

Supplementary Table 1. List of the differentially expressed genes (DEGs) in NF639R cells vs. NF639 cells

Gene ID	Gene Symbol	MeanTPM (NF639R)	MeanTPM (NF639)	log ₂ FoldChange	p-value	q-value	Result	Gene Description
ENSMUSG00000078915	Hsp25-ps1	6.641855	0.000824333	12.97607077	2.38E-11	1.27E-09	up	heat shock protein 25, pseudogene 1 [Source:MGI Symbol;Acc:MGI:96241]
ENSMUSG000000031379	Pir	7.332141	0.043030667	7.412725528	1.19E-09	4.67E-08	up	pirin [Source:MGI Symbol;Acc:MGI:1916906]
ENSMUSG000000031980	Agt	32.483909	0.434484333	6.224277284	1.52E-147	1.19E-143	up	angiotensinogen (serpin peptidase inhibitor, clade A, member 8) [Source:MGI Symbol;Acc:MGI:87963]
ENSMUSG000000027375	Mal	7.743187667	0.275256333	4.814079944	5.66E-63	7.40E-60	up	myelin and lymphocyte protein, T cell differentiation protein [Source:MGI Symbol;Acc:MGI:892970]
ENSMUSG000000000753	Serpinf1	135.1986237	5.409637667	4.643404688	2.41E-200	3.77E-196	up	serine (or cysteine) peptidase inhibitor, clade F, member 1 [Source:MGI Symbol;Acc:MGI:108080]
ENSMUSG000000036908	Unc93b1	5.739695333	0.254224	4.49680202	0.000207731	0.001892764	up	unc-93 homolog B1, TLR signaling regulator [Source:MGI Symbol;Acc:MGI:1859307]
ENSMUSG000000050896	Rtn4rl2	9.2162	0.421229	4.451495356	4.09E-40	1.73E-37	up	reticulon 4 receptor-like 2 [Source:MGI Symbol;Acc:MGI:2669796]
ENSMUSG000000029755	Dlx5	16.326984	0.820884	4.313936136	2.92E-65	4.58E-62	up	distal-less homeobox 5 [Source:MGI Symbol;Acc:MGI:101926]
ENSMUSG000000019102	Aldh3a1	222.322291	12.196711	4.188088542	3.05E-77	7.97E-74	up	aldehyde dehydrogenase family 3, subfamily A1 [Source:MGI Symbol;Acc:MGI:1353451]
ENSMUSG000000029771	Irf5	5.343041333	0.368494333	3.857946839	9.79E-38	3.65E-35	up	interferon regulatory factor 5 [Source:MGI Symbol;Acc:MGI:1350924]
ENSMUSG000000025855	Prkar1b	12.06690833	0.916271333	3.719137396	4.40E-49	3.45E-46	up	protein kinase, cAMP dependent regulatory, type I beta [Source:MGI Symbol;Acc:MGI:97759]
ENSMUSG000000038296	Galnt18	12.22789167	0.935416667	3.708422732	1.15E-61	1.29E-58	up	polypeptide N-acetylglucosaminyltransferase 18 [Source:MGI Symbol;Acc:MGI:2446239]
ENSMUSG000000020866	Caena1g	6.006289	0.478120667	3.651027221	3.72E-50	3.07E-47	up	calcium channel, voltage-dependent, T type, alpha 1G subunit [Source:MGI Symbol;Acc:MGI:1201678]
ENSMUSG000000007594	Hapln4	7.589206333	0.647827	3.550268516	6.53E-65	9.31E-62	up	hyaluronan and proteoglycan link protein 4 [Source:MGI Symbol;Acc:MGI:2679531]
ENSMUSG000000026725	Tnn	72.214249	6.837737333	3.400692623	5.11E-14	4.09E-12	up	tenascin N [Source:MGI Symbol;Acc:MGI:2665790]
ENSMUSG000000006800	Sulf2	7.381699333	0.761820333	3.276430276	5.66E-46	3.41E-43	up	sulfatase 2 [Source:MGI Symbol;Acc:MGI:1919293]
ENSMUSG000000020432	Tcn2	5.281788	0.585042667	3.174412648	6.38E-17	7.14E-15	up	transcobalamin 2 [Source:MGI Symbol;Acc:MGI:98534]
ENSMUSG000000017417	Pldc1	5.266995	0.598958667	3.136451737	1.01E-35	3.44E-33	up	plexin domain containing 1 [Source:MGI Symbol;Acc:MGI:1919574]
ENSMUSG000000041559	Fmod	8.717799667	1.020834	3.094215766	8.65E-42	3.99E-39	up	fibromodulin [Source:MGI Symbol;Acc:MGI:1328364]
ENSMUSG000000030218	Mgp	196.03569	24.38868233	3.006832614	3.03E-77	7.97E-74	up	matrix Gla protein [Source:MGI Symbol;Acc:MGI:96976]
ENSMUSG000000039137	Whrn	8.232785667	1.037170667	2.988727358	5.20E-28	1.29E-25	up	whirlin [Source:MGI Symbol;Acc:MGI:2682003]
ENSMUSG000000050751	Pgbd5	6.414797667	0.855392667	2.906745017	6.86E-38	2.62E-35	up	piggyBac transposable element derived 5 [Source:MGI Symbol;Acc:MGI:2429955]
ENSMUSG000000092130	D030025P21Rik	18.60276	2.489806	2.901411443	1.68E-47	1.20E-44	up	RIKEN cDNA D030025P21 gene [Source:MGI Symbol;Acc:MGI:3698049]
ENSMUSG000000096965	3300005D01Rik	28.81078933	3.976952333	2.856874011	1.24E-40	5.40E-38	up	RIKEN cDNA 3300005D01 gene [Source:MGI Symbol;Acc:MGI:1925762]
ENSMUSG000000088529	Gm26083	5.141384333	0.758241333	2.761427854	0.011654677	0.047864805	up	predicted gene, 26083 [Source:MGI Symbol;Acc:MGI:5455860]
ENSMUSG000000021846	Peli2	11.054688	1.753172333	2.656618586	5.62E-74	1.26E-70	up	pellino 2 [Source:MGI Symbol;Acc:MGI:1891445]
ENSMUSG000000000567	Sox9	11.558805	1.84218	2.649506314	2.33E-54	2.29E-51	up	SRY (sex determining region Y)-box 9 [Source:MGI Symbol;Acc:MGI:98371]

ENSMUSG00000097312	Gm26870	8.28511667	1.322407	2.647354876	1.21E-11	6.89E-10	up	predicted gene, 26870 [Source: MGI Symbol; ACC:MGI:5477364]
ENSMUSG00000023911	Flywch2	8.23317	1.366677	2.590775698	9.82E-13	6.63E-11	up	FLYWCH family member 2 [Source:MGI Symbol;Acc:MGI:1924167]
ENSMUSG00000022610	Mapk12	22.075716	3.822503	2.529870692	9.83E-40	4.05E-37	up	mitogen-activated protein kinase 12 [Source:MGI Symbol;Acc:MGI:1353438]
ENSMUSG00000036565	Ttyh3	120.7323153	21.22508033	2.507969962	8.96E-107	3.51E-103	up	tweety family member 3 [Source:MGI Symbol;Acc:MGI:1925589]
ENSMUSG00000023411	Nfate4	37.31176367	6.629898333	2.492571903	1.15E-61	1.29E-58	up	nuclear factor of activated T cells, cytoplasmic, calcineurin dependent 4 [Source:MGI Symbol;Acc:MGI:1920431]
ENSMUSG00000051483	Cbr1	34.43288567	6.131562	2.489460543	1.73E-46	1.13E-43	up	carbonyl reductase 1 [Source:MGI Symbol;Acc:MGI:88284]
ENSMUSG00000033227	Wnt6	13.869975	2.471828333	2.48831473	1.07E-45	6.21E-43	up	wingless-type MMTV integration site family, member 6 [Source:MGI Symbol;Acc:MGI:98960]
ENSMUSG00000075014	Gm10800	19.870986	3.644427333	2.446899421	1.52E-12	9.93E-11	up	predicted gene 10800 [Source:MGI Symbol;Acc:MGI:3641657]
ENSMUSG00000074738	Fndc10	12.40600633	2.324619667	2.415972167	3.23E-33	1.01E-30	up	fibronectin type III domain containing 10 [Source:MGI Symbol;Acc:MGI:2444790]
ENSMUSG00000032024	Clmp	12.44799133	2.386173667	2.383142009	1.35E-34	4.49E-32	up	CXADR-like membrane protein [Source:MGI Symbol;Acc:MGI:1918816]
ENSMUSG00000078923	Ube2v1	157.0365683	30.350148	2.371325095	0.008774881	0.03843486	up	ubiquitin-conjugating enzyme E2 variant 1 [Source:MGI Symbol;Acc:MGI:1913839]
ENSMUSG00000036256	Igfbp7	205.3354693	41.247968	2.315587903	2.59E-71	5.08E-68	up	insulin-like growth factor binding protein 7 [Source:MGI Symbol;Acc:MGI:1352480]
ENSMUSG00000003849	Nqo1	214.1784107	43.78333833	2.290359198	2.42E-44	1.23E-41	up	NAD(P)H dehydrogenase, quinone 1 [Source:MGI Symbol;Acc:MGI:103187]
ENSMUSG00000010307	Tmem86a	7.797578333	1.608864667	2.276983165	3.27E-21	5.52E-19	up	transmembrane protein 86A [Source:MGI Symbol;Acc:MGI:1915143]
ENSMUSG00000021469	Msx2	7.941234667	1.646082667	2.270326538	1.73E-25	3.81E-23	up	msh homeobox 2 [Source:MGI Symbol;Acc:MGI:97169]
ENSMUSG000000037161	Mgarp	7.965402667	1.663871333	2.25920342	6.46E-15	5.89E-13	up	mitochondria localized glutamic acid rich protein [Source:MGI Symbol;Acc:MGI:1914999]
ENSMUSG00000053137	Mapk11	13.65592967	2.86622	2.252306278	3.86E-26	8.76E-24	up	mitogen-activated protein kinase 11 [Source:MGI Symbol;Acc:MGI:1338024]
ENSMUSG00000022871	Fetub	7.47345	1.592268	2.230691213	3.44E-17	4.00E-15	up	fetuin beta [Source:MGI Symbol;Acc:MGI:1890221]
ENSMUSG00000046329	Slc25a23	5.3272	1.195258333	2.156054981	1.28E-16	1.39E-14	up	solute carrier family 25 (mitochondrial carrier; phosphate carrier), member 23 [Source:MGI Symbol;Acc:MGI:1914222]
ENSMUSG00000026043	Col3a1	110.3138403	24.78804133	2.153897623	7.01E-27	1.66E-24	up	collagen, type III, alpha 1 [Source:MGI Symbol;Acc:MGI:88453]
ENSMUSG00000031654	Cbln1	12.453142	2.888374333	2.108180156	1.08E-24	2.20E-22	up	cerebellin 1 precursor protein [Source:MGI Symbol;Acc:MGI:88281]
ENSMUSG00000029093	Sorcs2	8.197764	1.930482333	2.086269106	2.27E-21	3.95E-19	up	sortilin-related VPS10 domain containing receptor 2 [Source:MGI Symbol;Acc:MGI:1932289]
ENSMUSG00000045763	Basp1	68.579206	16.15143367	2.086108971	3.29E-60	3.43E-57	up	brain abundant, membrane attached signal protein 1 [Source:MGI Symbol;Acc:MGI:1917600]
ENSMUSG00000002020	Ltbp2	28.84893633	6.819129667	2.080858604	5.40E-46	3.38E-43	up	latent transforming growth factor beta binding protein 2 [Source:MGI Symbol;Acc:MGI:99502]
ENSMUSG00000079547	H2-DMb1	9.625615	2.302110333	2.063921741	2.38E-18	3.11E-16	up	histocompatibility 2, class II, locus Mb1 [Source:MGI Symbol;Acc:MGI:95922]
ENSMUSG000000041577	Prelp	22.92736633	5.633394	2.02499436	1.31E-16	1.41E-14	up	proline arginine-rich end leucine-rich repeat [Source:MGI Symbol;Acc:MGI:2151110]
ENSMUSG00000042485	Mustn1	10.30200633	2.563343667	2.006826514	7.61E-16	7.75E-14	up	musculoskeletal, embryonic nuclear protein 1 [Source:MGI Symbol;Acc:MGI:1913425]
ENSMUSG00000063838	1700027J19Rik	27.79249133	6.920862	2.005671521	1.31E-22	2.38E-20	up	CDC42 effector protein (Rho GTPase binding) 5 [Source:MGI Symbol;Acc:MGI:1929745]
ENSMUSG00000029869	Ephb6	23.15419267	5.827081333	1.990428102	3.70E-45	2.07E-42	up	Eph receptor B6 [Source:MGI Symbol;Acc:MGI:1096338]
ENSMUSG00000062713	Sim2	5.278587	1.335961667	1.982273181	4.46E-15	4.18E-13	up	single-minded family bHLH transcription factor 2 [Source:MGI Symbol;Acc:MGI:98307]

