Table S2. Lung genes (n=448) significantly different between wild-type (Gsr-WT) and glutathione reductase-deficient (Gsr-KO) mouse neonates at PND5 (moderated t-test, p < 0.01).

Blue(-): fold lower in Gsr-KO, Red : fold higher in Gsr-KO.

	Hon Dilrow) [Ger-K		tefSeq Transcript ID FD	Gene Symbol	Gene Title	Gene Ontology Biological Process
0.008322 816.41			IM_001252569///NM_1-3			or 0001701 // in utero embryonic development // inferred from mutant phenotype///0006487 // protein N-linked glycosyl
0.008322 810.41			IM_001232303///NM_1-3		fibringen alpha chain	0002250 // adaptive immune response // inferred from electronic annotation///0002376 // immune system process // ii
0.007904 1212.1				i.52 Afp	alpha fetoprotein	0001542 // ovulation from ovarian follicle // inferred from mutant phenotype///0001889 // liver development // inferre
					albumin	
0.007904 10688. 0.007904 2191.2				7.57 Alb 8.50 Ttr		0001895 // retina homeostasis // inferred from electronic annotation///0006810 // transport // inferred from electronic
					transthyretin	0006810 // transport // inferred from electronic annotation///0042572 // retinol metabolic process // not recorded///00
0.007904 1061.1				.58 Serpina1c	serine (or cysteine) peptidase inhibitor, clade A, member 1C	0010466 // negative regulation of peptidase activity // inferred from electronic annotation///0010951 // negative regula
0.009035 769.83			IM_009244///XM_0065 -2:			b 0001701 // in utero embryonic development // inferred from mutant phenotype///0006487 // protein N-linked glycosyl
0.007904 1290.8			IM_001317105///NM_: -19		fibrinogen gamma chain	0002250 // adaptive immune response // inferred from electronic annotation///0002376 // immune system process // ii
0.007904 848.15				1.72 Fgb	fibrinogen beta chain	0002250 // adaptive immune response // inferred from electronic annotation///0002376 // immune system process // in
0.007904 1642.4				i.65 Apoa1	apolipoprotein A-I	0001932 // regulation of protein phosphorylation // inferred from direct assay///0001935 // endothelial cell proliferation
0.007904 716.42			IM_001080809///XM_(-1	.82 Cps1	carbamoyl-phosphate synthetase 1	0000050 // urea cycle // not recorded///000050 // urea cycle // inferred by curator///0001889 // liver development //
0.008322 375.42				1.91 <i>Gc</i>	group specific component	0006810 // transport // inferred from electronic annotation///0007565 // female pregnancy // inferred from electronic a
0.009035 359.77	782 36.298	8824 N	IM_001102411///NM_I -9.	91 Kng1	kininogen 1	0006954 // inflammatory response // inferred from electronic annotation///0007204 // positive regulation of cytosolic c
0.008322 377.97	7778 38.284	4813 N	IM_007376 -9.	87 Pzp	pregnancy zone protein	0007566 // embryo implantation // inferred from genetic interaction///0010466 // negative regulation of peptidase active
0.009035 803.46	665 85.733	314 N	IM_001276449///NM_I-9.	37 Ahsg	alpha-2-HS-glycoprotein	0001503 // ossification // inferred from direct assay///0006461 // protein complex assembly // not recorded///0006953
0.009035 589.54	441 63.618	.869 N	IM_016668 -9.	27 Bhmt	betaine-homocysteine methyltransferase	0006479 // protein methylation // not recorded///0006577 // amino-acid betaine metabolic process // not recorded///C
0.007904 415.43			IM_008407///XM_0065 -9.		inter-alpha trypsin inhibitor, heavy chain 3	0010466 // negative regulation of peptidase activity // inferred from electronic annotation///0010951 // negative regula
0.009539 376.79			IM_008341 -8.		insulin-like growth factor binding protein 1	0001558 // regulation of cell growth // inferred from electronic annotation///0008286 // insulin receptor signaling pathy
0.008514 410.85			IM 133997 -8.		apolipoprotein F	0006629 // lipid metabolic process // inferred from electronic annotation///0006641 // triglyceride metabolic process //
0.00824 321.74			IM_080844///XM_0064 -8.		serine (or cysteine) peptidase inhibitor, clade C (antithrombin), member 1	0007584 // response to nutrient // not recorded///0007596 // blood coagulation // inferred from electronic annotation/
0.008579 677.73			IM_008877 -8.		plasminogen	0006508 // proteolysis // inferred from electronic annotation///0007596 // blood coagulation // not recorded///000759
0.007904 931.01			IM_001305549///NM_+-8.		apolipoprotein A-II	0002526 // acute inflammatory response // inferred from electronic annotation///0002740 // negative regulation of cyti
0.007904 784.26			IM_019395///XM_0112 -8.		fructose bisphosphatase 1	0005975 // carbohydrate metabolic process // not recorded///0006002 // fructose 6-phosphate metabolic process // no
0.007304 784.20						
			IM_017399 -8.		fatty acid binding protein 1, liver	0002230 // positive regulation of defense response to virus by host // not recorded///0006810 // transport // inferred fr
0.009035 460.40			IM_007443 -8.		alpha 1 microglobulin/bikunin	0010466 // negative regulation of peptidase activity // inferred from electronic annotation///0010951 // negative regula
0.009035 364.10			IM_175628///XM_0112 -8.		alpha-2-macroglobulin	0001869 // negative regulation of complement activation, lectin pathway // not recorded///0007565 // female pregnant
0.007904 117.09			IM_029562///XM_0065 -8.		cytochrome P450, family 2, subfamily d, polypeptide 26	0006805 // xenobiotic metabolic process // not recorded///0007565 // female pregnancy // inferred from electronic ann
0.009035 569.55			IM_013475///XM_0065 -7.		apolipoprotein H	0001937 // negative regulation of endothelial cell proliferation // not recorded///0006641 // triglyceride metabolic proci
0.008933 297.73			IM_001039555///XM_(-6.		cytochrome P450, family 2, subfamily c, polypeptide 68	0006805 // xenobiotic metabolic process // not recorded///0019373 // epoxygenase P450 pathway // not recorded///00
0.009515 530.36			IM_144903 -6.		aldolase B, fructose-bisphosphate	0001889 // liver development // inferred from electronic annotation///0006000 // fructose metabolic process // not rec
0.009035 107.03	329 16.240		IM_001150749///NM_I -6.		retinol dehydrogenase 7	0008152 // metabolic process // inferred from electronic annotation///0042572 // retinol metabolic process // inferred f
0.008933 101.33	33954 16.885	5468 N	IM_031164///XM_0065 -6.	00 F13b	coagulation factor XIII, beta subunit	0007596 // blood coagulation // inferred from electronic annotation///0007599 // hemostasis // inferred from electroni
0.00121 567.42	212 95.492	2805 N	IM_010344 -5.	94 <i>Gsr</i>	glutathione reductase	0006749 // glutathione metabolic process // inferred by curator///0006749 // glutathione metabolic process // not reco
0.009035 123.63	3873 21.02:	113 N	IM_019775 -5.	88 Cpb2	carboxypeptidase B2 (plasma)	0003331 // positive regulation of extracellular matrix constituent secretion // not recorded///0006508 // proteolysis // n
0.009515 115.26	6279 20.114	.462 N	IM_008777 -5.	73 Pah	phenylalanine hydroxylase	0006558 // L-phenylalanine metabolic process // not recorded///0006559 // L-phenylalanine catabolic process // inferre
0.007904 323.92	2343 60.30:	1983 N	IM_053149///XM_0112 -5.	37 Heman	hemogen	0007275 // multicellular organismal development // inferred from electronic annotation///0030154 // cell differentiation
0.009035 97.145			IM_001277944///NM_1-4.		apolipoprotein C-II///Apoc4-Apoc2 readthrough	0006629 // lipid metabolic process // inferred from electronic annotation///0006810 // transport // inferred from electronic
0.009035 97.145			IM_001277944///NM_1-4.			0006629 // lipid metabolic process // inferred from electronic annotation///0006810 // transport // inferred from electronic
