	-	Up	0.0338	0.2594
NM_008785	-	Up	0.0023	0.1322
AK016639	-	Up	0.0460	0.2749
AI593498	-	Up	0.0282	0.2501
BG066467	-	Up	0.0190	0.2199
BB155266	-	Up	0.0210	0.2271
BE957407	-	Up	0.0240	0.2388
NM_026621	-	Up	0.0035	0.1349
AK020674	-	Up	0.0049	0.1489
AK016607	-	Up	0.0234	0.2370
BB205090	-	Up	0.0006	0.0870
BG064549	-	Up	0.0359	0.2622
BB536585	-	Up	0.0495	0.2801
BB375206	-	Up	0.0387	0.2645
AK006986	-	Up	0.0112	0.1914

BG074159	-	Up	0.0328	0.2564
AK020112	-	Up	0.0036	0.1349
AK017010	-	Up	0.0374	0.2643
C79309	-	Up	0.0464	0.2751
BG070618	-	Up	0.0254	0.2425
BB183109	-	Up	0.0453	0.2741
AK015377	-	Up	0.0318	0.2564
BB445605	-	Up	0.0139	0.2030
NM_008271	-	Up	0.0049	0.1489
BG866612	-	Up	0.0125	0.1951
AV230414	-	Up	0.0138	0.2030
BG068545	-	Up	0.0341	0.2595
BB269821	-	Up	0.0350	0.2602
BB040120	-	Up	0.0369	0.2637
BG072095	-	Up	0.0082	0.1668
BB740266	-	Up	0.0347	0.2602
BM730983	-	Up	0.0375	0.2645
BI656407	-	Up	0.0092	0.1767
C80868	-	Up	0.0422	0.2699
AK012411	-	Up	0.0342	0.2595
NM_009310	-	Up	0.0135	0.2014
AB041554	-	Up	0.0384	0.2645
BB026304	-	Up	0.0081	0.1668
AK007209	-	Up	0.0188	0.2199
NM_029241	-	Up	0.0381	0.2645
BE685969	-	Up	0.0468	0.2752
BB763153	-	Up	0.0153	0.2061
AK005945	-	Up	0.0297	0.2524
AK014925	-	Up	0.0294	0.2516
AK009733	-	Up	0.0431	0.2729
BB463139	-	Up	0.0040	0.1383
AK012003	-	Up	0.0388	0.2645
BB045793	-	Up	0.0498	0.2804
AK018489	-	Up	0.0469	0.2752
BM244157	-	Up	0.0398	0.2674
AK009690	-	Up	0.0310	0.2546
BB648848	-	Up	0.0482	0.2780
AK006072	-	Up	0.0197	0.2224
AK014888	-	Up	0.0415	0.2688
AK019986	-	Up	0.0448	0.2736
AK014433	-	Up	0.0148	0.2045
BE952823	-	Up	0.0375	0.2645
AV153710	-	Up	0.0307	0.2544
AV210811	-	Up	0.0124	0.1951
AK017959	-	Up	0.0001	0.0568
BG069076	-	Up	0.0090	0.1752
BG070574	-	Up	0.0030	0.1330
AK013712	-	Up	0.0428	0.2725
AI847438	-	Up	0.0275	0.2469
BB324785	-	Up	0.0168	0.2120
AK013026	-	Up	0.0181	0.2166
AK009736	-	Up	0.0223	0.2334
BF682509	-	Up	0.0134	0.2011
AB054000	1110028A07Rik	Up	0.0026	0.1330
AK005740	1700007N14Rik	Up	0.0387	0.2645
AK006434	1700027L20Rik	Up	0.0257	0.2425
AK007013	1700086D15Rik	Up	0.0243	0.2388
AK009747	2310042D19Rik	Up	0.0211	0.2271
BB349413	2410129H14Rik	Up	0.0274	0.2469
BC024774	2610034M16Rik	Up	0.0207	0.2265
BI134263	2900083I11Rik	Up	0.0251	0.2424
AK014652	4833403I15Rik	Up	0.0284	0.2501
BC020160	4833422F24Rik	Up	0.0169	0.2120
NM_025737	4931417E11Rik	Up	0.0063	0.1570
AK016775	4933411K16Rik	Up	0.0436	0.2729
NM_025746	4933415F23Rik	Up	0.0268	0.2448
AK020314	9230104L09Rik	Up	0.0327	0.2564
M85170	Acr	Up	0.0083	0.1684
NM_007394	Acvr1	Up	0.0165	0.2114
NM_026531	Aen	Up	0.0009	0.0898
BB698513	Afap1	Up	0.0200	0.2255
AJ429133	Alg12	Up	0.0197	0.2225
L34570	Alox15	Up	0.0202	0.2265
AK003821	Anapc5	Up	0.0243	0.2388
BC012275	Ankmy2	Up	0.0372	0.2643
NM_007477	Arf2	Up	0.0004	0.0844
AF297029	Arhgap10	Up	0.0005	0.0844
BG295243	Arhgap22	Up	0.0104	0.1881
BE651011	Arhgef7	Up	0.0454	0.2741
BQ042885	Atcay	Up	0.0467	0.2752
BB393498	Atic	Up	0.0207	0.2265
NM_016745	Atp2a3	Up	0.0309	0.2546
AF200346	Bace1	Up	0.0208	0.2265
BB001852	BC033915	Up	0.0068	0.1608
BF302511	BC048546	Up	0.0102	0.1881
BC004826	Bcam	Up	0.0444	0.2731
NM_009751	Bfsp1	Up	0.0040	0.1383
NM_007563	Bpgm	Up	0.0031	0.1330