ENSMUSG00000026888	Grb14	12.39601333	3.171246667	1.966754209	8.58E-25	1.77E-22	up	growth factor receptor bound protein 14 [Source:MGI Symbol;Acc:MGI:1355324]
ENSMUSG00000051048	P4ha3	8.090161333	2.129716333	1.925507189	5.54E-14	4.41E-12	up	procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), alpha polypeptide III [Source:MGI Symbol;Acc:MGI:2444049]
ENSMUSG00000056427	Slit3	10.251743	2.800709333	1.872005049	2.85E-25	6.12E-23	up	slit guidance ligand 3 [Source:MGI Symbol;Acc:MGI:1315202]
ENSMUSG00000024663	Rab3il1	28.64123333	7.828505	1.871284889	6.13E-29	1.55E-26	up	RAB3A interacting protein (rabin3)-like 1 [Source:MGI Symbol;Acc:MGI:1922010]
ENSMUSG00000026177	Slc11a1	5.200648333	1.428625	1.864064214	1.08E-16	1.19E-14	up	solute carrier family 11 (proton-coupled divalent metal ion transporters), member 1 [Source:MGI Symbol;Acc:MGI:1345275]
ENSMUSG00000000253	Gmpr	12.969357	3.596656667	1.850378602	5.77E-18	7.23E-16	up	guanosine monophosphate reductase [Source:MGI Symbol;Acc:MGI:1913605]
ENSMUSG00000048416	Mifl	5.417339667	1.503731667	1.849037402	1.03E-07	2.49E-06	up	myeloid leukemia factor 1 [Source:MGI Symbol;Acc:MGI:1341819]
ENSMUSG00000022265	Ank	14.88853867	4.153699667	1.841733347	6.23E-31	1.68E-28	up	progressive ankylosis [Source:MGI Symbol;Acc:MGI:3045421]
ENSMUSG00000105211	AC125167.1	34.27447067	9.617673333	1.833374555	2.63E-05	0.000327519	up	predicted gene, 47302 [Source:MGI Symbol;Acc:MGI:6096169]
ENSMUSG00000073633	Fbxo36	19.414901	5.470054667	1.827537194	9.85E-19	1.35E-16	up	F-box protein 36 [Source:MGI Symbol;Acc:MGI:1289192]
ENSMUSG00000031387	Renbp	8.909353	2.521000667	1.821324167	2.19E-12	1.37E-10	up	renin binding protein [Source:MGI Symbol;Acc:MGI:105940]
ENSMUSG00000025743	Sdc3	81.50659933	23.07763167	1.820421699	6.95E-47	4.74E-44	up	syndecan 3 [Source:MGI Symbol;Acc:MGI:1349163]
ENSMUSG00000030753	Thap12	6.221851667	1.766173667	1.816716791	3.73E-21	6.23E-19	up	THAP domain containing 12 [Source:MGI Symbol;Acc:MGI:1920231]
ENSMUSG00000007888	Crlf1	93.139066	26.53320767	1.811587318	1.46E-51	1.35E-48	up	cytokine receptor-like factor 1 [Source:MGI Symbol;Acc:MGI:1340030]
ENSMUSG00000027533	Fabp5	308.647339	91.15753933	1.759525466	7.33E-32	2.09E-29	up	fatty acid binding protein 5, epidermal [Source:MGI Symbol;Acc:MGI:101790]
ENSMUSG00000031827	Cotl1	47.933141	14.326843	1.742302742	2.79E-31	7.82E-29	up	coactosin-like 1 (Dictyostelium) [Source:MGI Symbol;Acc:MGI:1919292]
ENSMUSG00000017400	Stac2	55.844171	17.06885333	1.710040557	3.37E-42	1.60E-39	up	SH3 and cysteine rich domain 2 [Source:MGI Symbol;Acc:MGI:2144518]
ENSMUSG00000035493	Tgfb1	123.0185823	37.831078	1.701232464	8.67E-24	1.70E-21	up	transforming growth factor, beta induced [Source:MGI Symbol;Acc:MGI:99959]
ENSMUSG00000011148	Adss1	9.510805	2.930614	1.698364498	3.80E-14	3.12E-12	up	adenylosuccinate synthetase like 1 [Source:MGI Symbol;Acc:MGI:87947]
ENSMUSG00000055553	Kxd1	396.5764973	122.835176	1.69087542	0.002828444	0.015882258	up	KxDL motif containing 1 [Source:MGI Symbol;Acc:MGI:1922870]
ENSMUSG00000020601	Trib2	15.49377667	4.840703333	1.678400264	2.85E-23	5.45E-21	up	tribbles pseudokinase 2 [Source:MGI Symbol;Acc:MGI:2145021]
ENSMUSG00000068758	Il3ra	12.76740833	4.040900667	1.659716908	3.72E-14	3.07E-12	up	interleukin 3 receptor, alpha chain [Source:MGI Symbol;Acc:MGI:96553]
ENSMUSG00000017002	Slpi	666.7901813	211.7513987	1.654861361	3.13E-34	1.02E-31	up	secretory leukocyte peptidase inhibitor [Source:MGI Symbol;Acc:MGI:109297]
ENSMUSG00000026473	Glul	25.986215	8.363194	1.63562058	4.91E-31	1.35E-28	up	glutamate-ammonia ligase (glutamine synthetase) [Source:MGI Symbol;Acc:MGI:95739]
ENSMUSG00000019846	Lama4	5.836904667	1.880266333	1.634266476	6.34E-15	5.84E-13	up	laminin, alpha 4 [Source:MGI Symbol;Acc:MGI:109321]
ENSMUSG00000033389	Arhgap44	9.738489667	3.156669667	1.625294747	7.98E-21	1.29E-18	up	Rho GTPase activating protein 44 [Source:MGI Symbol;Acc:MGI:2144423]
ENSMUSG00000040133	Gpr176	14.53914567	4.745164333	1.615412541	6.34E-21	1.03E-18	up	G protein-coupled receptor 176 [Source:MGI Symbol;Acc:MGI:2685858]
ENSMUSG00000031486	Adgra2	34.79504767	11.37901233	1.612506643	0.003426476	0.018390318	up	adhesion G protein-coupled receptor A2 [Source:MGI Symbol;Acc:MGI:1925810]
ENSMUSG00000021483	Cdk20	7.924729	2.598170333	1.608865585	6.55E-09	2.14E-07	up	cyclin-dependent kinase 20 [Source:MGI Symbol;Acc:MGI:2145349]

ENSMUSG00000064346	mt-Tw	117.4201277	39.17310667	1.583744278	9.48E-07	1.78E-05	up	mitochondrially encoded tRNA tryptophan [Source:MGI Symbol;Acc:MGI:102471]
ENSMUSG00000044006	Cilp2	6.740218667	2.25169	1.581787177	4.27E-14	3.49E-12	up	cartilage intermediate layer protein 2 [Source:MGI Symbol;Acc:MGI:1915959]
ENSMUSG00000074064	Mlycd	13.117038	4.386186667	1.580402861	1.54E-21	2.70E-19	up	malonyl-CoA decarboxylase [Source:MGI Symbol;Acc:MGI:1928485]
ENSMUSG00000038375	Trp53inp2	17.648584	5.975431	1.562437755	2.89E-21	4.98E-19	up	transformation related protein 53 inducible nuclear protein 2 [Source:MGI Symbol;Acc:MGI:1915978]
ENSMUSG00000021367	Edn1	7.115876667	2.425485333	1.55276805	2.72E-14	2.28E-12	up	endothelin 1 [Source:MGI Symbol;Acc:MGI:95283]
ENSMUSG00000023809	Rps6ka2	7.023418	2.394676667	1.552342426	7.51E-18	9.27E-16	up	ribosomal protein S6 kinase, polypeptide 2 [Source:MGI Symbol;Acc:MGI:1342290]
ENSMUSG00000047945	Marcks1	119.8241093	41.04414733	1.545669795	4.81E-30	1.28E-27	up	MARCKS-like 1 [Source:MGI Symbol;Acc:MGI:97143]
ENSMUSG00000086013	Gm15706	9.678031	3.387947	1.514302255	6.78E-08	1.73E-06	up	predicted gene 15706 [Source:MGI Symbol;Acc:MGI:3783146]
ENSMUSG0000002948	Map2k7	18.212841	6.406720333	1.507298064	6.42E-15	5.88E-13	up	mitogen-activated protein kinase kinase 7 [Source:MGI Symbol;Acc:MGI:1346871]
ENSMUSG0000006435	Neur1a	5.087136	1.800745	1.498259765	2.72E-12	1.68E-10	up	neuralized E3 ubiquitin protein ligase 1A [Source:MGI Symbol;Acc:MGI:1334263]
ENSMUSG00000022032	Scara5	6.709001333	2.381650333	1.494136414	4.58E-17	5.20E-15	up	scavenger receptor class A, member 5 [Source:MGI Symbol;Acc:MGI:1918395]
ENSMUSG00000027602	Map1lc3a	278.169281	99.247144	1.486865616	1.07E-36	3.72E-34	up	microtubule-associated protein 1 light chain 3 alpha [Source:MGI Symbol;Acc:MGI:1915661]
ENSMUSG00000048644	Ctxn1	134.289004	48.43982933	1.47107549	1.90E-20	2.93E-18	up	cortexin 1 [Source:MGI Symbol;Acc:MGI:88566]
ENSMUSG00000031880	Rrad	19.72060867	7.191878	1.455263628	7.16E-19	1.00E-16	up	Ras-related associated with diabetes [Source:MGI Symbol;Acc:MGI:1930943]
ENSMUSG00000039481	Nrtn	5.463007667	2.004751	1.44627239	4.06E-05	0.00046909	up	neurturin [Source:MGI Symbol;Acc:MGI:108417]
ENSMUSG00000031785	Adgrg1	13.84822	5.084381	1.445556501	8.52E-10	3.48E-08	up	adhesion G protein-coupled receptor G1 [Source:MGI Symbol;Acc:MGI:1340051]
ENSMUSG00000017830	Dhx58	13.467853	4.975373667	1.436643094	1.50E-12	9.86E-11	up	DEXH (Asp-Glu-X-His) box polypeptide 58 [Source:MGI Symbol;Acc:MGI:1931560]
ENSMUSG00000038236	Hoxa7	20.07432567	7.437278333	1.432504856	5.06E-14	4.07E-12	up	homeobox A7 [Source:MGI Symbol;Acc:MGI:96179]
ENSMUSG00000050578	Mmp13	17.533935	6.508117	1.429837712	1.44E-15	1.40E-13	up	matrix metalloproteinase 13 [Source:MGI Symbol;Acc:MGI:1340026]
ENSMUSG00000006519	Cyba	29.00412633	10.834794	1.420586439	1.33E-12	8.76E-11	up	cytochrome b-245, alpha polypeptide [Source:MGI Symbol;Acc:MGI:1316658]
ENSMUSG00000038451	Spsb2	44.6475	17.06389133	1.387632712	1.26E-07	3.00E-06	up	splA/ryanodine receptor domain and SOCS box containing 2 [Source:MGI Symbol;Acc:MGI:1315199]
ENSMUSG00000069662	Marcks	42.74897533	16.39445267	1.382682102	1.93E-26	4.51E-24	up	myristoylated alanine rich protein kinase C substrate [Source:MGI Symbol;Acc:MGI:96907]
ENSMUSG00000004558	Ndrg2	6.810189333	2.629438	1.372940428	6.66E-11	3.30E-09	up	N-myc downstream regulated gene 2 [Source:MGI Symbol;Acc:MGI:1352498]
ENSMUSG00000110409	Gm9908	6.794596333	2.629574	1.369558746	0.004039615	0.020990998	up	predicted gene 9908 [Source:MGI Symbol;Acc:MGI:3708779]
ENSMUSG00000100954	Gm10138	10.079312	3.909542667	1.366325408	0.002448817	0.01415635	up	predicted gene 10138 [Source:MGI Symbol;Acc:MGI:3708522]
ENSMUSG00000061461	Smim20	12.62512833	4.899498	1.365592209	5.80E-07	1.16E-05	up	small integral membrane protein 20 [Source:MGI Symbol;Acc:MGI:1913528]
ENSMUSG00000026544	Dusp23	20.883512	8.186851667	1.35098369	2.92E-16	3.03E-14	up	dual specificity phosphatase 23 [Source:MGI Symbol;Acc:MGI:1915690]
ENSMUSG00000056054	S100a8	18.283277	7.238078	1.336846115	2.85E-07	6.14E-06	up	S100 calcium binding protein A8 (calgranulin A) [Source:MGI Symbol;Acc:MGI:88244]
ENSMUSG00000050530	Fam171a1	5.101842667	2.034603	1.326271092	1.33E-11	7.45E-10	up	family with sequence similarity 171, member A1 [Source:MGI Symbol;Acc:MGI:2442917]
ENSMUSG00000042814	Mets2	17.39615267	6.991666	1.315060103	2.70E-09	9.79E-08	up	malignant T cell amplified sequence 2 [Source:MGI Symbol;Acc:MGI:1913655]