0.009362 275.06			IM 011318 -4.		serum amyloid P-component	0006461 // protein complex assembly // not recorded///0044869 // negative regulation by host of viral exo-alpha-sialida
0.009035 205.81			IM_009474 -4.		urate oxidase	0006144 // purine nucleobase metabolic process // traceable author statement///0019628 // urate catabolic process //
0.009035 366.01			IM_007686///XM_0065 -4.		complement component factor i	0002376 // immune system process // inferred from electronic annotation///0006508 // proteolysis // inferred from electronic annotation/// immune system process // inferred from electronic annotation/// immune system process // inferred from electronic annotation // immune system process // inferred from electronic annotation // immune system process // inferred from electronic annotation // immune system process // inferred from electronic annotation // immune system process // inferred from electronic annotation // immune system process // inferred from electronic annotation // immune system process // inferred from electronic annotation // immune system process // immune system
0.009035 369.15			IM_017371 -4.		hemopexin	0002639 // positive regulation of immunoglobulin production // inferred from mutant phenotype///0002925 // positive
0.009393 79.195			IM_007768 -4.		C-reactive protein, pentraxin-related	0006953 // acute-phase response // inferred from electronic annotation//0006958 // complement activation, classical production in the complement activation of the complement activation in the complement activation activation in the complement activation activati
0.009539 46.109			IM_007708 -4.		betaine-homocysteine methyltransferase 2	0009086 // methionine biosynthetic process // not recorded///0032259 // methylation // inferred from electronic annot
0.009539 79.056			IM_009258 -3.		serine peptidase inhibitor, Kazal type 1	0010466 // negative regulation of peptidase activity // inferred from direct assay///0010751 // negative regulation of nit
0.009339 79.030			IM 008277 -3.			0006559 // L-phenylalanine catabolic process // inferred from electronic annotation///0006572 // tyrosine catabolic pro
			_	•	4-hydroxyphenylpyruvic acid dioxygenase	
0.009035 76.636			IM_031197 -3.		solute carrier family 2 (facilitated glucose transporter), member 2	0006810 // transport // inferred from electronic annotation///0008643 // carbohydrate transport // traceable author st
			IM_009060///XM_0065 -3.		regucalcin	0001822 // kidney development // inferred from electronic annotation///0001889 // liver development // inferred from
0.009035 328.84			IM_010582 -3.		inter-alpha trypsin inhibitor, heavy chain 2	0010466 // negative regulation of peptidase activity // inferred from electronic annotation///0010951 // negative regula
0.009035 103.57			IM_013913 -3.		angiopoietin-like 3	0006071 // glycerol metabolic process // not recorded///0006631 // fatty acid metabolic process // not recorded///0006
0.009838 59.324			IM_008769///XM_0112 -3.		ornithine transcarbamylase	0000050 // urea cycle // not recorded///0001889 // liver development // inferred from electronic annotation///0006520
0.007904 1182.6			IM_009921 -3.		cathelicidin antimicrobial peptide	0001878 // response to yeast // not recorded///0001934 // positive regulation of protein phosphorylation // not record
0.008579 210.20			IM_010391///XM_0112 -3.		histocompatibility 2, Q region locus 10	0002376 // immune system process // inferred from electronic annotation///0002474 // antigen processing and present
0.008322 680.87			IM_008522 -3.		lactotransferrin	0001503 // ossification // inferred from electronic annotation///0001817 // regulation of cytokine production // not reco
0.009515 132.50			IM_145499///XM_0112 -3.		cytochrome P450, family 2, subfamily c, polypeptide 70	0006805 // xenobiotic metabolic process // not recorded///0019373 // epoxygenase P450 pathway // not recorded///00
0.008322 46.314			IM_153598 -2.	•	UDP glucuronosyltransferase 2 family, polypeptide B34	0008152 // metabolic process // inferred from electronic annotation///0009813 // flavonoid biosynthetic process // not
0.008322 35.960			IM_009244///NM_009: -2.	88 Serpina1b///Serpina1		b 0001701 // in utero embryonic development // inferred from mutant phenotype///0006487 // protein N-linked glycosyl
0.009515 1939.3	3445 687.68	849 N	IM_008694 -2.	82 Ngp	neutrophilic granule protein	0006952 // defense response // inferred from electronic annotation///0010466 // negative regulation of peptidase activ
0.009539 152.12	246 58.68	7115 N	IM_009693///XM_0065 -2.	59 Apob	apolipoprotein B	0001701 // in utero embryonic development // inferred from mutant phenotype///0006629 // lipid metabolic process //
0.008514 4169.4	445 1656.9	.9628 N	IM_001281852///NM_I -2.	52 S100a9	S100 calcium binding protein A9 (calgranulin B)	0002376 // immune system process // inferred from electronic annotation///0002523 // leukocyte migration involved in
0.00948 51.676	6186 20.722	2546 N	IM_001174170///NM_I -2.	49 Serpinb2	serine (or cysteine) peptidase inhibitor, clade B, member 2	0010466 // negative regulation of peptidase activity // inferred from electronic annotation///0010951 // negative regula
0.009515 36.612	29 15.24	5841	-2.	40 AI195470	expressed sequence Al195470	
0.009035 2648.2			IM_025288///NM_001(-2.	40 Stfa3///BC100530///		0010466 // negative regulation of peptidase activity // inferred from electronic annotation///0010951 // negative regula
0.008322 3385.8			IM_001082543///NM_1-2.			0010466 // negative regulation of peptidase activity // inferred from electronic annotation///0010951 // negative regula
0.009515 463.53			IM_001030294///XM_(-2.		olfactomedin 4	0007155 // cell adhesion // inferred from electronic annotation///0043124 // negative regulation of I-kappaB kinase/NF-
0.009515 403.93			IM_009467 -2.		UDP glucuronosyltransferase 2 family, polypeptide B5	0008152 // metabolic process // inferred from electronic annotation///0009813 // flavonoid biosynthetic process // not
0.009539 130.07			IM_009407 -2.		myeloperoxidase	0001878 // response to yeast // inferred from mutant phenotype///0002149 // hypochlorous acid biosynthetic process /
0.009539 130.07			-2. -2.		RIKEN cDNA 9430047L24 gene	obozoro // response to yeast // innerred from mutaint phenotype///obozz45 // hypothiorous and biosynthetic process /
0.009035 38.632			-2. IM 020495///NM 178: -2.		solute carrier organic anion transporter family, member 1b2	0001889 // liver development // inferred from electronic annotation///0006810 // transport // inferred from electronic annotation
0.009035 38.632			IM_020495///NM_1782. IM_026414 -2.		aspartic peptidase, retroviral-like 1	0006508 // protein processing // inferred from electronic annotation///0016485 // protein processing // inferred from electronic annotation///0016485 // protein processing // inferred from direct as:
0.009035 380.67			IM_001159299///NM_1 -2.		inter alpha-trypsin inhibitor, heavy chain 4	0006953 // acute-phase response // inferred from electronic annotation///0010466 // negative regulation of peptidase a
0.009539 821.34			IM_001159487///NM_I -2.		retinol binding protein 4, plasma	0001654 // eye development // inferred from mutant phenotype///0001654 // eye development // not recorded///000
0.009539 109.62			IM_001042767///NM_I -2.		protein C	0006508 // proteolysis // inferred from electronic annotation///0007596 // blood coagulation // inferred from electronic
0.009035 85.571	101 40.139	9442 N	IM_030611///XM_0065 -2.	13 Akr1c6	aldo-keto reductase family 1, member C6	0006629 // lipid metabolic process // inferred from electronic annotation///0006694 // steroid biosynthetic process // ir