BI466363	Brca1	Up	0.0023	0.1322
BE984258	Bre	Up	0.0180	0.2166
AV144956	Bzw1	Up	0.0325	0.2564
BB278653	Cacna2d4	Up	0.0314	0.2551
BE985916	Camsap1	Up	0.0491	0.2794
NM_007617	Cav3	Up	0.0361	0.2627
AK010251	Ccdc77	Up	0.0116	0.1929
AF065933	Ccl2	Up	0.0304	0.2541
AJ416459	Ccnb3	Up	0.0323	0.2564
AL024092	Cct3	Up	0.0024	0.1322
AK005507	Cd59a	Up	0.0069	0.1617
NM_009690	Cd5l	Up	0.0416	0.2689
NM_008339	Cd79b	Up	0.0153	0.2061
AK004547	Cdc5l	Up	0.0101	0.1873

BC006628	Cenpb	Up	0.0412	0.2686
NM_031258	Chrdl1	Up	0.0499	0.2809
AF486651	Cldn19	Up	0.0080	0.1668
NM_011606	Clec3b	Up	0.0257	0.2425
U53455	Clns1a	Up	0.0154	0.2069
NM_007753	Cpa3	Up	0.0158	0.2093
BM933756	Crh	Up	0.0138	0.2030
NM_024223	Crip2	Up	0.0190	0.2199
AU045294	Crxos1	Up	0.0203	0.2265
AK010433	Cryz1	Up	0.0020	0.1288
AK020589	Cstad	Up	0.0017	0.1186
NM_030249	Cttnbp2nl	Up	0.0423	0.2702
AA023906	Cux1	Up	0.0040	0.1383
AF010586	Cx3cl1	Up	0.0446	0.2731
NM_028375	Cxx1c	Up	0.0391	0.2645
AF332060	Cyb5r3	Up	0.0062	0.1570
NM_007807	Cybb	Up	0.0330	0.2574
BQ175587	D3Bwg0562e	Up	0.0283	0.2501
BE447520	D4Wsu53e	Up	0.0460	0.2749
NM_026302	Dctn4	Up	0.0238	0.2384
AI841578	Ddn	Up	0.0267	0.2448
NM_007845	Defa-rs10	Up	0.0404	0.2680
NM_015789	Dkl1	Up	0.0016	0.1133
NM_015802	Dlc1	Up	0.0325	0.2564
AK004739	Dli4	Up	0.0008	0.0898
AI664344	Dnajb5	Up	0.0062	0.1570
BB224547	Dnajc21	Up	0.0334	0.2589
BG066325	Dnm2	Up	0.0114	0.1921
NM_00788	Drd4	Up	0.0111	0.1914
NM_025975	Dynlt3	Up	0.0315	0.2557
BC008277	Ednra	Up	0.0026	0.1330
BC025062	Efcab2	Up	0.0105	0.1881
D38146	Efna1	Up	0.0274	0.2469
AI507006	EG627607	Up	0.0010	0.0898
AW701127	Elf3a	Up	0.0123	0.1951
BC005686	Elk3	Up	0.0037	0.1349
AB034693	Emcn	Up	0.0031	0.1330
AF339910	Enpp1	Up	0.0104	0.1881
	ENSMUSG0000			
BQ126025	0061115	Up	0.0378	0.2645
BE951907	Epb4.1l2	Up	0.0225	0.2349
BB492312	Epb4.9	Up	0.0337	0.2594
AF353717	Epdr1	Up	0.0133	0.1993
NM_007938	Epha6	Up	0.0262	0.2440
AB073079	Erg	Up	0.0177	0.2166
AV329219	Erg	Up	0.0076	0.1648
AK007800	Erp27	Up	0.0125	0.1951
BB612598	Esf1	Up	0.0066	0.1592
BE652876	Fads3	Up	0.0040	0.1383
BB400295	Fam154a	Up	0.0033	0.1330
BB629037	Fam49a	Up	0.0411	0.2686
BB205408	Farsa	Up	0.0078	0.1656
BB555130	Fbxw13	Up	0.0445	0.2731
AF176528	Fbxw14	Up	0.0247	0.2400
M14216	Fcgr2b	Up	0.0024	0.1322
BM224327	Fcgr2b	Up	0.0014	0.1125
BI247584	Fdps	Up	0.0079	0.1661
NM_008006	Fgf2	Up	0.0291	0.2513
BB283818	Fndc7	Up	0.0135	0.2011
U41047	Foxd3	Up	0.0205	0.2265
NM_007984	Fscn1	Up	0.0061	0.1567
BG067296	Fut10	Up	0.0203	0.2265
NM_010243	Fut9	Up	0.0009	0.0898
NM_008067	Gabra3	Up	0.0495	0.2801
AV348821	Gabrg2	Up	0.0232	0.2370
AF348968	Galnt2	Up	0.0185	0.2188
BC021462	Gcc1	Up	0.0482	0.2780
AK013104	Gdi2	Up	0.0179	0.2166
BB750040	Gfap	Up	0.0437	0.2729
AV148957	Gjc1	Up	0.0005	0.0844
AF276917	Glrx	Up	0.0312	0.2546
AV122321	Glit25d1	Up	0.0087	0.1734
AU041329	Gnb5	Up	0.0055	0.1553
BI103049	Gpr146	Up	0.0116	0.1928
NM_022320	Gpr35	Up	0.0484	0.2781
BM899529	Grik3	Up	0.0212	0.2271
NM_010358	Gstm1	Up	0.0059	0.1553
AV325174	Gtf2f1	Up	0.0034	0.1330
BB821611	Gtf3c1	Up	0.0255	0.2425
BC019856	Gulo	Up	0.0002	0.0784
M33151	H2-K1	Up	0.0392	0.2648
AK006835	Hbp1	Up	0.0237	0.2380
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BG072212	Hs3st3b1	Up	0.0445	0.2731