ENSMUSG00000095677	Dynlt1f	80.78938033	32.552014	1.311418859	8.61E-21	1.38E-18	up	dynein light chain Tctex-type 1F [Source:MGI Symbol;Acc:MGI:3780996]
ENSMUSG00000006356	Crip2	27.173961	10.99663567	1.305162665	1.12E-06	2.05E-05	up	cysteine rich protein 2 [Source:MGI Symbol;Acc:MGI:1915587]
ENSMUSG00000025978	Rftn2	5.715010333	2.323500333	1.298456255	6.62E-10	2.74E-08	up	raftlin family member 2 [Source:MGI Symbol;Acc:MGI:1921263]
ENSMUSG00000006517	Mvd	183.6400653	75.34119933	1.285369946	4.26E-19	6.13E-17	up	mevalonate (diphospho) decarboxylase [Source:MGI Symbol;Acc:MGI:2179327]
ENSMUSG00000023046	Igfbp6	477.894419	199.4392397	1.260742632	1.40E-18	1.87E-16	up	insulin-like growth factor binding protein 6 [Source:MGI Symbol;Acc:MGI:96441]
ENSMUSG00000021069	Pygl	5.757812667	2.410487667	1.256195803	2.14E-07	4.76E-06	up	liver glycogen phosphorylase [Source:MGI Symbol;Acc:MGI:97829]
ENSMUSG00000093803	Ppp2r3d	24.162527	10.20174933	1.243954787	0.000311561	0.002637918	up	protein phosphatase 2 (formerly 2A), regulatory subunit B", delta [Source:MGI Symbol;Acc:MGI:1335093]
ENSMUSG00000015337	Endog	33.017967	13.96745867	1.241181742	1.19E-14	1.06E-12	up	endonuclease G [Source:MGI Symbol;Acc:MGI:1261433]
ENSMUSG00000040699	Limd2	47.02406933	19.91420667	1.239601384	8.65E-17	9.61E-15	up	LIM domain containing 2 [Source:MGI Symbol;Acc:MGI:1915053]
ENSMUSG00000041347	Bdkrb1	25.08119967	10.635292	1.237746712	3.01E-12	1.85E-10	up	bradykinin receptor, beta 1 [Source:MGI Symbol;Acc:MGI:88144]
ENSMUSG00000020241	Col6a2	270.9947153	115.0100837	1.236504361	3.05E-23	5.75E-21	up	collagen, type VI, alpha 2 [Source:MGI Symbol;Acc:MGI:88460]
ENSMUSG00000058665	En1	8.227709333	3.491944	1.236460405	1.91E-10	8.78E-09	up	engrailed 1 [Source:MGI Symbol;Acc:MGI:95389]
ENSMUSG00000031722	Hp	164.31249	69.90693933	1.232934572	2.21E-11	1.20E-09	up	haptoglobin [Source:MGI Symbol;Acc:MGI:96211]
ENSMUSG00000097084	Foxl1	6.292959	2.687755	1.227336907	3.44E-09	1.23E-07	up	forkhead box L1 [Source:MGI Symbol;Acc:MGI:1347469]
ENSMUSG00000021265	Slc25a29	5.349758333	2.294223	1.221468092	5.21E-06	7.98E-05	up	solute carrier family 25 (mitochondrial carrier, palmitoylcarnitine transporter), member 29 [Source:MGI Symbol;Acc:MGI:2444911]
ENSMUSG00000044646	Zbtb7c	11.364834	4.907848333	1.21141404	5.32E-19	7.58E-17	up	zinc finger and BTB domain containing 7C [Source:MGI Symbol;Acc:MGI:2443302]
ENSMUSG00000049985	Ankrd55	5.975885667	2.580859333	1.211301035	3.20E-06	5.22E-05	up	ankyrin repeat domain 55 [Source:MGI Symbol;Acc:MGI:1924568]
ENSMUSG00000019929	Dcn	13.25811	5.756037333	1.203727273	2.30E-09	8.47E-08	up	decorin [Source:MGI Symbol;Acc:MGI:94872]
ENSMUSG00000062380	Tubb3	89.933121	39.1087	1.201362956	5.23E-21	8.63E-19	up	tubulin, beta 3 class III [Source:MGI Symbol;Acc:MGI:107813]
ENSMUSG00000051920	Rspo2	19.31985567	8.497614333	1.184954543	7.68E-16	7.76E-14	up	R-spondin 2 [Source:MGI Symbol;Acc:MGI:1922667]
ENSMUSG00000004098	Col5a3	8.284322	3.675647	1.17238541	4.00E-11	2.07E-09	up	collagen, type V, alpha 3 [Source:MGI Symbol;Acc:MGI:1858212]
ENSMUSG00000035273	Hpse	5.126043667	2.275539667	1.171637033	1.22E-06	2.23E-05	up	heparanase [Source:MGI Symbol;Acc:MGI:1343124]
ENSMUSG00000064342	mt-Ti	51.987629	23.29384533	1.158219541	0.003666372	0.019379125	up	mitochondrially encoded tRNA isoleucine [Source:MGI Symbol;Acc:MGI:102484]
ENSMUSG00000110344	Gm45716	5.737275333	2.577946667	1.154143338	9.49E-06	0.000135748	up	predicted gene 45716 [Source:MGI Symbol;Acc:MGI:5804831]
ENSMUSG00000097248	Gm2694	23.920808	10.797563	1.147560388	2.87E-07	6.17E-06	up	predicted gene 2694 [Source:MGI Symbol;Acc:MGI:3780864]
ENSMUSG00000031066	Usp11	13.26406167	6.008642	1.142411747	3.71E-13	2.66E-11	up	ubiquitin specific peptidase 11 [Source:MGI Symbol;Acc:MGI:2384312]
ENSMUSG00000071324	Armc2	9.587352333	4.353670667	1.138900173	3.52E-05	0.000417788	up	armadillo repeat containing 2 [Source:MGI Symbol;Acc:MGI:1916449]
ENSMUSG00000047250	Ptgs1	58.27789567	26.494922	1.137232904	1.70E-15	1.64E-13	up	prostaglandin-endoperoxide synthase 1 [Source:MGI Symbol;Acc:MGI:97797]
ENSMUSG00000037379	Spon2	25.93269133	11.82264267	1.133219388	1.96E-13	1.50E-11	up	spondin 2, extracellular matrix protein [Source:MGI Symbol;Acc:MGI:1923724]
ENSMUSG00000051550	Zfp579	16.00503167	7.364889667	1.119789714	5.70E-11	2.85E-09	up	zinc finger protein 579 [Source:MGI Symbol;Acc:MGI:1915740]

ENSMUSG00000020878	Lrrc46	5.409307667	2.494091667	1.116929466	3.54E-05	0.000419162	up	leucine rich repeat containing 46 [Source:MGI Symbol;Acc:MGI:1916547]
ENSMUSG00000008734	Gprc5b	5.711167333	2.636345	1.115246477	4.75E-10	2.06E-08	up	G protein-coupled receptor, family C, group 5, member B [Source:MGI Symbol;Acc:MGI:1927596]
ENSMUSG00000000782	Tcf7	31.56276567	14.58519333	1.113719116	1.24E-15	1.23E-13	up	transcription factor 7, T cell specific [Source:MGI Symbol;Acc:MGI:98507]
ENSMUSG00000022575	Gsdmd	145.8279723	68.060632	1.099375027	1.80E-20	2.79E-18	up	gasdermin D [Source:MGI Symbol;Acc:MGI:1916396]
ENSMUSG00000024913	Lrp5	10.33580333	4.826808333	1.098509079	1.85E-14	1.59E-12	up	low density lipoprotein receptor-related protein 5 [Source:MGI Symbol;Acc:MGI:1278315]
ENSMUSG00000031930	Wwp2	104.323471	48.78891133	1.096438579	1.52E-22	2.73E-20	up	WW domain containing E3 ubiquitin protein ligase 2 [Source:MGI Symbol;Acc:MGI:1914144]
ENSMUSG00000059895	Ptp4a3	23.701259	11.08862833	1.095882782	1.47E-16	1.56E-14	up	protein tyrosine phosphatase 4a3 [Source:MGI Symbol;Acc:MGI:1277098]
ENSMUSG00000020695	Mre2	44.74411767	20.94684133	1.094965319	9.47E-19	1.31E-16	up	mannose receptor, C type 2 [Source:MGI Symbol;Acc:MGI:107818]
ENSMUSG00000033857	Engase	10.48556533	4.933545	1.087708074	5.78E-08	1.51E-06	up	endo-beta-N-acetylglucosaminidase [Source:MGI Symbol;Acc:MGI:2443788]
ENSMUSG00000052957	Gas1	217.1048127	102.1897683	1.087140952	3.76E-19	5.46E-17	up	growth arrest specific 1 [Source:MGI Symbol;Acc:MGI:95655]
ENSMUSG00000033862	Cdk10	41.49596133	19.560361	1.085037934	1.16E-12	7.71E-11	up	cyclin-dependent kinase 10 [Source:MGI Symbol;Acc:MGI:2448549]
ENSMUSG00000095180	Rhox5	9.330577333	4.399320333	1.084685697	0.000233231	0.002073278	up	reproductive homeobox 5 [Source:MGI Symbol;Acc:MGI:97538]
ENSMUSG00000071547	Nt5dc2	335.8099263	158.44104	1.0836988	2.92E-14	2.43E-12	up	5'-nucleotidase domain containing 2 [Source:MGI Symbol;Acc:MGI:1917271]
ENSMUSG00000069300	Hist1h2bj	24.03386367	11.343274	1.083231489	2.41E-06	4.05E-05	up	histone cluster 1, H2bj [Source:MGI Symbol;Acc:MGI:2448388]
ENSMUSG00000024644	Cndp2	85.52006033	40.45266467	1.080028133	1.72E-18	2.29E-16	up	CNDP dipeptidase 2 (metallopeptidase M20 family) [Source:MGI Symbol;Acc:MGI:1913304]
ENSMUSG00000034520	Gje1	10.55965967	5.002640333	1.0778017	2.79E-07	6.03E-06	up	gap junction protein, gamma 1 [Source:MGI Symbol;Acc:MGI:95718]
ENSMUSG00000055633	Zfp580	63.33933167	30.05615833	1.075441024	4.20E-13	2.96E-11	up	zinc finger protein 580 [Source:MGI Symbol;Acc:MGI:1916242]
ENSMUSG00000022013	Dnajc15	41.83602267	19.876205	1.073703375	1.41E-09	5.41E-08	up	DnaJ heat shock protein family (Hsp40) member C15 [Source:MGI Symbol;Acc:MGI:1913398]
ENSMUSG00000063594	Gng8	7.820665333	3.722157333	1.07115231	0.000645012	0.004788553	up	guanine nucleotide binding protein (G protein), gamma 8 [Source:MGI Symbol;Acc:MGI:109163]
ENSMUSG00000002732	Fkbp7	5.935017667	2.825273667	1.070861705	0.000944564	0.00651263	up	FK506 binding protein 7 [Source:MGI Symbol;Acc:MGI:1336879]
ENSMUSG00000030630	Fah	28.417851	13.548349	1.068680404	4.72E-15	4.38E-13	up	fumarylacetoacetate hydrolase [Source:MGI Symbol;Acc:MGI:95482]
ENSMUSG00000071715	Ncf4	9.078374333	4.328254333	1.068648701	2.91E-06	4.80E-05	up	neutrophil cytosolic factor 4 [Source:MGI Symbol;Acc:MGI:109186]
ENSMUSG00000032661	Oas3	7.253411667	3.466676333	1.065106586	1.07E-05	0.000151575	up	2'-5' oligoadenylate synthetase 3 [Source:MGI Symbol;Acc:MGI:2180850]
ENSMUSG00000045251	Zfp688	8.314679333	3.977509667	1.063795188	0.003911272	0.020432484	up	zinc finger protein 688 [Source:MGI Symbol;Acc:MGI:1916484]
ENSMUSG00000062175	Tgfi2	6.389929	3.073948667	1.055706828	7.30E-05	0.000769266	up	TGFB-induced factor homeobox 2 [Source:MGI Symbol;Acc:MGI:1915299]
ENSMUSG00000097960	A330074K22Rik	5.449243	2.635707	1.047865826	3.39E-06	5.50E-05	up	RIKEN cDNA A330074K22 gene [Source:MGI Symbol;Acc:MGI:3045392]
ENSMUSG00000059920	4930453N24Rik	13.72963733	6.650578667	1.045741737	2.03E-05	0.000264717	up	RIKEN cDNA 4930453N24 gene [Source:MGI Symbol;Acc:MGI:1914859]
ENSMUSG00000031748	Gnao1	35.203316	17.09029667	1.04253389	2.32E-17	2.76E-15	up	guanine nucleotide binding protein, alpha O [Source:MGI Symbol;Acc:MGI:95775]
ENSMUSG00000001552	Jup	19.03851233	9.250062333	1.041385758	2.88E-11	1.52E-09	up	junction plakoglobin [Source:MGI Symbol;Acc:MGI:96650]
ENSMUSG00000024873	Cnih2	30.35276767	14.759334	1.04020045	1.15E-11	6.58E-10	up	cornichon family AMPA receptor auxiliary protein 2 [Source:MGI Symbol;Acc:MGI:1277225]