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	6512.8364	3080.731	RefSeq Transcript ID NM 013650	-2.11	Gene Symbol \$100a8	Gene Title S100 calcium binding protein A8 (calgranulin A)	Gene Ontology Biological Process 0002376 // immune system process // inferred from electronic annotation///0002523 // leukocyte migration involved in
	91.161674	43.631207	NM 001083904///NM		Fetub	fetuin heta	0007338 // single fertilization // inferred from mutant phenotype///0007339 // binding of sperm to zona pellucida // inf
0.009333		22.273838	NM 001291131///NM		Asar1	asialoglycoprotein receptor 1	0006897 // endocytosis // inferred from electronic annotation///0006898 // receptor-mediated endocytosis // not recor
	161.25824	79.039925	NM_008572///XM_006		Mcpt8	mast cell protease 8	0006508 // proteolysis // inferred from electronic annotation///0006955 // immune response // not recorded///001648
	72.10932	35.654472	NM_027427//XM_006		Taf15	TAF15 RNA polymerase II, TATA box binding protein (TBP)-associated factor	boods of proteorysis // interest from electronic annotation///boods so // interest response /
0.009515		17.145666	NM 010001	-2.02	Cyp2c37	cytochrome P450, family 2. subfamily c, polypeptide 37	0006805 // xenobiotic metabolic process // not recorded///0019373 // epoxygenase P450 pathway // not recorded///00
	142.16702	70.81732	NM_133653///XM_006		Mat1a	methionine adenosyltransferase I, alpha	0006556 // S-adenosylmethionine biosynthetic process // not recorded///0006730 // one-carbon metabolic process // ii
0.009539		44.16997	NM_001302496///NM_		Gjb1	gap junction protein, beta 1	0007154 // cell communication // inferred from electronic annotation///0015868 // purine ribonucleotide transport // n
	114.84889	57.78398	NM_001301404///NM_		Serpina10	serine (or cysteine) peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 10	0007596 // blood coagulation // inferred from electronic annotation///0007599 // hemostasis // inferred from electroni
	170.41675	88.12699	NM_011575	-1.93	Tff3	trefoil factor 3, intestinal	0010906 // regulation of glucose metabolic process // inferred from direct assay
	369.59058	191.68193	NM_001159564///NM_		Itqb6	integrin beta 6	0006954 // inflammatory response // inferred from mutant phenotype///0007155 // cell adhesion // inferred from elect
	115.297844	60.250324	NM 020504	-1.91	Cldn13	claudin 13	coopsist, minimizer, response, minimizer continues and present specific continues and minimizers
0.009035		39.278843	NM 019447//XM 006		Hafac	hepatocyte growth factor activator	0006508 // proteolysis // inferred from electronic annotation
0.009035		107.778244	NM_001142706///NM		Cfb	complement factor B	0002376 // immune system process // inferred from electronic annotation///0006508 // proteolysis // inferred from electronic annotation
	469.32083	251.78458	NM_029784///XM_006		Fam81a	family with sequence similarity 81, member A	,,
0.009515		39.8889	NM 145146	-1.86	Afm	afamin	0006810 // transport // inferred from electronic annotation///0051180 // vitamin transport // not recorded
0.009035	82.129814	46.073097	NM_001082960///NM	1-1.78	Itgam	integrin alpha M	0002523 // leukocyte migration involved in inflammatory response // inferred from mutant phenotype///0006412 // tra
0.008322	287.88992	161.85806	NM_008256	-1.78	Hmqcs2	3-hydroxy-3-methylglutaryl-Coenzyme A synthase 2	0001822 // kidney development // inferred from electronic annotation///0001889 // liver development // inferred from
	121.671135	69.7707	NM_001122683///NM_	-1.74	Bdh1	3-hydroxybutyrate dehydrogenase, type 1	0008152 // metabolic process // inferred from electronic annotation///0055114 // oxidation-reduction process // not re
0.009035	109.09615	62.895817	NM_032540///XM_006	5 -1.73	Kel	Kell blood group	0006508 // proteolysis // inferred from electronic annotation///0006874 // cellular calcium ion homeostasis // inferred f
	111.313835	64.34137	NM_001168515///NM		Rpgrip1	retinitis pigmentosa GTPase regulator interacting protein 1	0007601 // visual perception // inferred from mutant phenotype///0042462 // eye photoreceptor cell development // ir
0.009035	20.140684	11.720101	NM_015787	-1.72	Hist1h1e	histone cluster 1, H1e	0000122 // negative regulation of transcription from RNA polymerase II promoter // inferred from genetic interaction///
0.009838	85.03456	49.78549	NM_001271777///NM	(-1.71	C8g	complement component 8, gamma polypeptide	0002376 // immune system process // inferred from electronic annotation///0006957 // complement activation, alterna
0.009539	265.6635	156.26965	NM_001110827///NM	1-1.70	Rbfox2	RNA binding protein, fox-1 homolog (C. elegans) 2	0000381 // regulation of alternative mRNA splicing, via spliceosome // inferred from genetic interaction///0000381 // re
0.009838	71.19826	42.00909	NM_001276710///NM_		Agxt	alanine-glyoxylate aminotransferase	0007219 // Notch signaling pathway // inferred from direct assay///0008152 // metabolic process // inferred from electr
0.00948	32.087597	18.967062	NM_001289755///NM_		Apoc3	apolipoprotein C-III	0006629 // lipid metabolic process // inferred from electronic annotation///0006641 // triglyceride metabolic process //
0.009757	82.98969	49.437355	XR_380276///XR_39286		Gm33916	predicted gene, 33916	
0.009515	521.6738	311.00317	NM_016966///NR_033	5 -1.68	Gm8096///Phgdh///Gm675	f 3-phosphoglycerate dehydrogenase pseudogene///3-phosphoglycerate dehydrogenase	0006541 // glutamine metabolic process // inferred from mutant phenotype///0006544 // glycine metabolic process // i
0.007904	209.88908	125.27118	NM_010635	-1.68	Klf1	Kruppel-like factor 1 (erythroid)	0001701 // in utero embryonic development // inferred from mutant phenotype///0001889 // liver development // infe
0.008322	31.614925	19.28061	NM_001290645///NM_	1-1.64	C8a	complement component 8, alpha polypeptide	0002376 // immune system process // inferred from electronic annotation///0006955 // immune response // inferred fr
0.009161	68.87866	42.34007	NM_009398	-1.63	Tnfaip6	tumor necrosis factor alpha induced protein 6	0007155 // cell adhesion // inferred from electronic annotation///0030335 // positive regulation of cell migration // not
0.008933	163.9482	101.6475	NM_011270	-1.61	Rhd	Rh blood group, D antigen	0015696 // ammonium transport // inferred from mutant phenotype///0048821 // erythrocyte development // inferred
0.009035	146.27252	91.4925	NM_009690	-1.60	Cd5l	CD5 antigen-like	0006898 // receptor-mediated endocytosis // inferred from electronic annotation///0006915 // apoptotic process // infe
0.009539	318.34985	200.75731	NM_008638///XM_006	5 -1.59	Mthfd2	methylenetetrahydrofolate dehydrogenase (NAD+ dependent), methenyltetrahydrofolate cyclohy	0006730 // one-carbon metabolic process // not recorded///0008152 // metabolic process // inferred from electronic an
0.009035	182.09444	114.99019	NM_177271	-1.58	Samd5	sterile alpha motif domain containing 5	
	203.05083	128.72978		-1.58	Gm10401	predicted gene 10401	
0.00824	1346.5383	856.39703	NM_133243///XR_0023	3 -1.57	AY036118	cDNA sequence AY036118	
0.007904	432.43604	275.88815	NM_027711///XM_011	2-1.57	lqgap2	IQ motif containing GTPase activating protein 2	0007165 // signal transduction // inferred from electronic annotation///0007264 // small GTPase mediated signal transd
0.009515	159.25708	102.108574	NM_007976	-1.56	F5	coagulation factor V	0007596 // blood coagulation // inferred from direct assay///0007596 // blood coagulation // inferred from mutant phe
0.009539	49.777195	31.949018	XM_011243805	-1.56	Gm40824	predicted gene, 40824	
0.009539	404.84216	260.87363	NM_028013	-1.55	Endod1	endonuclease domain containing 1	0008152 // metabolic process // inferred from electronic annotation///0090305 // nucleic acid phosphodiester bond hyd
0.009539	107.88894	69.59727	NM_198414	-1.55	Paqr9	progestin and adipoQ receptor family member IX	
0.009515	75.23336	48.9117	NM_010024///XM_006	5 -1.54	Dct	dopachrome tautomerase	0002052 // positive regulation of neuroblast proliferation // inferred from mutant phenotype///0006583 // melanin bio:
0.009657	71.39743	46.500046	NM_023530///XM_006	5 -1.54	Pla2g12b	phospholipase A2, group XIIB	0016042 // lipid catabolic process // inferred from electronic annotation///0042632 // cholesterol homeostasis // inferre
0.009539	327.16165	213.19955	NR_015519	-1.53	AI662270	expressed sequence Al662270	
	380.11133	251.04103	NM_010369///XM_006		Gypa	glycophorin A	0007016 // cytoskeletal anchoring at plasma membrane // inferred from mutant phenotype///0047484 // regulation of
0.009539	231.7885	153.44604	NM_015767///XM_011		Ttpa	tocopherol (alpha) transfer protein	0001890 // placenta development // inferred from mutant phenotype///0001892 // embryonic placenta development /
	149.97658	99.34097	NM_001289507///NM_		Tfr2	transferrin receptor 2	0006879 // cellular iron ion homeostasis // traceable author statement///0006898 // receptor-mediated endocytosis //
0.009035	99.47614	66.52702	NM_027903///XM_006		Dhdh	dihydrodiol dehydrogenase (dimeric)	0042843 // D-xylose catabolic process // inferred from direct assay///0055114 // oxidation-reduction process // inferred
	50.317238	33.86893	NM_008952///XM_011		Pipox	pipecolic acid oxidase	0033514 // L-lysine catabolic process to acetyl-CoA via L-pipecolate // not recorded///0033514 // L-lysine catabolic proc
0.009141		117.53102	NM_007788///XM_006		Csnk2a1///Gm10031	casein kinase 2, alpha 1 polypeptide///predicted pseudogene 10031	0006351 // transcription, DNA-templated // inferred from electronic annotation///0006355 // regulation of transcription
	60.244728	40.656837	NM_145539	-1.48	Tm4sf4	transmembrane 4 superfamily member 4	0042246 // tissue regeneration // inferred from electronic annotation
	146.79344	99.46615	NM_007994	-1.48	Fbp2	fructose bisphosphatase 2	0005975 // carbohydrate metabolic process // inferred from electronic annotation///0006094 // gluconeogenesis // not
	307.14972	209.08922	NM_027457	-1.47	Tmem242	transmembrane protein 242	
	50.580288	34.443153	NM_008061	-1.47	G6pc	glucose-6-phosphatase, catalytic	0005977 // glycogen metabolic process // inferred from mutant phenotype///0005980 // glycogen catabolic process // ii
	192.03654	130.93428	NM_001161667///NM_		Acox2	acyl-Coenzyme A oxidase 2, branched chain	0006629 // lipid metabolic process // inferred from electronic annotation///0006631 // fatty acid metabolic process // in
0.009838		201.16042	NM_007633	-1.47	Ccne1	cyclin E1	0000082 // G1/S transition of mitotic cell cycle // inferred from electronic annotation///0001547 // antral ovarian follicle
	136.62427	93.20229	NM_025310	-1.47	Ftsj3	FtsJ homolog 3 (E. coli)	0000453 // enzyme-directed rRNA 2'-O-methylation // inferred from electronic annotation///0000463 // maturation of I
0.009035	47.06415	32.44323	NR_040338	-1.45	Redrum	Redrum, erythroid developmental long intergenic non-protein coding transcript	
	872.99396	606.62067	NM_001110251///NM_		Hmbs	hydroxymethylbilane synthase	0001666 // response to hypoxia // inferred from electronic annotation///0006779 // porphyrin-containing compound bi
0.009539		3773.0076	NM_001048061///NM_		Hnrnpab	heterogeneous nuclear ribonucleoprotein A/B	0000122 // negative regulation of transcription from RNA polymerase II promoter // inferred from genetic interaction///
0.009035	78.971115	54.98317	NM_026085///NM_026		Pbld1///Pbld2		on 0009058 // biosynthetic process // inferred from electronic annotation///0010633 // negative regulation of epithelial cel
	109.25326	76.39132	NM_178931///XM_006		Tnfrsf14	tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator)	0002741 // positive regulation of cytokine secretion involved in immune response // inferred from mutant phenotype///
	62.149387	44.175636	NM_001136237///NM_		SIc39a5	solute carrier family 39 (metal ion transporter), member 5	0001654 // eye development // not recorded///0006810 // transport // inferred from electronic annotation///0006811
	279.50458	198.9557	NM_008698///XM_006		Nipsnap1	4-nitrophenylphosphatase domain and non-neuronal SNAP25-like protein homolog 1 (C. elegans)	
	1414.5854	1008.10645	NM_001313723///NM_		Tuba4a	tubulin, alpha 4A	0007017 // microtubule-based process // inferred from electronic annotation///0008152 // metabolic process // inferred
0.009838		398.02176	NM_001024945///NM_		Qsox1	quiescin Q6 sulfhydryl oxidase 1	0006457 // protein folding // not recorded///0016242 // negative regulation of macroautophagy // not recorded///0045
	2961.0923	2127.6135	NM_011239	-1.39	Ranbp1	RAN binding protein 1	0007051 // spindle organization // inferred from direct assay///0010976 // positive regulation of neuron projection deve
	48.109287	34.59443	XR_880475///XR_88855		Gm42127	predicted gene, 42127	
0.009539		459.50595	NM_010104	-1.39	Edn1	endothelin 1	0000122 // negative regulation of transcription from RNA polymerase II promoter // not recorded///0001501 // skeletal
0.009515		19.083727	NM_172881	-1.39	Ugt2b35	UDP glucuronosyltransferase 2 family, polypeptide B35	0008152 // metabolic process // inferred from electronic annotation///0009813 // flavonoid biosynthetic process // not
	20.862589	15.07787	NM_001195596	-1.38	Smlr1	small leucine-rich protein 1	
0.009838		415.9078	NM_027421///XM_006		Ints2	integrator complex subunit 2	0016180 // snRNA processing // not recorded
0.009539		59.150433	NM_013754	-1.38	Insl6	insulin-like 6	0007283 // spermatogenesis // inferred from mutant phenotype///0007286 // spermatid development // inferred from
	178.88324	130.4749	NM_010792///XM_006		Mettl1	methyltransferase like 1	0006400 // tRNA modification // not recorded///0008033 // tRNA processing // inferred from electronic annotation///00
0.009035	1982.2194	1451.1311	NM_177730	-1.37	Impad1	inositol monophosphatase domain containing 1	0001501 // skeletal system development // inferred from mutant phenotype///0001958 // endochondral ossification //