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NM_008348	Il10ra	Up	0.0405	0.2680
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BB530994	Layn	Up	0.0075	0.1643
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AK005871	Lrrc67	Up	0.0002	0.0784
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NM_010749	M6pr	Up	0.0383	0.2645
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AF128892	Mapk14	Up	0.0168	0.2120
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BB003847	Mbnl2	Up	0.0095	0.1801
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NM_027334	Mettl7a1	Up	0.0415	0.2688
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AV280494	Mfap3l	Up	0.0334	0.2589
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AI987929	Ndrp1	Up	0.0058	0.1553
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BB537004	Rassf2	Up	0.0029	0.1330
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Cluster D			Cluster E			Cluster F		
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2810410D24Rik	---	1456339_at					NM_010765 ///	
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3830406C13Rik	NM_178141	1436388_a_at	Tekt2	NM_011902	1418484_at	Ncbp2		
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Snmp25	NM_030093	1428004_at
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Stom	NM_013515	1419099_x_at
Stra13	NM_016665	1416553_at
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Tek	NM_013690	1418788_at
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Thop1	NM_022653	1448907_at
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Tmem106b	NM_027992	1435075_at
Tmem109	NM_134142	1416033_at
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Tmem85	NM_026519	1418124_at
Tmem88	NM_025915	1453285_at
Tmem98	NM_029537	1424133_at
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Tom111	NM_028011	1451117_a_at
Top1mt	NM_028404	1460370_at
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	NM_031187 ///	
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Tpsb2	NM_010781	1422180_a_at
Tradd	NM_001033161	1429117_at
Trak2	NM_172406	1435016_at
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Trim34	NM_030684	1426092_a_at
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Tubd1	NM_019756	1421748_a_at
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Txndc17	NM_026559	1423035_s_at
Txndc5	NM_145367	1451091_at
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Ugt1a7c ///	NM_201642 ///	
Ugt1a9	NM_201643 /// NM_	1426261_s_at
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Unc45b	NM_178680	1436939_at
Urm1	NM_026615	1437227_at
Vars	NM_011690	1448472_at
Vgll4	NM_177683	1455992_at

Vldlr	NM_001161420 ///	1451156_s_at
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Vwa5a	NM_172767	1426221_at
Wdr18	NM_175450	1433635_at
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Wdr33	NM_028866	1453554_a_at
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Zc3h12a	NM_153159	1443993_at
Zdhhc2	NM_178395	1453481_at
	NM_178395	1452655_at
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Zfp319	NM_024467	1439008_at
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