ENSMUSG00000039347	Atp6v0e2	15.535149	7.555957667	1.039849555	2.65E-07	5.78E-06	up	ATPase, H+ transporting, lysosomal V0 subunit E2 [Source:MGI Symbol;Acc:MGI:1923502]
ENSMUSG00000034936	Arl4d	13.78461267	6.717545	1.037052744	4.46E-08	1.20E-06	up	ADP-ribosylation factor-like 4D [Source:MGI Symbol;Acc:MGI:1933155]
ENSMUSG00000038523	1700003F12Rik	81.74278767	39.99063767	1.031429159	4.74E-07	9.71E-06	up	RIKEN cDNA 1700003F12 gene [Source:MGI Symbol;Acc:MGI:1922730]
ENSMUSG00000053333	Dis3l2	9.262444333	4.536793667	1.02971992	7.99E-09	2.56E-07	up	DIS3 like 3'-5' exoribonuclease 2 [Source:MGI Symbol;Acc:MGI:2442555]
ENSMUSG00000090258	Churc1	71.61619067	35.14735667	1.02686959	2.49E-14	2.11E-12	up	churchill domain containing 1 [Source:MGI Symbol;Acc:MGI:1923684]
ENSMUSG00000037362	Nov	102.8955687	50.559863	1.025116393	2.59E-14	2.18E-12	up	cellular communication network factor 3 [Source:MGI Symbol;Acc:MGI:109185]
ENSMUSG00000030468	Siglecg	5.841731667	2.872931333	1.02387258	1.09E-06	2.01E-05	up	sialic acid binding Ig-like lectin G [Source:MGI Symbol;Acc:MGI:2443630]
ENSMUSG00000055737	Ghr	16.36125433	8.076079	1.018556428	7.58E-06	0.000111975	up	growth hormone receptor [Source:MGI Symbol;Acc:MGI:95708]
ENSMUSG00000056820	Tsnax	20.87407067	10.37584533	1.008483089	8.61E-12	5.00E-10	up	translin-associated factor X [Source:MGI Symbol;Acc:MGI:1855672]
ENSMUSG00000096727	Psmb9	5.656512333	2.819239667	1.004606669	6.32E-05	0.000680128	up	proteasome (prosome, macropain) subunit, beta type 9 (large multifunctional peptidase 2) [Source:MGI Symbol;Acc:MGI:1346526]
ENSMUSG00000024892	Pcx	31.55169067	15.748379	1.002513975	1.19E-17	1.45E-15	up	pyruvate carboxylase [Source:MGI Symbol;Acc:MGI:97520]
ENSMUSG00000029836	Cbx3	24.23353233	48.469706	-1.000078621	5.36E-08	1.42E-06	down	chromobox 3 [Source:MGI Symbol;Acc:MGI:108515]
ENSMUSG00000032050	Rdx	9.289297667	18.59360433	-1.001165033	7.17E-07	1.40E-05	down	radixin [Source:MGI Symbol;Acc:MGI:97887]
ENSMUSG00000023026	Dip2b	3.059875667	6.128758667	-1.002121864	6.29E-08	1.62E-06	down	disco interacting protein 2 homolog B [Source:MGI Symbol;Acc:MGI:2145977]
ENSMUSG00000023830	Igf2r	5.605067667	11.23022633	-1.002583309	7.72E-09	2.50E-07	down	insulin-like growth factor 2 receptor [Source:MGI Symbol;Acc:MGI:96435]
ENSMUSG00000032366	Tpm1	174.8991647	350.5125833	-1.002942839	9.28E-11	4.53E-09	down	tropomyosin 1, alpha [Source:MGI Symbol;Acc:MGI:98809]
ENSMUSG0000005610	Eif4g2	34.36299833	68.881724	-1.003265328	1.24E-07	2.94E-06	down	eukaryotic translation initiation factor 4, gamma 2 [Source:MGI Symbol;Acc:MGI:109207]
ENSMUSG00000022114	Spry2	5.030714333	10.08720767	-1.00369169	4.13E-06	6.55E-05	down	sprouty RTK signaling antagonist 2 [Source:MGI Symbol;Acc:MGI:1345138]
ENSMUSG00000024976	Shoc2	2.953841667	5.925379667	-1.004315101	0.000704521	0.005135469	down	Shoc2, leucine rich repeat scaffold protein [Source:MGI Symbol;Acc:MGI:1927197]
ENSMUSG00000025758	Plk4	2.823620667	5.667264333	-1.005106209	0.000212387	0.001927344	down	polo like kinase 4 [Source:MGI Symbol;Acc:MGI:101783]
ENSMUSG00000055319	Sec23ip	7.712623333	15.51358533	-1.008238585	3.05E-09	1.09E-07	down	Sec23 interacting protein [Source:MGI Symbol;Acc:MGI:2450915]
ENSMUSG00000027782	Kpna4	7.780534667	15.65912733	-1.009062611	2.74E-07	5.96E-06	down	karyopherin (importin) alpha 4 [Source:MGI Symbol;Acc:MGI:1100848]
ENSMUSG00000070372	Capza1	12.32238933	24.821892	-1.010331062	5.57E-07	1.12E-05	down	capping protein (actin filament) muscle Z-line, alpha 1 [Source:MGI Symbol;Acc:MGI:106227]
ENSMUSG00000025762	Larp1b	3.134080333	6.315902333	-1.010946702	0.0019048	0.011579528	down	La ribonucleoprotein domain family, member 1B [Source:MGI Symbol;Acc:MGI:1914604]
ENSMUSG00000016918	Sulf1	4.614108333	9.308887667	-1.012556911	1.52E-07	3.53E-06	down	sulfatase 1 [Source:MGI Symbol;Acc:MGI:2138563]
ENSMUSG00000009207	Lnpk	2.761923667	5.578505333	-1.014205181	0.006868351	0.031836968	down	lunapark, ER junction formation factor [Source:MGI Symbol;Acc:MGI:1918115]
ENSMUSG00000057363	Uxs1	5.980717	12.08601033	-1.014947723	0.001212058	0.007991322	down	UDP-glucuronate decarboxylase 1 [Source:MGI Symbol;Acc:MGI:1915133]
ENSMUSG00000032582	Rbm6	3.970076	8.029023333	-1.016057881	2.61E-05	0.000325484	down	RNA binding motif protein 6 [Source:MGI Symbol;Acc:MGI:1338037]
ENSMUSG00000038949	Cnst	2.744663	5.559690667	-1.018375595	0.000514155	0.003985081	down	consortin, connexin sorting protein [Source:MGI Symbol;Acc:MGI:2445141]
ENSMUSG00000039286	Fndc3b	3.141470667	6.365922333	-1.018929447	7.23E-07	1.41E-05	down	fibronectin type III domain containing 3B [Source:MGI Symbol;Acc:MGI:1919257]