			RefSeq Transcript ID	FD	Gene Symbol	Gene Title
0.009035	96.40056	70.88627	NM_001161515///NM_	-1.36	Dctd	dCMP deaminase
0.009393	145.70305	107.20567	NM_020591///NR_0278	-1.36	Chd3os	chromodomain helicase DNA binding protein 3, opposite strand
0.009539	248.24391	183.27887	NM_028228///XM_0065		Pinx1	PIN2/TERF1 interacting, telomerase inhibitor 1
	1118.0834	826.66895	NM_146229	-1.35	Dync1li1	dynein cytoplasmic 1 light intermediate chain 1
	422.27673	312.24203	NM_007682	-1.35	Cenpb	centromere protein B
					•	·
0.009539		613.9402	NM_024193///XM_006		Nop56	NOP56 ribonucleoprotein
	194.61078	144.35522		-1.35	Tes3-ps	testis derived transcript 3, pseudogene
0.009515	115.65555	85.826584	NM_054094///XM_0065	-1.35	Acsm1	acyl-CoA synthetase medium-chain family member 1
0.009393	197.96646	146.96428	NM 001102404///NM	-1.35	Acp5	acid phosphatase 5, tartrate resistant
0.009393	82.71533	61.67905	NR_003964///NM_0237	-1.34	Tubb2a-ps2///Tubb2b	tubulin, beta 2a, pseudogene 2///tubulin, beta 2B class IIB
	416.94724	312.54208	NM_001127233///NM_		Trp53	transformation related protein 53
	2649.8318	1989.797			Prmt1	
			NM_001252476///NM_			protein arginine N-methyltransferase 1
	225.13934	169.49669	NM_019547///XM_0064		Rbm38	RNA binding motif protein 38
0.009539	343.71655	259.67032	NM_010478	-1.32	Hspa1b	heat shock protein 1B
0.009539	634.3614	479.27847	NM_001290667///NM_	-1.32	Chac2	ChaC, cation transport regulator 2
0.007904	782.0202	591.61865	NM 025954	-1.32	Pgp	phosphoglycolate phosphatase
0.009838	676 9084	515.1457	NM_015800///XM_0065	-1 31	Crim1	cysteine rich transmembrane BMP regulator 1 (chordin like)
	138.16159	105.437546	NM_001202445///NM_		Mapk8ip1	mitogen-activated protein kinase 8 interacting protein 1
0.009313		115.771126	NM 008396	-1.31	Itaa2	
						integrin alpha 2
0.009035		393.19016	NM_009266	-1.31	Sephs2	selenophosphate synthetase 2
0.009035	857.5765	656.29474	NM_001030307///XM_0	-1.31	Dkc1	dyskeratosis congenita 1, dyskerin
0.009539	85.157585	65.53217	NM_009400///NM_021	-1.30	Tnfrsf18	tumor necrosis factor receptor superfamily, member 18
	454.66617	351.08884	NM_001291128///NM_		Nnat	neuronatin
0.009515	1189.5702	919.7363	NM 025584	-1.29	Cd99	CD99 antigen
	1411.8641	1096.1992	NM 018868///XM 0064		Nop58	NOP58 ribonucleoprotein
0.009515		542.6236	NM_001001493///XM_0		Gm2573///Wdr83os	predicted gene 2573///WD repeat domain 83 opposite strand
0.009515	785.9864	613.72473	NM_001033536///XM_0	-1.28	Rfx7	regulatory factor X, 7
0.009539	1795.9786	1406.2979	NM_026027	-1.28	Pfdn1	prefoldin 1
	1325.4642	1038.1267	NM_026122///NM_175	-1.28	Hman3	high mobility group nucleosomal binding domain 3
	572.92474	451.67682	NM 023203	-1.27	Dctpp1	dCTP pyrophosphatase 1
0.009539		525.63696	NM 026845	-1.26	Ppil1	peptidylprolyl isomerase (cyclophilin)-like 1
0.009539		467.6986	NM_001302163///NM_		Acsl1	acyl-CoA synthetase long-chain family member 1
0.009035	1009.2893	804.79645	NM_010411///XR_3859	-1.25	Hdac3	histone deacetylase 3
0.009515	259.44144	206.95248	NM_027297///XM_0065	-1.25	Prpf4	PRP4 pre-mRNA processing factor 4 homolog (yeast)
0.009035	453.9274	362.5217	NM_019816///XM_0069	-1.25	Aatf	apoptosis antagonizing transcription factor
0.009515	687.4245	549.7506	NM_001252450///NM_		Cldnd1	claudin domain containing 1
	1186.0769	950.7319	NM_025507	-1.25	Snw1	SNW domain containing 1
	695.9858	558.87134	NM_026742	-1.25	Ndufaf4	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, assembly factor 4
	963.01416	774.43896	NM_025544	-1.24	Mrps15	mitochondrial ribosomal protein S15
0.009539	1239.7227	997.7482	NM_019657	-1.24	Hsd17b12	hydroxysteroid (17-beta) dehydrogenase 12
0.009035	871.2057	701.7155	NM_001035228///NM_	-1.24	St3gal5	ST3 beta-galactoside alpha-2,3-sialyltransferase 5
0.009393	1185.0565	954.66797	NM_001003913///NM_	-1.24	Mars	methionine-tRNA synthetase
0.009515	334.53293	269.49628	NM_025903///XM_0112		Ifrd2	interferon-related developmental regulator 2
	337.53903	272.58347	NM_016856///XM_0065		Cpsf2	cleavage and polyadenylation specific factor 2
	64.897865	52.419785	NM_001312906///NM_		Hnf4a	hepatic nuclear factor 4, alpha
	503.20862	406.62573	NM_019553	-1.24	Ddx21	DEAD (Asp-Glu-Ala-Asp) box polypeptide 21
0.009515	909.7652	738.1548	NM_001033966///NM_	-1.23	Ak2	adenylate kinase 2
0.009838	159.77129	129.77583	NM_080457///NM_183	-1.23	Muc4	mucin 4
0.009539	285.77148	232.21115	NM_027242///XM_0069		Ppp1r35	protein phosphatase 1, regulatory subunit 35
0.009838		52.348244	NM_001077514///NM_		Slc1a2	solute carrier family 1 (glial high affinity glutamate transporter), member 2
	266.27518	217.09465	NM_001077314///NM_		Zbtb5	zinc finger and BTB domain containing 5
0.009515		350.48245	NM_001085390	-1.22	Dusp5	dual specificity phosphatase 5
	231.37968	189.52222	NM_033573	-1.22	Prcc	papillary renal cell carcinoma (translocation-associated)
0.009515	1644.7557	1353.1824	NM_001304528///NM_	-1.22	Ahcy///Gm4737	S-adenosylhomocysteine hydrolase///predicted gene 4737
0.009755	432.92596	357.80963	NM_026660///XM_0065	-1.21	Mfsd10	major facilitator superfamily domain containing 10
0.009539	235.79848	194.93832	NM_145365///XM_0113		Creb3I3	cAMP responsive element binding protein 3-like 3
0.009515	439.4294	364.59235	NM_001038230///NM_		Anapc11	anaphase promoting complex subunit 11
	510.38306	424.5472	NM_010817	-1.20	Psmd7	proteasome (prosome, macropain) 26S subunit, non-ATPase, 7
0.009539		2155.1052	NM_144784	-1.20	Acat1	acetyl-Coenzyme A acetyltransferase 1
0.009539	328.1385	275.55862	NM_028428	-1.19	Fut11	fucosyltransferase 11
0.009539	551.38324	464.7824	NM_025840///XM_0069	-1.19	Bzw2	basic leucine zipper and W2 domains 2
0.009515	15.254267	17.774426	NM_008671	1.17	Nap1l2	nucleosome assembly protein 1-like 2
0.009393	15.830147	18.650099	NM 011023	1.18	Otx1	orthodenticle homolog 1
0.009539		53.331398	NM_001177366///NM_		Fut7	fucosyltransferase 7
0.009838		117.45883	NM_001024700	1.19	Igh-VJ558///Igha	immunoglobulin heavy chain (J558 family)///immunoglobulin heavy constant alpha
	25.095377	30.028923	NR_110482	1.20	Gm38403	predicted gene, 38403
	71.126236	85.54989	NM_176987///XM_0069		Simc1	SUMO-interacting motifs containing 1
0.009539	20.03472	24.266289	NM_176848///XM_0069	1.21	Fbxo2	F-box protein 2
0.009539	90.46158	109.88717	NM_053255///XM_0112	1.21	Elac1	elaC homolog 1 (E. coli)
0.009838	177.27383	216.18193	NM 023750	1.22	Zfp84	zinc finger protein 84
	34.521523	42.238297	NR 033221	1.22	BC031361	cDNA sequence BC031361
		42.236297			Brdt	
	40.641575		NM_001079873///NM_			bromodomain, testis-specific
	81.076225	99.432945	NM_013904	1.23	Hey2	hairy/enhancer-of-split related with YRPW motif 2
	40.186634	49.31	NM_010341	1.23	Nmur1	neuromedin U receptor 1
0.009539	41.73369	51.33612	NM_145603///NR_0337	1.23	Ces2c///Ces2d-ps	carboxylesterase 2C///carboxylesterase 2D, pseudogene
0.009515	117.33529	145.04886	NM_025943///NR_1307		Dzip1	DAZ interacting protein 1
			_			

Gene Ontology Biological Process

0006220 // pyrimidine nucleotide metabolic process // inferred from electronic annotation///0008152 // metabolic process

0007004 // telomere maintenance via telomerase // inferred from direct assay///0007080 // mitotic metaphase plate co 0006810 // transport // inferred from electronic annotation///0007018 // microtubule-based movement // inferred fror 0006355 // regulation of transcription, DNA-templated // inferred from electronic annotation

0000154 // rRNA modification // not recorded///0042254 // ribosome biogenesis // inferred from electronic annotation

0006629 // lipid metabolic process // inferred from electronic annotation///0006631 // fatty acid metabolic process // in 0006470 // protein dephosphorylation // inferred from electronic annotation///0016311 // dephosphorylation // inferre 0001764 // neuron migration // not recorded//0007017 // microtubule-based process // inferred from electronic annot 0000060 // protein import into nucleus, translocation // inferred from direct assay//0000122 // negative regulation of to 0001701 // in utero embryonic development // inferred from mutant phenotype///000555 // regulation of transcriptio 0006397 // mRNA processing // inferred from electronic annotation///0006977 // DNA damage response, signal transdu 0007339 // binding of sperm to zona pellucida // inferred from direct assay///0009408 // response to heat // inferred from electronic annotation

0005975 // carbohydrate metabolic process // inferred from electronic annotation///0008152 // metabolic process // information from electronic annotation///0008152 // metabolic process // information from electronic annotation///0005951 // negative regulation of ell growth // inferred from electronic annotation///00005951 // negative regulation of feukocyte migration // not recorded///0006929 // substrate-dependent cell migration // not recorded///0006929 // substrate-dependent cell migration // not necorded///0006939 // substrate-dependent cell migration // not necorded///000495 // box h/ACA snoRNA 3'-end processing // not recorded///0000495 // box h/ACA snoRNA 3'-end processing // not recorded///000000287 // positive regulation of leukocyte migration // not recorded///0006915 // apoptotic process // inferred from e 0007275 // multicellular organismal development // inferred from electronic annotation///0007420 // brain developmen 0001773 // myeloid dendritic cell activation // inferred from direct assay

0000154 // rRNA modification // not recorded///0006608 // snRNP protein import into nucleus // not recorded///00422

0006355 // regulation of transcription, DNA-templated // inferred from electronic annotation///0006357 // regulation o 0006437 // protein folding // inferred from electronic annotation///0021537 // telencephalon development // inferred from 0006357 // regulation of transcription from RNA polymerase il promoter // inferred from mutant phenotype//0016568 0009143 // nucleoside triphosphate catabolic process // inferred from direct assay//0051289 // protein homotetrameri 0000413 // protein peptidyl-prolyl isomerization // not recorded//0006397 // mRNA processing // inferred from 0000122 // negative regulation of transcription from RNA polymerase il promoter // inferred from genetic interaction// 0000398 // mRNA splicing, via spliceosome // not recorded///0006397 // mRNA processing // inferred from 0000122 // regulation of transcription from RNA polymerase il promoter // inferred from 0000122 // regulation of transcription from RNA polymerase il promoter // not recorded//0006397 // mRNA processing // inferred from 0000122 // regulation of transcription from RNA polymerase il promoter // not recorded//0006997 // regulation of transcription from RNA polymerase il promoter // not recorded//0006997 // regulation of transcription from RNA polymerase il promoter // not recorded//0006997 // regulation of transcription from RNA polymerase il promoter // not recorded//0006997 // regulation of transcription from RNA polymerase il promoter // not recorded//0006997 // regulation of transcription from RNA polymerase il promoter // not recorded//0006997 // regulation of transcription from RNA polymerase il promoter // not recorded//0006997 // regulation of transcription from RNA polymerase il promoter // not recorded//0006997 // regulation of transcription from RNA polymerase il promoter // not recorded//0006997 // regulation of transcription from RNA polymerase il promoter // not recorded//0006997 // regulation of transcription from RNA polymerase il promoter // not recorded//0006997 // regulation of transcription from RNA polym

0000122 // negative regulation of transcription from RNA polymerase II promoter // not recorded///0000398 // mRNA a 0008284 // positive regulation of cell proliferation // not recorded///0010257 // NADH dehydrogenase complex assembl 0006412 // translation // inferred from electronic annotation///0032543 // mitochondrial translation // inferred from se 0006629 // lipid metabolic process // inferred from electronic annotation///0006633 // fatty acid biosynthetic process // 0001574 // ganglioside biosynthetic process // not recorded///0006486 // protein glycosylation // inferred from electronic annotation///0006418 // tRNA aminoacylation for protein translation