ENSMUSG00000032504	Pcd6ip	20.60602367	41.76492067	-1.019225562	2.92E-07	6.27E-06	down	programmed cell death 6 interacting protein [Source:MGI Symbol;Acc:MGI:1333753]
ENSMUSG00000032096	Arcn1	13.02953067	26.40966167	-1.019280701	1.44E-10	6.75E-09	down	archain 1 [Source:MGI Symbol;Acc:MGI:2387591]
ENSMUSG00000016409	Nkap	2.537179333	5.143825	-1.019616065	5.00E-05	0.000561383	down	NFKB activating protein [Source:MGI Symbol;Acc:MGI:1914300]
ENSMUSG00000028402	Mpdz	3.425776333	6.955825333	-1.021790744	3.93E-05	0.000456811	down	multiple PDZ domain protein [Source:MGI Symbol;Acc:MGI:1343489]
ENSMUSG00000034311	Kif4	7.386943667	15.02100467	-1.023931829	1.08E-08	3.36E-07	down	kinesin family member 4 [Source:MGI Symbol;Acc:MGI:108389]
ENSMUSG00000032402	Smad3	7.469987333	15.19648667	-1.024560118	2.21E-08	6.33E-07	down	SMAD family member 3 [Source:MGI Symbol;Acc:MGI:1201674]
ENSMUSG00000040339	Fam102b	3.17753	6.46444	-1.024619652	5.88E-06	8.93E-05	down	family with sequence similarity 102, member B [Source:MGI Symbol;Acc:MGI:3036259]
ENSMUSG00000025060	Slk	2.782354667	5.673275333	-1.027875555	1.01E-06	1.89E-05	down	STE20-like kinase [Source:MGI Symbol;Acc:MGI:103241]
ENSMUSG00000025234	Arih1	2.967233333	6.066062	-1.031641864	1.18E-06	2.17E-05	down	ariadne RBR E3 ubiquitin protein ligase 1 [Source:MGI Symbol;Acc:MGI:1344363]
ENSMUSG00000070348	Cnd1	54.30911733	111.07195	-1.032228205	5.51E-13	3.84E-11	down	cyclin D1 [Source:MGI Symbol;Acc:MGI:88313]
ENSMUSG00000026393	Nek7	2.751867333	5.629795667	-1.032671641	4.81E-06	7.43E-05	down	NIMA (never in mitosis gene a)-related expressed kinase 7 [Source:MGI Symbol;Acc:MGI:1890645]
ENSMUSG00000068882	Ssb	14.678174	30.06572933	-1.034447451	5.94E-06	8.99E-05	down	Sjogren syndrome antigen B [Source:MGI Symbol;Acc:MGI:98423]
ENSMUSG00000022521	Crebbp	3.567736333	7.319332333	-1.036703053	1.64E-06	2.88E-05	down	CREB binding protein [Source:MGI Symbol;Acc:MGI:1098280]
ENSMUSG00000022533	Atp13a3	2.857924333	5.865151667	-1.037200695	2.21E-07	4.89E-06	down	ATPase type 13A3 [Source:MGI Symbol;Acc:MGI:2685387]
ENSMUSG00000057858	Fam204a	4.233116	8.689815667	-1.037605551	3.98E-05	0.000462228	down	family with sequence similarity 204, member A [Source:MGI Symbol;Acc:MGI:1289174]
ENSMUSG00000024974	Smc3	6.527421333	13.40174567	-1.037835863	5.71E-05	0.000623857	down	structural maintenance of chromosomes 3 [Source:MGI Symbol;Acc:MGI:1339795]
ENSMUSG00000095115	Itpril2	7.329493667	15.054846	-1.038442507	7.97E-08	2.00E-06	down	inositol 1,4,5-triphosphate receptor interacting protein-like 2 [Source:MGI Symbol;Acc:MGI:2442416]
ENSMUSG00000044864	Ankrd50	4.297817333	8.833376	-1.039360756	1.01E-08	3.19E-07	down	ankyrin repeat domain 50 [Source:MGI Symbol;Acc:MGI:2139777]
ENSMUSG00000028675	Pnrc2	8.127212333	16.71050733	-1.039923042	1.40E-06	2.51E-05	down	proline-rich nuclear receptor coactivator 2 [Source:MGI Symbol;Acc:MGI:106512]
ENSMUSG00000032280	Tle3	8.146050667	16.75467133	-1.040390694	7.70E-07	1.49E-05	down	transducin-like enhancer of split 3 [Source:MGI Symbol;Acc:MGI:104634]
ENSMUSG00000035024	Ncapd3	5.032042	10.355772	-1.041219238	6.52E-07	1.29E-05	down	non-SMC condensin II complex, subunit D3 [Source:MGI Symbol;Acc:MGI:2142989]
ENSMUSG00000042323	Pbrn1	4.555689333	9.375918333	-1.041290635	0.000625877	0.004675286	down	polybromo 1 [Source:MGI Symbol;Acc:MGI:1923998]
ENSMUSG00000041625	Ggact	24.25105633	49.94296767	-1.04223396	8.31E-08	2.06E-06	down	gamma-glutamylamine cyclotransferase [Source:MGI Symbol;Acc:MGI:2385008]
ENSMUSG00000028228	Cpne3	2.610606333	5.37714	-1.042454112	6.94E-06	0.000103141	down	copine III [Source:MGI Symbol;Acc:MGI:1917818]
ENSMUSG00000026308	Klhl30	3.132980333	6.454249	-1.042713523	7.08E-05	0.000749093	down	kelch-like 30 [Source:MGI Symbol;Acc:MGI:1918038]
ENSMUSG00000039601	Rean2	10.04500133	20.69703367	-1.042946258	7.76E-08	1.95E-06	down	regulator of calcineurin 2 [Source:MGI Symbol;Acc:MGI:1858219]
ENSMUSG00000001870	Ltbp1	46.14186233	95.13934833	-1.04396591	1.14E-14	1.02E-12	down	latent transforming growth factor beta binding protein 1 [Source:MGI Symbol;Acc:MGI:109151]
ENSMUSG00000082585	Gm15387	5.885794	12.13898733	-1.044339119	0.003088107	0.016981336	down	predicted gene 15387 [Source:MGI Symbol;Acc:MGI:3705374]
ENSMUSG00000022807	Osbp11	3.433973667	7.091645	-1.046241342	1.40E-07	3.29E-06	down	oxysterol binding protein-like 11 [Source:MGI Symbol;Acc:MGI:2146553]
ENSMUSG00000015880	Ncapg	3.900256333	8.056456667	-1.046576518	1.91E-05	0.000250448	down	non-SMC condensin I complex, subunit G [Source:MGI Symbol;Acc:MGI:1930197]

ENSMUSG00000029334	Prkg2	2.515371	5.201596	-1.048183148	6.73E-05	0.000720031	down	protein kinase, cGMP-dependent, type II [Source:MGI Symbol;Acc:MGI:108173]
ENSMUSG00000059005	Hnrnpa3	73.635793	152.4123357	-1.049500564	0.000118921	0.001169951	down	heterogeneous nuclear ribonucleoprotein A3 [Source:MGI Symbol;Acc:MGI:1917171]
ENSMUSG00000029686	Cu1l	8.137838667	16.85262033	-1.050255342	2.25E-06	3.81E-05	down	cullin 1 [Source:MGI Symbol;Acc:MGI:1349658]
ENSMUSG00000028771	Ptpn12	4.786558	9.919827333	-1.051326418	1.46E-07	3.41E-06	down	protein tyrosine phosphatase, non-receptor type 12 [Source:MGI Symbol;Acc:MGI:104673]
ENSMUSG00000026502	Desi2	3.403923667	7.073113667	-1.055146761	1.09E-07	2.64E-06	down	desumoylating isopeptidase 2 [Source:MGI Symbol;Acc:MGI:1926075]
ENSMUSG00000067873	Htatsf1	6.693624667	13.926246	-1.056946851	1.53E-08	4.63E-07	down	HIV TAT specific factor 1 [Source:MGI Symbol;Acc:MGI:1919709]
ENSMUSG00000005803	Sqrdl	79.869362	166.288503	-1.057974331	2.14E-12	1.35E-10	down	sulfide quinone oxidoreductase [Source:MGI Symbol;Acc:MGI:1929899]
ENSMUSG00000069833	Ahnak	29.83337167	62.13831967	-1.058556193	1.02E-08	3.20E-07	down	AHNAK nucleoprotein (desmoyokin) [Source:MGI Symbol;Acc:MGI:1316648]
ENSMUSG00000024073	Birc6	3.180380333	6.626536	-1.059055599	5.00E-08	1.33E-06	down	baculoviral IAP repeat-containing 6 [Source:MGI Symbol;Acc:MGI:1276108]
ENSMUSG00000022973	Synj1	3.012905333	6.278775667	-1.059327924	3.09E-07	6.61E-06	down	synaptojanin 1 [Source:MGI Symbol;Acc:MGI:1354961]
ENSMUSG00000000420	Galnt1	4.974169667	10.370255	-1.059923747	1.97E-05	0.000257446	down	polypeptide N-acetylgalactosaminyltransferase 1 [Source:MGI Symbol;Acc:MGI:894693]
ENSMUSG00000030157	Clec2d	3.440092	7.191808	-1.063907358	0.007361494	0.033498644	down	C-type lectin domain family 2, member d [Source:MGI Symbol;Acc:MGI:2135589]
ENSMUSG00000004535	Tax1bp1	6.248133667	13.07090433	-1.064861737	3.83E-05	0.000446574	down	Tax1 (human T cell leukemia virus type I) binding protein 1 [Source:MGI Symbol;Acc:MGI:1289308]
ENSMUSG00000038740	Mvb12b	11.23079767	23.51149667	-1.065905981	1.29E-13	9.95E-12	down	multivesicular body subunit 12B [Source:MGI Symbol;Acc:MGI:1919793]
ENSMUSG00000023027	Atf1	14.32683333	29.99454767	-1.06598051	2.05E-09	7.59E-08	down	activating transcription factor 1 [Source:MGI Symbol;Acc:MGI:1298366]
ENSMUSG00000029804	Herc3	3.028027	6.355434	-1.069612578	2.99E-08	8.38E-07	down	hect domain and RLD 3 [Source:MGI Symbol;Acc:MGI:1921248]
ENSMUSG00000015357	Clpx	3.392466333	7.120388667	-1.069621494	1.50E-05	0.000202148	down	caseinolytic mitochondrial matrix peptidase chaperone subunit [Source:MGI Symbol;Acc:MGI:1346017]
ENSMUSG00000050931	Sgms2	4.474035	9.394073	-1.070174262	4.19E-09	1.46E-07	down	sphingomyelin synthase 2 [Source:MGI Symbol;Acc:MGI:1921692]
ENSMUSG00000032217	Rnfl11	2.805572	5.895115667	-1.071225183	1.21E-07	2.89E-06	down	ring finger 111 [Source:MGI Symbol;Acc:MGI:1934919]
ENSMUSG00000030315	Vgll4	17.40080533	36.57989833	-1.071896988	3.90E-09	1.37E-07	down	vestigial like family member 4 [Source:MGI Symbol;Acc:MGI:2652840]
ENSMUSG00000032328	Tmem30a	5.560762333	11.6965	-1.072722307	1.20E-09	4.68E-08	down	transmembrane protein 30A [Source:MGI Symbol;Acc:MGI:106402]
ENSMUSG00000059890	Ube4a	3.123916333	6.570947333	-1.072745564	1.78E-06	3.09E-05	down	ubiquitination factor E4A [Source:MGI Symbol;Acc:MGI:2154580]
ENSMUSG00000035783	Acta2	64.87809367	136.468646	-1.072766192	8.68E-13	5.91E-11	down	actin, alpha 2, smooth muscle, aorta [Source:MGI Symbol;Acc:MGI:87909]
ENSMUSG00000036990	Otu4	2.800903	5.894721667	-1.073531673	7.11E-08	1.80E-06	down	OTU domain containing 4 [Source:MGI Symbol;Acc:MGI:1098801]
ENSMUSG00000025921	Rdh10	3.038732667	6.405507333	-1.075843081	5.80E-06	8.81E-05	down	retinol dehydrogenase 10 (all-trans) [Source:MGI Symbol;Acc:MGI:1924238]
ENSMUSG00000021699	Pde4d	2.962001333	6.254254	-1.078265522	8.87E-06	0.000128516	down	phosphodiesterase 4D, cAMP specific [Source:MGI Symbol;Acc:MGI:99555]
ENSMUSG00000029287	Tgfbr3	8.709248333	18.393934	-1.078609954	5.62E-10	2.38E-08	down	transforming growth factor, beta receptor III [Source:MGI Symbol;Acc:MGI:104637]
ENSMUSG00000058587	Tmod3	6.860148333	14.493286	-1.079073052	3.32E-08	9.21E-07	down	tropomodulin 3 [Source:MGI Symbol;Acc:MGI:1355315]
ENSMUSG00000000355	Mets1	13.56267533	28.75383033	-1.084112364	6.85E-06	0.000101988	down	malignant T cell amplified sequence 1 [Source:MGI Symbol;Acc:MGI:1916245]
ENSMUSG00000001864	Aif1l	18.23636767	38.67853667	-1.084714813	1.99E-13	1.52E-11	down	allograft inflammatory factor 1-like [Source:MGI Symbol;Acc:MGI:1919598]

ENSMUSG00000026885	Tlll1	5.887754	12.49366333	-1.08540726	0.001361424	0.008802075	down	tubulin tyrosine ligase-like family, member 11 [Source:MGI Symbol;Acc:MGI:1921660]
ENSMUSG00000026414	Tnnt2	2.653534667	5.630852667	-1.085438006	0.005590663	0.026967337	down	troponin T2, cardiac [Source:MGI Symbol;Acc:MGI:104597]
ENSMUSG00000059456	Ptk2b	12.28295367	26.11952267	-1.088471006	5.18E-10	2.24E-08	down	PTK2 protein tyrosine kinase 2 beta [Source:MGI Symbol;Acc:MGI:104908]
ENSMUSG00000032290	Ptpn9	8.38569	17.83328567	-1.088571132	3.61E-09	1.28E-07	down	protein tyrosine phosphatase, non-receptor type 9 [Source:MGI Symbol;Acc:MGI:1928376]
ENSMUSG00000004936	Map2k1	29.079654	61.995064	-1.09214325	8.13E-11	3.99E-09	down	mitogen-activated protein kinase kinase 1 [Source:MGI Symbol;Acc:MGI:1346866]
ENSMUSG00000032601	Prkar2a	10.914827	23.30364833	-1.094266572	1.84E-07	4.16E-06	down	protein kinase, cAMP dependent regulatory, type II alpha [Source:MGI Symbol;Acc:MGI:108025]
ENSMUSG00000028967	Errfi1	14.97267833	31.97713133	-1.094708205	1.68E-08	5.04E-07	down	ERBB receptor feedback inhibitor 1 [Source:MGI Symbol;Acc:MGI:1921405]
ENSMUSG00000020911	Krt19	37.295171	79.657028	-1.094812812	1.12E-09	4.41E-08	down	keratin 19 [Source:MGI Symbol;Acc:MGI:96693]
ENSMUSG00000029422	Rsrc2	4.173066333	8.914540333	-1.095052556	0.000256185	0.002242983	down	arginine/serine-rich coiled-coil 2 [Source:MGI Symbol;Acc:MGI:1913489]
ENSMUSG00000032911	Cspg4	20.96138067	44.793523	-1.095556392	4.26E-10	1.87E-08	down	chondroitin sulfate proteoglycan 4 [Source:MGI Symbol;Acc:MGI:2153093]
ENSMUSG00000028163	Nfkb1	31.51435833	67.40995533	-1.096952381	4.14E-07	8.56E-06	down	nuclear factor of kappa light polypeptide gene enhancer in B cells 1, p105 [Source:MGI Symbol;Acc:MGI:97312]
ENSMUSG00000045328	Cenpe	2.415639667	5.169055333	-1.097495378	6.41E-05	0.000688441	down	centromere protein E [Source:MGI Symbol;Acc:MGI:1098230]
ENSMUSG00000026749	Nek6	6.580436333	14.086874	-1.098096347	1.50E-05	0.000201891	down	NIMA (never in mitosis gene a)-related expressed kinase 6 [Source:MGI Symbol;Acc:MGI:1891638]
ENSMUSG00000030551	Nr2f2	4.324273	9.280093667	-1.101681761	1.41E-10	6.59E-09	down	nuclear receptor subfamily 2, group F, member 2 [Source:MGI Symbol;Acc:MGI:1352452]
ENSMUSG00000033031	C330027C09Rik	3.816881667	8.192496333	-1.101908662	6.49E-06	9.73E-05	down	cell proliferation regulating inhibitor of protein phosphatase 2A [Source:MGI Symbol;Acc:MGI:2146335]
ENSMUSG00000038095	Sbno1	3.283807	7.058972667	-1.104088897	0.000148675	0.001412145	down	strawberry notch 1 [Source:MGI Symbol;Acc:MGI:2384298]
ENSMUSG00000027309	4930402H24Rik	4.889160333	10.52051867	-1.10554721	5.63E-08	1.48E-06	down	RIKEN cDNA 4930402H24 gene [Source:MGI Symbol;Acc:MGI:1923029]
ENSMUSG00000052299	Ltn1	3.422831333	7.367719	-1.106027837	7.26E-08	1.84E-06	down	listerin E3 ubiquitin protein ligase 1 [Source:MGI Symbol;Acc:MGI:1926163]
ENSMUSG00000026944	Abca2	9.444024333	20.337839	-1.10669273	6.31E-10	2.61E-08	down	ATP-binding cassette, sub-family A (ABC1), member 2 [Source:MGI Symbol;Acc:MGI:99606]
ENSMUSG00000044813	Shb	15.348581	33.060248	-1.106992265	1.71E-08	5.09E-07	down	src homology 2 domain-containing transforming protein B [Source:MGI Symbol;Acc:MGI:98294]
ENSMUSG00000021408	Ripk1	2.917630333	6.284756667	-1.107059783	5.73E-05	0.000625051	down	receptor (TNFRSF)-interacting serine-threonine kinase 1 [Source:MGI Symbol;Acc:MGI:108212]
ENSMUSG00000085666	Gm9855	9.470799	20.40264733	-1.107198312	9.00E-06	0.000129914	down	predicted pseudogene 9855 [Source:MGI Symbol;Acc:MGI:3704357]
ENSMUSG00000035725	Prkx	2.783541333	5.998012	-1.107562902	6.27E-07	1.25E-05	down	protein kinase, X-linked [Source:MGI Symbol;Acc:MGI:1309999]
ENSMUSG00000028970	Abcb1b	3.291535	7.096071667	-1.108260042	6.91E-08	1.76E-06	down	ATP-binding cassette, sub-family B (MDR/TAP), member 1B [Source:MGI Symbol;Acc:MGI:97568]
ENSMUSG00000020954	Strn3	2.43803	5.259077	-1.109093742	0.000403025	0.003260817	down	striatin, calmodulin binding protein 3 [Source:MGI Symbol;Acc:MGI:2151064]
ENSMUSG00000032340	Neo1	11.41763	24.642676	-1.109895714	5.02E-14	4.06E-12	down	neogenin [Source:MGI Symbol;Acc:MGI:1097159]
ENSMUSG00000027340	Slc23a2	6.137302	13.25746533	-1.111128495	1.02E-12	6.81E-11	down	solute carrier family 23 (nucleobase transporters), member 2 [Source:MGI Symbol;Acc:MGI:1859682]
ENSMUSG00000021360	Gent2	2.649697333	5.724407667	-1.111298843	1.79E-05	0.000236716	down	glucosaminyl (N-acetyl) transferase 2, 1-branching enzyme [Source:MGI Symbol;Acc:MGI:1100870]
ENSMUSG00000031596	Slc7a2	4.951697	10.70308033	-1.11203112	0.000361304	0.002981755	down	solute carrier family 7 (cationic amino acid transporter, y+ system), member 2 [Source:MGI Symbol;Acc:MGI:99828]
ENSMUSG000000041219	Arhgap11a	2.489742333	5.384863667	-1.112913376	0.000238591	0.002116132	down	Rho GTPase activating protein 11A [Source:MGI Symbol;Acc:MGI:2444300]

ENSMUSG00000075703	Selenoi	2.559814667	5.544008667	-1.114890151	2.13E-05	0.000274117	down	selenoprotein I [Source:MGI Symbol;Acc:MGI:107898]
ENSMUSG00000015702	Anxa9	4.207433333	9.128140333	-1.117380559	1.26E-06	2.29E-05	down	annexin A9 [Source:MGI Symbol;Acc:MGI:1923711]
ENSMUSG00000033004	Mycbp2	3.050588	6.628443	-1.119582677	0.00029783	0.002540875	down	MYC binding protein 2, E3 ubiquitin protein ligase [Source:MGI Symbol;Acc:MGI:2179432]
ENSMUSG00000036712	Cyld	2.326505667	5.065679667	-1.122591149	2.29E-07	5.04E-06	down	CYLD lysine 63 deubiquitinase [Source:MGI Symbol;Acc:MGI:1921506]
ENSMUSG00000026166	Ccl20	16.74770367	36.48516067	-1.12334651	2.13E-07	4.75E-06	down	chemokine (C-C motif) ligand 20 [Source:MGI Symbol;Acc:MGI:1329031]
ENSMUSG00000049866	Arl4c	14.49633333	31.684805	-1.128103102	1.03E-11	5.91E-10	down	ADP-ribosylation factor-like 4C [Source:MGI Symbol;Acc:MGI:2445172]
ENSMUSG00000038181	Chpf2	9.253414667	20.35145267	-1.137074028	1.20E-07	2.86E-06	down	chondroitin polymerizing factor 2 [Source:MGI Symbol;Acc:MGI:1917522]
ENSMUSG00000032254	Kif23	15.75485967	34.71317933	-1.139686602	1.53E-12	9.95E-11	down	kinesin family member 23 [Source:MGI Symbol;Acc:MGI:1919069]
ENSMUSG00000022822	Abcc5	9.530622333	21.00042533	-1.13977622	7.91E-12	4.62E-10	down	ATP-binding cassette, sub-family C (CFTR/MRP), member 5 [Source:MGI Symbol;Acc:MGI:1351644]
ENSMUSG00000022146	Osmr	4.518620333	9.959672333	-1.140215936	6.20E-08	1.60E-06	down	oncostatin M receptor [Source:MGI Symbol;Acc:MGI:1330819]
ENSMUSG00000012443	Kif11	4.817898	10.636066	-1.142488879	1.26E-05	0.000175011	down	kinesin family member 11 [Source:MGI Symbol;Acc:MGI:1098231]
ENSMUSG00000036591	Arhgap21	2.662982667	5.890491	-1.145344856	2.78E-17	3.28E-15	down	Rho GTPase activating protein 21 [Source:MGI Symbol;Acc:MGI:1918685]
ENSMUSG00000028649	Macf1	2.970286	6.570999333	-1.145510945	2.39E-06	4.03E-05	down	microtubule-actin crosslinking factor 1 [Source:MGI Symbol;Acc:MGI:108559]
ENSMUSG00000036777	Anln	26.82651633	59.36587267	-1.145974095	3.26E-14	2.70E-12	down	anillin, actin binding protein [Source:MGI Symbol;Acc:MGI:1920174]
ENSMUSG00000027962	Vcam1	10.56461833	23.38178233	-1.146144259	2.61E-09	9.50E-08	down	vascular cell adhesion molecule 1 [Source:MGI Symbol;Acc:MGI:98926]
ENSMUSG00000042499	Hoxd11	20.688383	45.843797	-1.147905651	2.44E-11	1.30E-09	down	homeobox D11 [Source:MGI Symbol;Acc:MGI:96203]
ENSMUSG00000032932	Hspa13	4.641241667	10.28915033	-1.148541126	1.12E-07	2.70E-06	down	heat shock protein 70 family, member 13 [Source:MGI Symbol;Acc:MGI:1309463]
ENSMUSG00000030659	Nucb2	4.426216	9.823547333	-1.150170227	1.74E-06	3.03E-05	down	nucleobindin 2 [Source:MGI Symbol;Acc:MGI:1858179]
ENSMUSG00000026875	Traf1	3.12223	6.931041667	-1.150495374	0.000657052	0.004864109	down	TNF receptor-associated factor 1 [Source:MGI Symbol;Acc:MGI:101836]
ENSMUSG00000006423	C330007P06Rik	2.969921333	6.595944333	-1.151154505	6.00E-07	1.20E-05	down	RIKEN cDNA C330007P06 gene [Source:MGI Symbol;Acc:MGI:1924894]
ENSMUSG00000030707	Coro1a	3.619454667	8.048137	-1.152882517	0.008002719	0.035752168	down	coronin, actin binding protein 1A [Source:MGI Symbol;Acc:MGI:1345961]
ENSMUSG00000020048	Hsp90b1	92.34025833	205.907323	-1.156963466	1.35E-09	5.19E-08	down	heat shock protein 90, beta (Grp94), member 1 [Source:MGI Symbol;Acc:MGI:98817]
ENSMUSG00000001173	Ocr1	2.460599	5.488859	-1.157496716	9.12E-07	1.73E-05	down	OCR1, inositol polyphosphate-5-phosphatase [Source:MGI Symbol;Acc:MGI:109589]
ENSMUSG00000052397	Ezr	88.26629633	197.036855	-1.158530937	4.47E-16	4.58E-14	down	ezrin [Source:MGI Symbol;Acc:MGI:98931]
ENSMUSG00000024423	Impact	5.965535333	13.32343167	-1.159242207	4.15E-08	1.13E-06	down	impact, RWD domain protein [Source:MGI Symbol;Acc:MGI:1098233]
ENSMUSG00000032085	Tagln	9.688108333	21.64669733	-1.159860025	6.14E-09	2.02E-07	down	transgelin [Source:MGI Symbol;Acc:MGI:106012]
ENSMUSG00000071552	Tigit	5.528365333	12.45095233	-1.171331231	5.47E-05	0.00060322	down	T cell immunoreceptor with Ig and ITIM domains [Source:MGI Symbol;Acc:MGI:3642260]
ENSMUSG00000049550	Clip1	6.758682667	15.25122267	-1.174110922	4.09E-12	2.48E-10	down	CAP-GLY domain containing linker protein 1 [Source:MGI Symbol;Acc:MGI:1928401]
ENSMUSG00000037072	Selenof	199.7374013	451.272054	-1.175892933	1.21E-09	4.72E-08	down	selenoprotein F [Source:MGI Symbol;Acc:MGI:1927947]
ENSMUSG00000056234	Ncoa4	5.754774	13.016395	-1.17749876	1.15E-07	2.76E-06	down	nuclear receptor coactivator 4 [Source:MGI Symbol;Acc:MGI:1350932]