0006378 // mRNA polyadenylation // inferred from electronic annotation///0006379 // mRNA cleavage // inferred from 0006351 // transcription, DNA-templated // inferred from electronic annotation//0006355 // regulation of transcription 0001649 // osteoblast differentiation // not recorded///0006351 // transcription, DNA-templated // inferred from electronic annotation// osteoblast differentiation // not recorded///0006351 // transcription, DNA-templated // inferred from electronic annotation///0006172 // AC 0001933 // negative regulation of cell-matrix adhesion // not recorded///0002244 // hematopoletic progenitor cell differentiation of phosphatase activity // not recorded

0006810 // transport // inferred from electronic annotation // 0006835 // dicarboxylic acid transport // inferred from ele 0006351 // transcription, DNA-templated // inferred from electronic annotation // 0006355 // regulation of transcription 0000188 // inactivation of MAPK activity // not recorded // 0001706 // endoderm formation // not recorded // 0006470 0007093 // mitotic cell cycle checkpoint // not recorded

0002439 // chronic inflammatory response to antigenic stimulus // not recorded///0006730 // one-carbon metabolic pro 0006810 // transport // inferred from electronic annotation///0006915 // apoptotic process // inferred from electronic a 0006351 // transcription, DNA-templated // inferred from electronic annotation///0006355 // regulation of transcription 0007049 // cell cycle // inferred from electronic annotation///0007067 // mitotic nuclear division // inferred from electronic annotation///0007067 // mitotic nuclear division // inferred from electronic annotation // proteasome-mediated ubiquitin-dependent protein catabolic process // not recorded

0001889 // liver development // inferred from electronic annotation///0007420 // brain development // inferred from e 0006486 // protein glycosylation // inferred from electronic annotation///036065 // fucosylation // inferred from electronic annotation///0007399 // nervous system d 0006334 // nucleosome assembly // inferred from electronic annotation///0007399 // nervous system d 0006334 // nucleosome assembly // inferred from electronic annotation///0035066 // positive regulation of histone ace 0006355 // regulation of transcription, DNA-templated // inferred from electronic annotation///0006357 // regulation of 0002361 // CD4-positive, CD25-positive, apha-beta regulatory of zell differentiation // inferred from mutant phenotype/, 0002385 // mucosal immune response // inferred from direct assay///0002455 // humoral immune response mediated it

0006511 // ubiquitin-dependent protein catabolic process // inferred from direct assay///0006516 // glycoprotein catab 0008033 // RNA processing // inferred from electronic annotation///003441 // tRNA 3 -trailer cleavage, endonucleolyt 0006355 // regulation of transcription, DNA-templated // inferred from electronic annotation

0001207 // histone displacement // inferred from mutant phenotype///0006338 // chromatin remodeling // inferred fro 0000122 // negative regulation of transcription from RNA polymerase II promoter // inferred from direct assay///000012 0006816 // calcium ion transport // not recorded///0006821 // chloride transport // not recorded///0006939 // smot 0001101 // response to acid chemical // inferred from direct assay///0008152 // metabolic process // inferred from elect 0007224 // smoothened signaling pathway // inferred from mutant phenotype///0007257 // multicellular organismal de

- (Cam)	[COLL/LIGHT DE]/rem)	[Car VO DE]/sam)	RefSeq Transcript ID	FD.	Gene Symbol	Gene Title	Gene Ontology Biological Process
0.009539		85.47465	NM_001243741///NM_			expressed sequence C87436///predicted gene, 38849	defie Ontology biological Process
	666.24347	826.46735	NM 020625///XM 006			zinc finger and BTB domain containing 22	0006351 // transcription, DNA-templated // inferred from electronic annotation///0006355 // regulation of transcription
0.009838		11800.324	NM 013755///XM 006			glycogenin	0005978 // glycogen biosynthetic process // not recorded///0008152 // metabolic process // inferred from electronic an
0.009838		409.743	NM_145151///NR_0734			CREB/ATF bZIP transcription factor	0006351 // transcription, DNA-templated // not recorded///0006355 // regulation of transcription, DNA-templated // in
		77.42998	XR_377689///XR_40338			predicted gene 16499	Cooperation of the second of t
0.009393		147.82677	NM_130882///XM_006			cytochrome P450, family 4, subfamily f, polypeptide 13	0006691 // leukotriene metabolic process // not recorded///0055114 // oxidation-reduction process // inferred from ele
0.009539		143.71123	NM_001168564///NM_			potassium voltage-gated channel, delayed-rectifier, subfamily S, member 3	0006810 // transport // inferred from electronic annotation///0006811 // ion transport // inferred from electronic anno
0.009539	244.16508	304.57812	NM_194346///XM_006			ring finger protein 31	0000209 // protein polyubiquitination // not recorded///0016567 // protein ubiquitination // inferred from mutant phe
	2020.9365	2524.2908	NM_001163635///XM_			tankyrase, TRF1-interacting ankyrin-related ADP-ribose polymerase 2	0000209 // protein polyubiquitination // not recorded///0000723 // telomere maintenance // inferred from mutant phe
	8101.5117	10130.0625		1.25		collagen, type IV, alpha 2	0001525 // angiogenesis // inferred from electronic annotation///0006351 // transcription, DNA-templated // inferred fr
0.009539		1596.5925	NM_001081364///NM_			Rho GTPase activating protein 21	0007030 // Golgi organization // not recorded///0007165 // signal transduction // inferred from electronic annotation//
0.009515	37.730293	47.209244	NM_175514///XM_006		Fam171b	family with sequence similarity 171, member B	
0.009539	1140.678	1428.8904		1.25		actin related protein 2/3 complex, subunit 1A	0030833 // regulation of actin filament polymerization // inferred from electronic annotation///0034314 // Arp2/3 comp
0.009838	27.220903	34.211407	NM_001272057///NM_	1.26	Adam5	a disintegrin and metallopeptidase domain 5	0006508 // proteolysis // inferred from electronic annotation
0.009838	328.1849	412.80176	NM_001110253///NM_		Fyco1	FYVE and coiled-coil domain containing 1	0006810 // transport // inferred from electronic annotation///0072383 // plus-end-directed vesicle transport along micr
0.009539	33.495815	42.134575	NM_053250///NM_181	1.26	Crip3	cysteine-rich protein 3	0042098 // T cell proliferation // inferred from mutant phenotype
0.009838	360.62012	453.7087		1.26		protocadherin 12	0005977 // glycogen metabolic process // inferred from mutant phenotype///0007155 // cell adhesion // inferred from o
0.009539	70.070786	88.25277	NM_001136496///NM_	1.26	Zfp935	zinc finger protein 935	0006355 // regulation of transcription, DNA-templated // inferred from electronic annotation
0.009582	192.0062	241.86015	NM_173865	1.26	Slc41a1	solute carrier family 41, member 1	0006810 // transport // inferred from electronic annotation///0006811 // ion transport // inferred from electronic anno
0.009035	132.09906	166.5039	NM_027007///XM_006	1.26	Zfp397	zinc finger protein 397	0006351 // transcription, DNA-templated // inferred from electronic annotation///0006355 // regulation of transcription
0.009838	760.297	961.42017	NM_001081241///XM_	(1.26	Fam65a	family with sequence similarity 65, member A	
0.009721	1276.3322	1616.231	NM_010761///XM_006	4 1.27	Ccndbp1	cyclin D-type binding-protein 1	0007049 // cell cycle // inferred from electronic annotation///0051726 // regulation of cell cycle // inferred from electron
0.009539	133.90605	169.81232	XM_006517803///XM_0	C 1.27	D130037M23Rik	RIKEN cDNA D130037M23 gene	
0.009393	435.22348	552.22626	NM_029788	1.27	Rnft1	ring finger protein, transmembrane 1	
0.009801	165.18332	210.24138	NM_001039951///NM_	1.27		zinc finger protein 606	0006355 // regulation of transcription, DNA-templated // not recorded
0.009539		48.03753		1.27		developing brain homeobox 1	0006355 // regulation of transcription, DNA-templated // inferred from electronic annotation///0006357 // regulation o
0.009515	30.937084	39.39259	NM_001101482///NM_	1.27		melanocortin 2 receptor accessory protein 2	0006112 // energy reserve metabolic process // inferred from mutant phenotype///0007631 // feeding behavior // infer
0.009035		126.10651	NM_025981///XM_006	5 1.28	2810416G20Rik///LOC10264	RIKEN cDNA 2810416G20 gene///uncharacterized LOC102642487	
0.009515	56.52688	72.152306	NR_045164	1.28	Slc2a4rg-ps	Slc2a4 regulator, pseudogene	
0.009539	357.88156	456.92197	NM_007772///XM_006	1.28	Hivep1	human immunodeficiency virus type I enhancer binding protein 1	0000122 // negative regulation of transcription from RNA polymerase II promoter // inferred from direct assay///000012
0.009035	23.108797	29.550993	NM_010846///NR_0035		Mx1	MX dynamin-like GTPase 1	0002376 // immune system process // inferred from electronic annotation///0008152 // metabolic process // inferred fr
0.009515	155.8945	199.79364	NM_001311069///NM_	1.28	Dixdc1	DIX domain containing 1	0007049 // cell cycle // inferred from mutant phenotype///0007275 // multicellular organismal development // inferred
0.009539	27.122637	34.801304	NM_198621	1.28	Cct8/1	chaperonin containing TCP1, subunit 8 (theta)-like 1	0006457 // protein folding // inferred from electronic annotation
0.009515	389.0285	499.26144	NM_001164056///NM_	1.28	Pld1	phospholipase D1	0006629 // lipid metabolic process // inferred from electronic annotation///0006643 // membrane lipid metabolic proce
0.009539	126.22039	162.15186	NM_001291047///NM_	1.28	Ypel1	yippee-like 1 (Drosophila)	
0.009515	3079.7148	3961.3894	NM_024473	1.29	BC005537	cDNA sequence BC005537	
0.009035	153.61166	197.64618	NM_001290720///NM_	1.29	Tsga10	testis specific 10	0030031 // cell projection assembly // inferred from mutant phenotype
0.009515	561.0085	723.5869	NM_001163475///XM_	(1.29	Zfp746	zinc finger protein 746	0000122 // negative regulation of transcription from RNA polymerase II promoter // inferred from direct assay///000012
0.009539	1456.5138	1881.6926	NM_175134///XM_006		Ankrd46	ankyrin repeat domain 46	
0.009515	64.59649	83.649956	NM_001146046///NM_	1.29	Lrrc49	leucine rich repeat containing 49	
0.009539		162.6137	NM_001159317///NM_		Il1rap	interleukin 1 receptor accessory protein	0002376 // immune system process // inferred from electronic annotation///0006954 // inflammatory response // infer
0.009515	234.31003	303.73087	NM_001113333///NM_	1.30	Cry2	cryptochrome 2 (photolyase-like)	0000122 // negative regulation of transcription from RNA polymerase II promoter // not recorded///0006281 // DNA rep
0.009539		399.93097	NM_001195633///XM_			ectopic P-granules autophagy protein 5 homolog (C. elegans)	$0006914 \ // \ autophagy \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ inferred from \ mutant \ phenotype \ // \ // \ endocytic \ recycling \ // \ endocytic \ // \ endoc$
0.009394	585.879	760.092	NM_001098233///NM_	1.30	Purg	purine-rich element binding protein G	
0.009539	626.092	812.32465		1.30	Phlpp1	PH domain and leucine rich repeat protein phosphatase 1	$0001932 \ // \ regulation \ of \ protein \ phosphorylation \ // \ not \ recorded \ // \ 0002667 \ // \ regulation \ of \ T \ cell \ anergy \ // \ inferred \ frc$
0.009515				1.30		caspase 6	0002525 // acute inflammatory response to non-antigenic stimulus // not recorded///0006508 // proteolysis // not reco
0.009539		782.78564	NM_018869///XM_006			G protein-coupled receptor kinase 5	0002029 // desensitization of G-protein coupled receptor protein signaling pathway // not recorded///0006468 // protein
0.009539		384.67972		1.30		DEAD (Asp-Glu-Ala-Asp) box polypeptide 58	0002230 // positive regulation of defense response to virus by host // not recorded///0002376 // immune system proce
	329.23483	428.31912	NM_177732///XM_006				0015781 // pyrimidine nucleotide-sugar transport // inferred from direct assay///0030206 // chondroitin sulfate biosynt
0.009539		546.51855	NM_030253///XM_006			poly (ADP-ribose) polymerase family, member 9	0006281 // DNA repair // inferred from electronic annotation///0006302 // double-strand break repair // not recorded/,
0.009539		1006.33606	NM_001161817///NM_		,	myosin IB	0006892 // post-Golgi vesicle-mediated transport // not recorded///0007015 // actin filament organization // not record
		47.803246	NM_009509///XM_011			villin 1	$0001951 \ // \ intestinal \ D-glucose \ absorption \ // \ inferred \ from \ genetic \ interaction \ // \ 0006915 \ // \ apoptotic \ process \ // \ inferred \ from \ genetic \ interaction \ // \ output \ output \ // \ output \ // \ output \ // \ output \ // \ output $
0.009035		54.34814	XR_106421///XR_10756			predicted gene, 17501	
0.009515		180.40723	NM_172919///XM_006		••	zinc finger protein 846	0006355 // regulation of transcription, DNA-templated // not recorded
	171.21489	226.58789	NM_001164792///NM_			trophoblast glycoprotein	0051965 // positive regulation of synapse assembly // inferred from direct assay
0.009539		291.39944	NM_009180///XR_3883				0001574 // ganglioside biosynthetic process // not recorded///0006486 // protein glycosylation // inferred from electror
		275.67743		1.32		guanine nucleotide binding protein, alpha 14	0007165 // signal transduction // inferred from electronic annotation///0007186 // G-protein coupled receptor signaling
0.009515		82.47314	NM_020262///XM_006			zinc finger protein 109	0006355 // regulation of transcription, DNA-templated // inferred from electronic annotation
0.009539		1001.0058		1.33		endothelin receptor type A	0001569 // patterning of blood vessels // inferred from genetic interaction///0001666 // response to hypoxia // inferred
0.009515		697.06226	NM_001033217///XM_			prickle homolog 1 (Drosophila)	0001843 // neural tube closure // not recorded///0006606 // protein import into nucleus // not recorded///0031398 //
0.009831		85.87017		1.33	*****	zinc finger protein 963	0006355 // regulation of transcription, DNA-templated // not recorded
	175.53862	233.50746	NM_153782///XM_006		Fam20a	family with sequence similarity 20, member A	0001934 // positive regulation of protein phosphorylation // inferred from direct assay///0001934 // positive regulation
0.009515		184.2994	NM_001177752///NM_			6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 3	0006000 // fructose metabolic process // inferred from electronic annotation///0006003 // fructose 2,6-bisphosphate m
0.009539		273.3012	NM_030168///XM_006			RPTOR independent companion of MTOR, complex 2	0001932 // regulation of protein phosphorylation // inferred from mutant phenotype///0001938 // positive regulation c
0.009539		557.38226	NM_001164289///NM_			PHD finger protein 11C///PHD finger protein 11D	0006351 // transcription, DNA-templated // inferred from electronic annotation///0006355 // regulation of transcription
		125.77775	NM_183254///XM_006			family with sequence similarity 229, member B	Annual III. I was a second of the second of
	1969.3298	2662.9504	NM_001199186///NM_			solute carrier family 44, member 2	0006810 // transport // inferred from electronic annotation///0007165 // signal transduction // not recorded///004312:
0.009035		787.2598	NM_001113386///NM_			leukemia inhibitory factor receptor	0008284 // positive regulation of cell proliferation // inferred from genetic interaction///0008284 // positive regulation c
0.009539		37.46456		1.36		NLR family, pyrin domain containing 10	0002250 // adaptive immune response // inferred from electronic annotation///0002376 // immune system process // in
0.009539		615.86365	NM_001243908///XM_	(1.36		zinc finger protein 383	0006355 // regulation of transcription, DNA-templated // inferred from electronic annotation
0.009539		1336.2693	NM_001290659///NM_			tetratricopeptide repeat, ankyrin repeat and coiled-coil containing 1	0007520 // myoblast fusion // inferred from mutant phenotype///0008542 // visual learning // inferred from mutant ph
0.009539		254.51581	NM_001199048///NR_0			zinc finger protein 942	0006355 // regulation of transcription, DNA-templated // inferred from electronic annotation
0.009035		266.33487	NM_144873///XM_006		Uhrf2	ubiquitin-like, containing PHD and RING finger domains 2	0006511 // ubiquitin-dependent protein catabolic process // not recorded///0006511 // ubiquitin-dependent protein ca
0.009515		3748.7139	NM_001243199///NM_			GTPase, IMAP family member 4	0000045 //
0.009035 0.009515		385.044 37.005226	NM_013881///XM_006 NR 038032	1.37		unc-51 like kinase 2 predicted gene 15663	0000045 // autophagosome assembly // not recorded///0006468 // protein phosphorylation // inferred from electronic
0.009515	20.9/140	37.003226	IND_U36U3Z	1.5/	GIII13003	hierirea Reiie 10009	