ENSMUSG00000022710	Usp7	10.91475767	24.76517367	-1.182032639	4.72E-15	4.38E-13	down	ubiquitin specific peptidase 7 [Source:MGI Symbol;Acc:MGI:2182061]
ENSMUSG00000032097	Ddx6	5.153083	11.710458	-1.184289766	3.60E-07	7.57E-06	down	DEAD (Asp-Glu-Ala-Asp) box polypeptide 6 [Source:MGI Symbol;Acc:MGI:104976]
ENSMUSG00000024164	C3	30.22865233	68.75358333	-1.185518245	6.39E-11	3.19E-09	down	complement component 3 [Source:MGI Symbol;Acc:MGI:88227]
ENSMUSG00000019230	Lhx9	4.027474667	9.161447333	-1.18570002	6.43E-12	3.80E-10	down	LIM homeobox protein 9 [Source:MGI Symbol;Acc:MGI:1316721]
ENSMUSG00000053522	Lgals7	5.672624333	12.91653367	-1.187130724	0.001387609	0.008912316	down	lectin, galactose binding, soluble 7 [Source:MGI Symbol;Acc:MGI:1316742]
ENSMUSG00000024614	Tmx3	2.401286667	5.468906	-1.187444622	1.36E-06	2.45E-05	down	thioredoxin-related transmembrane protein 3 [Source:MGI Symbol;Acc:MGI:2442418]
ENSMUSG00000037010	Apln	21.40034033	48.76679633	-1.188265459	3.43E-15	3.27E-13	down	apelin [Source:MGI Symbol;Acc:MGI:1353624]
ENSMUSG00000061273	Mmgt1	2.27032	5.181100333	-1.190362863	4.64E-07	9.51E-06	down	membrane magnesium transporter 1 [Source:MGI Symbol;Acc:MGI:2384305]
ENSMUSG00000050953	Gja1	53.16828433	121.589714	-1.193383369	9.33E-15	8.45E-13	down	gap junction protein, alpha 1 [Source:MGI Symbol;Acc:MGI:95713]
ENSMUSG00000024512	Dynap	2.509803	5.747673333	-1.195394905	0.000274128	0.002373954	down	dynactin associated protein [Source:MGI Symbol;Acc:MGI:1922827]
ENSMUSG00000085787	Gm13092	30.79804933	71.005381	-1.205089383	2.43E-06	4.08E-05	down	predicted gene 13092 [Source:MGI Symbol;Acc:MGI:3649661]
ENSMUSG00000006134	Crkl	4.527313	10.44275167	-1.205774955	4.71E-08	1.26E-06	down	v-crk avian sarcoma virus CT10 oncogene homolog-like [Source:MGI Symbol;Acc:MGI:104686]
ENSMUSG00000025240	Sacm11	2.789481667	6.438422667	-1.20671022	4.61E-07	9.48E-06	down	SAC1 suppressor of actin mutations 1-like (yeast) [Source:MGI Symbol;Acc:MGI:1933169]
ENSMUSG00000027699	Ect2	4.953311333	11.45202433	-1.209137433	2.32E-07	5.09E-06	down	ect2 oncogene [Source:MGI Symbol;Acc:MGI:95281]
ENSMUSG00000031278	AcsL4	2.873490333	6.645666667	-1.209609736	2.42E-06	4.06E-05	down	acyl-CoA synthetase long-chain family member 4 [Source:MGI Symbol;Acc:MGI:1354713]
ENSMUSG00000032376	Usp3	3.734559667	8.66218	-1.213792004	2.07E-05	0.000268229	down	ubiquitin specific peptidase 3 [Source:MGI Symbol;Acc:MGI:2152450]
ENSMUSG00000026718	Stam	3.330197333	7.756327	-1.21976596	8.50E-05	0.000875849	down	signal transducing adaptor molecule (SH3 domain and ITAM motif) 1 [Source:MGI Symbol;Acc:MGI:1329014]
ENSMUSG00000041124	Msantd4	2.598884	6.077478333	-1.225580604	1.84E-06	3.19E-05	down	Myb/SANT-like DNA-binding domain containing 4 with coiled-coils [Source:MGI Symbol;Acc:MGI:1925350]
ENSMUSG00000029657	Hsph1	20.225419	47.33913167	-1.226863653	3.17E-12	1.94E-10	down	heat shock 105kDa/110kDa protein 1 [Source:MGI Symbol;Acc:MGI:105053]
ENSMUSG00000036550	Cnot1	15.36688267	35.97967067	-1.227357452	6.60E-18	8.21E-16	down	CCR4-NOT transcription complex, subunit 1 [Source:MGI Symbol;Acc:MGI:2442402]
ENSMUSG00000040274	Cdk6	3.893002667	9.157615333	-1.234088633	5.35E-10	2.28E-08	down	cyclin-dependent kinase 6 [Source:MGI Symbol;Acc:MGI:1277162]
ENSMUSG00000068798	Rap1a	7.777355667	18.30886	-1.235190343	8.70E-06	0.000126774	down	RAS-related protein 1a [Source:MGI Symbol;Acc:MGI:97852]
ENSMUSG00000021285	Ppp1r13b	3.184011	7.511115	-1.238181767	3.58E-08	9.87E-07	down	protein phosphatase 1, regulatory subunit 13B [Source:MGI Symbol;Acc:MGI:1336199]
ENSMUSG00000078350	Smim1	3.579626333	8.458024	-1.240511657	0.000896552	0.006236469	down	small integral membrane protein 1 [Source:MGI Symbol;Acc:MGI:1916109]
ENSMUSG00000033985	Tesk2	4.606413333	10.88650533	-1.240825135	2.84E-09	1.02E-07	down	testis-specific kinase 2 [Source:MGI Symbol;Acc:MGI:2385204]
ENSMUSG00000031715	Smarca5	5.468655333	12.944783	-1.243112738	2.39E-05	0.000302933	down	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 5 [Source:MGI Symbol;Acc:MGI:1935129]
ENSMUSG00000043336	Filip11	7.786627333	18.47712	-1.246669418	9.21E-10	3.72E-08	down	filamin A interacting protein 1-like [Source:MGI Symbol;Acc:MGI:1925999]
ENSMUSG00000063406	Tmed5	4.076294333	9.691711333	-1.249493208	5.21E-08	1.38E-06	down	transmembrane p24 trafficking protein 5 [Source:MGI Symbol;Acc:MGI:1921586]
ENSMUSG00000049858	Suox	34.34635133	81.67903667	-1.249809004	1.15E-16	1.25E-14	down	sulfite oxidase [Source:MGI Symbol;Acc:MGI:2446117]

ENSMUSG00000027306	Nusap1	5.383249667	12.80654233	-1.25033177	1.33E-10	6.30E-09	down	nucleolar and spindle associated protein 1 [Source:MGI Symbol;Acc:MGI:2675669]
ENSMUSG00000054693	Adam10	4.105676667	9.770231	-1.250772657	1.64E-07	3.78E-06	down	a disintegrin and metallopeptidase domain 10 [Source:MGI Symbol;Acc:MGI:109548]
ENSMUSG00000031538	Plat	10.12336067	24.10108467	-1.251409773	2.04E-12	1.29E-10	down	plasminogen activator, tissue [Source:MGI Symbol;Acc:MGI:97610]
ENSMUSG00000014496	Ankrd28	2.908316	6.927626333	-1.252177083	5.08E-09	1.72E-07	down	ankyrin repeat domain 28 [Source:MGI Symbol;Acc:MGI:2145661]
ENSMUSG00000020248	Nfyb	4.081538667	9.741511333	-1.25503249	1.10E-07	2.67E-06	down	nuclear transcription factor-Y beta [Source:MGI Symbol;Acc:MGI:97317]
ENSMUSG00000022136	Dnajc3	4.532289333	10.852186	-1.259673812	3.84E-08	1.05E-06	down	DnaJ heat shock protein family (Hsp40) member C3 [Source:MGI Symbol;Acc:MGI:107373]
ENSMUSG00000027358	Bmp2	6.908762333	16.550305	-1.260358616	1.40E-12	9.25E-11	down	bone morphogenetic protein 2 [Source:MGI Symbol;Acc:MGI:88177]
ENSMUSG00000022801	Lrch3	3.162571	7.579311333	-1.2609689	3.79E-06	6.08E-05	down	leucine-rich repeats and calponin homology (CH) domain containing 3 [Source:MGI Symbol;Acc:MGI:1917394]
ENSMUSG00000049076	Acap2	3.724094667	8.967245333	-1.267775122	1.55E-09	5.90E-08	down	ArfGAP with coiled-coil, ankyrin repeat and PH domains 2 [Source:MGI Symbol;Acc:MGI:1925868]
ENSMUSG00000034855	Cxcl10	41.87881467	100.955823	-1.269431612	2.70E-18	3.50E-16	down	chemokine (C-X-C motif) ligand 10 [Source:MGI Symbol;Acc:MGI:1352450]
ENSMUSG00000022021	Diaph3	4.381977	10.60203167	-1.274686938	1.87E-05	0.000245484	down	diaphanous related formin 3 [Source:MGI Symbol;Acc:MGI:1927222]
ENSMUSG00000029863	Casp2	3.494311667	8.513507	-1.284745257	7.45E-05	0.000780702	down	caspace 2 [Source:MGI Symbol;Acc:MGI:97295]
ENSMUSG00000024989	Cep55	3.285682333	8.023179333	-1.28798104	0.001626868	0.010141718	down	centrosomal protein 55 [Source:MGI Symbol;Acc:MGI:1921357]
ENSMUSG00000039285	Azi2	3.726930667	9.115008	-1.290255942	0.000184026	0.001704525	down	5-azacytidine induced gene 2 [Source:MGI Symbol;Acc:MGI:1351332]
ENSMUSG00000049670	Morn4	5.309108667	13.04440233	-1.296889269	3.70E-09	1.31E-07	down	MORN repeat containing 4 [Source:MGI Symbol;Acc:MGI:2449568]
ENSMUSG00000042570	Mier2	15.26187233	37.50875233	-1.297295311	9.14E-06	0.000131212	down	MIER family member 2 [Source:MGI Symbol;Acc:MGI:1917677]
ENSMUSG00000040549	Ckap5	6.384289333	15.69191533	-1.297423516	2.67E-11	1.41E-09	down	cytoskeleton associated protein 5 [Source:MGI Symbol;Acc:MGI:1923036]
ENSMUSG00000095362	Gm14325	2.553486	6.279526	-1.298187514	0.011495908	0.047341854	down	predicted gene 14325 [Source:MGI Symbol;Acc:MGI:3702875]
ENSMUSG00000031246	Sh3bgr1	3.850333	9.488327	-1.301170507	5.34E-10	2.28E-08	down	SH3-binding domain glutamic acid-rich protein like [Source:MGI Symbol;Acc:MGI:1930849]
ENSMUSG00000021796	Bmpr1a	2.810005333	6.936050667	-1.303541569	4.50E-06	7.01E-05	down	bone morphogenetic protein receptor, type 1A [Source:MGI Symbol;Acc:MGI:1338938]
ENSMUSG00000022770	Dlg1	3.950797667	9.764737667	-1.305437323	2.20E-05	0.000282195	down	discs large MAGUK scaffold protein 1 [Source:MGI Symbol;Acc:MGI:107231]
ENSMUSG00000037643	Prkci	4.247334333	10.51999767	-1.308504803	1.94E-11	1.05E-09	down	protein kinase C, iota [Source:MGI Symbol;Acc:MGI:99260]
ENSMUSG00000092686	Gm25745	25.86694133	64.14554333	-1.310239563	0.000423049	0.003403501	down	predicted gene, 25745 [Source:MGI Symbol;Acc:MGI:5455522]
ENSMUSG00000024085	Man2a1	2.213681667	5.512152667	-1.316168072	8.31E-11	4.07E-09	down	mannosidase 2, alpha 1 [Source:MGI Symbol;Acc:MGI:104669]
ENSMUSG00000020170	Frs2	3.939105	9.821686333	-1.318102876	1.80E-15	1.74E-13	down	fibroblast growth factor receptor substrate 2 [Source:MGI Symbol;Acc:MGI:1100860]
ENSMUSG00000035247	Hectd1	2.055395667	5.158825	-1.327626366	6.07E-10	2.53E-08	down	HECT domain E3 ubiquitin protein ligase 1 [Source:MGI Symbol;Acc:MGI:2384768]
ENSMUSG00000027287	Snap23	2.549930333	6.403637667	-1.328433847	4.85E-06	7.48E-05	down	synaptosomal-associated protein 23 [Source:MGI Symbol;Acc:MGI:109356]
ENSMUSG00000063873	Slc24a3	3.997940667	10.04789133	-1.329563801	6.99E-13	4.81E-11	down	solute carrier family 24 (sodium/potassium/calcium exchanger), member 3 [Source:MGI Symbol;Acc:MGI:2137513]
ENSMUSG00000033542	Arhgef5	7.324835333	18.466598	-1.334049879	4.56E-17	5.20E-15	down	Rho guanine nucleotide exchange factor (GEF) 5 [Source:MGI Symbol;Acc:MGI:1858952]
ENSMUSG00000022546	Gpt	31.33982967	79.11193333	-1.33589799	4.88E-17	5.50E-15	down	glutamic pyruvic transaminase, soluble [Source:MGI Symbol;Acc:MGI:95802]