p (Corr	[C3H/HeN, P5](raw)	[Gsr-KO, P5](raw)	RefSeq Transcript ID	FD	Gene Symbol	Gene Title
0.0087	71 97.42562	134.67738	NM_007911///XM_006	55 1.38	Efnb3	ephrin B3
0.0090	35 356.06174	495.6695	NM_001033851///NM	1.39	Cpne8	copine VIII
0.0095	15 35.75946	49.786163	NM_001081084	1.39	Cubn	cubilin (intrinsic factor-cobalamin receptor)
0.0090	35 98.064575	137.12593	NM_001143776///NM	1.40	Fam13c	family with sequence similarity 13, member C
0.0079	04 101.20299	141.52968	XR_870188///XR_8701	8 1.40	Gm29782	predicted gene, 29782
0.0095	15 119.81094	168.41316	NM_001039530///XM_	(1.41	Parp14	poly (ADP-ribose) polymerase family, member 14
0.0098	38 241.15141	341.40613	NM_175460///XM_006	5: 1.42	Nmnat2	nicotinamide nucleotide adenylyltransferase 2
0.0090	35 32.524933	46.156807	NM_001045550///NM	1.42	Gm2083///Gm21320///Mup	major urinary protein LOC100048885///predicted gene, 21320///major urinary protein 1//
0.0098	38 438.85696	624.98376	NM_001276719///NM	1.42	Ackr2	atypical chemokine receptor 2
0.0095	15 87.13523	124.178055	NM_027560///XM_013	17 1.43	Arrdc2	arrestin domain containing 2
0.0090	35 1273.1368	1817.7776	NR_002321///NR_0023	32 1.43	Tug1	taurine upregulated gene 1
0.0095	39 564.8375	806.9806	NM_001310534///NM	1.43	Txndc16	thioredoxin domain containing 16
0.0095	39 241.2777	347.8312	NM_001033633	1.44	Slc2a13	solute carrier family 2 (facilitated glucose transporter), member 13
0.0095	39 111.349304	160.87154	NM_001164573///NM	1.44	Myo1h	myosin 1H
0.0095	15 78.335976	114.08768	NM_175140///XM_006	5: 1.46	Chst8	carbohydrate (N-acetylgalactosamine 4-0) sulfotransferase 8
0.0090	35 230.2688	339.45102	NM_008987	1.47	Ptx3	pentraxin related gene
0.0090	35 93.00372	137.63376	NM_001012324	1.48	Ecm2	extracellular matrix protein 2, female organ and adipocyte specific
0.0095	32 53.519703	79.219284	NM_001164374///XM_	(1.48	Gm17455	predicted gene, 17455
0.0090	35 816.0237	1209.8616	NM_020052	1.48	Scube2	signal peptide, CUB domain, EGF-like 2
0.0095	39 783.3385	1162.6428	NR_002840///NR_0285	1.48	Gas5///Snord47	growth arrest specific 5///small nucleolar RNA, C/D box 47
0.0095	39 664.98114	992.8802	NR_002896///NR_0044	14 1.49	Snhg1///Snord22	small nucleolar RNA host gene 1///small nucleolar RNA, C/D box 22
0.0095	39 1330.5524	1999.7644	NM_053109///XM_006	55 1.50	Clec2d	C-type lectin domain family 2, member d
0.0079	04 98.97489	153.05981	NM_001289740///NM	1.55	Mturn	maturin, neural progenitor differentiation regulator homolog (Xenopus)
0.0090	35 489.15015	765.87396	NM_008326///XM_006	5: 1.57	Irgm1	immunity-related GTPase family M member 1
0.0095	15 313.42593	493.61218	NR_029656	1.57	Mirlet7d	microRNA let7d
0.0098	38 238.08238	376.7505	NM_019440	1.58	Irgm2	immunity-related GTPase family M member 2
0.0098	38 432.136	687.02563	NM_001289492///NM	1.59	Gbp3	guanylate binding protein 3
0.0095	39 305.10446	503.60126	NM_001316729///NM	1.65	Qpct	glutaminyl-peptide cyclotransferase (glutaminyl cyclase)
0.0095	15 142.237	236.04419	NM_010114///NM_01	0: 1.66	Klk1b22///Klk1b9	kallikrein 1-related peptidase b22///kallikrein 1-related peptidase b9
0.0095	15 142.237	236.04419	NM_010114///NM_01	0: 1.66	Klk1b22///Klk1b9	kallikrein 1-related peptidase b22///kallikrein 1-related peptidase b9
0.0095	39 23.49422	39.586937	NM_027770///XM_006	5 1.68	Col24a1	collagen, type XXIV, alpha 1
0.0095	39 305.28564	521.377	NM_016704///XM_006	5: 1.71	C6	complement component 6
	39 551.9062	970.214	NM_001177980///NM	1.76	Pde4b	phosphodiesterase 4B, cAMP specific
0.0095	15 191.56723	340.33087	NM_194336///XM_006	5: 1.78	Gbp6	guanylate binding protein 6
	26 1671.4963	3212.4534	NM_026432	1.92	Saraf	store-operated calcium entry-associated regulatory factor
	15 198.83435	450.50763	NM_011854///XM_006		Oasl2	2'-5' oligoadenylate synthetase-like 2
0.0090	35 214.45288	1245.4403	NM_010861///XM_006	5: 5.81	Myl2	myosin, light polypeptide 2, regulatory, cardiac, slow
0.0089	33 92.58727	1654.6576	NM_008725	17.87	Nppa	natriuretic peptide type A

Gene Ontology Biological Process

 $0007275 \, // \, multicellular \, organismal \, development \, // \, inferred \, from \, electronic \, annotation ///0007399 \, // \, nervous \, system \, development \, // \, inferred \, from \, electronic \, annotation ///0007399 \, // \, nervous \, system \, development \, // \, inferred \, from \, electronic \, annotation ///0007399 \, // \, nervous \, system \, development \, // \, inferred \, from \, electronic \, annotation ///0007399 \, // \, nervous \, system \, development \, // \, inferred \, from \, electronic \, annotation ///0007399 \, // \, nervous \, system \, development \, // \, inferred \, from \, electronic \, annotation ///0007399 \, // \, nervous \, system \, development \, // \, inferred \, from \, electronic \, annotation ///0007399 \, // \, nervous \, system \, development \, // \, inferred \, from \, electronic \, annotation ///0007399 \, // \, nervous \, system \, development \, // \, inferred \, from \, electronic \, annotation ///0007399 \, // \, nervous \, system \, development \, // \, inferred \, from \, electronic \, from \, e$

0001701 // in utero embryonic development // not recorded///0006629 // lipid metabolic process // inferred from elect

0006351 // transcription, DNA-templated // inferred from electronic annotation///0006355 // regulation of transcriptior 0006767 // water-soluble vitamin metabolic process // inferred from sequence or structural similarity///0006112 // energy rese 0006898 // receptor-mediated endocytosis // not recorded///0006935 // chemotaxis // inferred from electronic annotat 0007165 // signal transduction // inferred from electronic annotation

0042461 // photoreceptor cell development // inferred from mutant phenotype

0045454 // cell redox homeostasis // inferred from electronic annotation

 $0006810 \ // \ transport \ // \ inferred from \ electronic \ annotation \ // \ (carbohydrate \ transport \ // \ inferred from \ electronic \ annotation$

0005975 // carbohydrate metabolic process // inferred from electronic annotation///0006790 // sulfur compound meta 0001878 // response to yeast // inferred from mutant phenotype//0008228 // posponization // inferred from mutant phenotype//0008218 // positive regulation of cell-substrate adhesion // inferred from di

0006968 // cellular defense response // traceable author statement///0007165 // signal transduction // inferred from se 0007275 // multicellular organismal development // inferred from electronic annotation///0048666 // neuron developen 0002376 // immune system process // inferred from electronic annotation///0006914 // autophagy // inferred from direct assay///0030509 // BMP signaling pathway // inferred from direct assay///00349341 // response to interferon-gamma // inferred from direct assay///00349341 // response to interferon-gamma // i0008152 // metabolic process // inferred from electronic annotation///0034588 // cellular response to interferon-gamma // i0017186 // peptidyl-pyroglutamic acid biosynthetic process, using glutaminyl-peptide cyclotransferase // not recorded 0002526 // acute inflammatory response // ---///0003073 // regulation of systemic arterial blood pressure // ---///00065 0002526 // acute inflammatory response // ---///0003073 // regulation of systemic arterial blood pressure // ---///00065 0002526 // acute inflammatory response // ---///0001700065 0002544 // hematopoietic progenitor cell differentiation // inferred from mutant phenotype

0001701 // in utero embryonic development // inferred from genetic interaction///0001970 // positive regulation of acti 0001780 // neutrophil homeostasis // inferred from mutant phenotype///0006198 // cAMP catabolic process // inferred from mutant phenotype///0006192 // metabolic process // inferred from elect 0006810 // transport // inferred from electronic annotation///0068112 // in transport // inferred from electronic annotation///0006164 // purine nucleotide biosynthetic 0002026 // regulation of the force of heart contraction // not recorded ///0003007 // heart morphogenesis // inferred from electronic annotation///0003085 // negative regulation of systemic arts