ENSMUSG00000037697	Ddhd1	2.528707333	6.387987667	-1.336961455	4.93E-05	0.000554193	down	DDHD domain containing 1 [Source:MGI Symbol;Acc:MGI:2150302]
ENSMUSG00000022912	Pros1	15.211077	38.51128133	-1.34015882	2.45E-10	1.10E-08	down	protein S (alpha) [Source:MGI Symbol;Acc:MGI:1095733]
ENSMUSG00000031125	3830403N18Rik	3.50861	8.897129	-1.342440277	3.79E-05	0.000444283	down	RIKEN cDNA 3830403N18 gene [Source:MGI Symbol;Acc:MGI:1917941]
ENSMUSG00000039911	Spsb1	2.237681333	5.679148333	-1.343669996	1.78E-07	4.04E-06	down	splA/ryanodine receptor domain and SOCS box containing 1 [Source:MGI Symbol;Acc:MGI:1921896]
ENSMUSG00000019861	Gopc	4.120950667	10.52425467	-1.352668967	8.60E-10	3.50E-08	down	golgi associated PDZ and coiled-coil motif containing [Source:MGI Symbol;Acc:MGI:2149946]
ENSMUSG00000020064	Herc4	2.894166	7.406319	-1.355609017	7.07E-05	0.000748509	down	hect domain and RLD 4 [Source:MGI Symbol;Acc:MGI:1914595]
ENSMUSG00000056758	Hmga2	29.226406	75.01419567	-1.359891206	3.53E-16	3.64E-14	down	high mobility group AT-hook 2 [Source:MGI Symbol;Acc:MGI:101761]
ENSMUSG00000038446	Cdc40	2.558844333	6.569558667	-1.360304072	1.95E-09	7.28E-08	down	cell division cycle 40 [Source:MGI Symbol;Acc:MGI:1918963]
ENSMUSG00000029377	Ereg	4.157366667	10.67674933	-1.360730568	1.96E-09	7.30E-08	down	epiregulin [Source:MGI Symbol;Acc:MGI:107508]
ENSMUSG00000063767	S100a7a	4.453687667	11.48241467	-1.36635377	0.000232798	0.002070604	down	S100 calcium binding protein A7A [Source:MGI Symbol;Acc:MGI:2687194]
ENSMUSG00000028995	Fam126a	2.042164333	5.279119667	-1.370198404	1.91E-08	5.55E-07	down	family with sequence similarity 126, member A [Source:MGI Symbol;Acc:MGI:2149839]
ENSMUSG00000031004	Mki67	4.972138667	12.876563	-1.372809125	0.006250458	0.029523676	down	antigen identified by monoclonal antibody Ki 67 [Source:MGI Symbol;Acc:MGI:106035]
ENSMUSG00000051236	Msrb3	3.795598667	9.888429	-1.38141388	1.77E-09	6.66E-08	down	methionine sulfoxide reductase B3 [Source:MGI Symbol;Acc:MGI:2443538]
ENSMUSG0000005802	Slc30a4	5.089785	13.27172833	-1.382679639	1.81E-09	6.76E-08	down	solute carrier family 30 (zinc transporter), member 4 [Source:MGI Symbol;Acc:MGI:1345282]
ENSMUSG00000021466	Ptch1	2.195217333	5.726518667	-1.383294567	9.85E-08	2.40E-06	down	patched 1 [Source:MGI Symbol;Acc:MGI:105373]
ENSMUSG00000019832	Rab32	15.749282	41.14401133	-1.385396398	9.52E-17	1.05E-14	down	RAB32, member RAS oncogene family [Source:MGI Symbol;Acc:MGI:1915094]
ENSMUSG00000022003	Slc25a30	3.006520667	7.872758333	-1.388774318	1.21E-05	0.000168308	down	solute carrier family 25, member 30 [Source:MGI Symbol;Acc:MGI:1914804]
ENSMUSG00000024778	Fas	4.060849333	10.63690167	-1.389224575	1.05E-06	1.95E-05	down	Fas (TNF receptor superfamily member 6) [Source:MGI Symbol;Acc:MGI:95484]
ENSMUSG00000023087	Noct	6.134502	16.21116833	-1.401969934	2.00E-07	4.48E-06	down	nocturnin [Source:MGI Symbol;Acc:MGI:109382]
ENSMUSG00000010080	Epn3	15.82882733	41.856972	-1.40291357	2.64E-13	1.98E-11	down	epsin 3 [Source:MGI Symbol;Acc:MGI:1919139]
ENSMUSG00000022911	Arl13b	3.171428	8.450779	-1.413951747	5.19E-12	3.11E-10	down	ADP-ribosylation factor-like 13B [Source:MGI Symbol;Acc:MGI:1915396]
ENSMUSG00000063952	Brpf3	2.541766667	6.798706667	-1.419428728	3.79E-05	0.000444283	down	bromodomain and PHD finger containing, 3 [Source:MGI Symbol;Acc:MGI:2146836]
ENSMUSG00000046056	Sbsn	18.34331633	49.373812	-1.428491545	3.45E-15	3.27E-13	down	suprabasin [Source:MGI Symbol;Acc:MGI:2446326]
ENSMUSG00000022139	Mbnl2	3.113996	8.431394333	-1.437004144	1.27E-09	4.94E-08	down	muscleblind like splicing factor 2 [Source:MGI Symbol;Acc:MGI:2145597]
ENSMUSG00000031098	Syt8	10.175537	27.584789	-1.438768012	5.79E-10	2.44E-08	down	synaptotagmin VIII [Source:MGI Symbol;Acc:MGI:1859867]
ENSMUSG00000038816	Cttna1	2.495255333	6.795091	-1.445305421	1.30E-11	7.38E-10	down	catenin (cadherin associated protein), alpha-like 1 [Source:MGI Symbol;Acc:MGI:1859649]
ENSMUSG00000033581	Igf2bp2	14.53981333	39.61113433	-1.445897268	2.80E-10	1.25E-08	down	insulin-like growth factor 2 mRNA binding protein 2 [Source:MGI Symbol;Acc:MGI:1890358]
ENSMUSG00000018263	Tbx5	4.300427333	11.74636133	-1.44966199	1.95E-12	1.24E-10	down	T-box 5 [Source:MGI Symbol;Acc:MGI:102541]
ENSMUSG00000030116	Mfap5	5.041614	13.84859167	-1.457781698	6.78E-07	1.34E-05	down	microfibrillar associated protein 5 [Source:MGI Symbol;Acc:MGI:1354387]
ENSMUSG00000032902	Slc16a1	15.65417733	43.01282867	-1.458219318	5.57E-19	7.86E-17	down	solute carrier family 16 (monocarboxylic acid transporters), member 1 [Source:MGI Symbol;Acc:MGI:106013]

ENSMUSG00000031095	Cul4b	2.909232667	8.051318667	-1.46858641	5.10E-11	2.57E-09	down	cullin 4B [Source:MGI Symbol;Acc:MGI:1919834]
ENSMUSG00000028073	Pear1	3.361238667	9.340703	-1.474538148	9.99E-09	3.16E-07	down	platelet endothelial aggregation receptor 1 [Source:MGI Symbol;Acc:MGI:1920432]
ENSMUSG00000095304	Plac9a	8.62248	23.993442	-1.476465353	5.63E-10	2.38E-08	down	placenta specific 9a [Source:MGI Symbol;Acc:MGI:2663998]
ENSMUSG0000005968	Tuft1	5.953989667	16.63379767	-1.482188965	2.04E-12	1.29E-10	down	tuftelin 1 [Source:MGI Symbol;Acc:MGI:109572]
ENSMUSG00000030717	Nupr1	40.581584	113.6108807	-1.485203927	4.35E-09	1.51E-07	down	nuclear protein transcription regulator 1 [Source:MGI Symbol;Acc:MGI:1891834]
ENSMUSG00000029372	Ppbb	87.37073267	245.944575	-1.493111239	1.86E-10	8.59E-09	down	pro-platelet basic protein [Source:MGI Symbol;Acc:MGI:1888712]
ENSMUSG00000057969	Sema3b	2.035932667	5.781453667	-1.505742435	4.84E-11	2.45E-09	down	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3B [Source:MGI Symbol;Acc:MGI:107561]
ENSMUSG00000106795	Gm43050	6.704304667	19.091287	-1.509754746	2.00E-07	4.48E-06	down	predicted gene 43050 [Source:MGI Symbol;Acc:MGI:5663187]
ENSMUSG00000032232	Cgnl1	3.095267	8.816544667	-1.51014949	2.23E-20	3.39E-18	down	cingulin-like 1 [Source:MGI Symbol;Acc:MGI:1915428]
ENSMUSG00000020312	Shc2	7.230925333	20.66767133	-1.515123663	1.73E-16	1.84E-14	down	SHC (Src homology 2 domain containing) transforming protein 2 [Source:MGI Symbol;Acc:MGI:106180]
ENSMUSG00000032086	Bace1	3.764910667	10.82934667	-1.52425867	1.29E-15	1.27E-13	down	beta-site APP cleaving enzyme 1 [Source:MGI Symbol;Acc:MGI:1346542]
ENSMUSG00000031119	Gpc4	2.554802	7.352536	-1.525030458	1.61E-07	3.71E-06	down	glypican 4 [Source:MGI Symbol;Acc:MGI:104902]
ENSMUSG00000009614	Sardh	10.78797033	31.19081	-1.53169756	5.16E-13	3.61E-11	down	sarcosine dehydrogenase [Source:MGI Symbol;Acc:MGI:2183102]
ENSMUSG00000094800	Gm9780	6.578054333	19.10349067	-1.538103448	1.65E-11	9.17E-10	down	predicted gene 9780 [Source:MGI Symbol;Acc:MGI:3710532]
ENSMUSG00000023963	Cyp39a1	3.012012	8.816745333	-1.549518671	2.24E-13	1.70E-11	down	cytochrome P450, family 39, subfamily a, polypeptide 1 [Source:MGI Symbol;Acc:MGI:1927096]
ENSMUSG00000028337	Coro2a	1.873315333	5.525499667	-1.560511165	1.78E-08	5.22E-07	down	coronin, actin binding protein 2A [Source:MGI Symbol;Acc:MGI:1345966]
ENSMUSG00000023092	Fhl1	10.64605567	31.57729267	-1.56856847	1.18E-10	5.66E-09	down	four and a half LIM domains 1 [Source:MGI Symbol;Acc:MGI:1298387]
ENSMUSG00000020334	Slc22a4	2.182596667	6.538289667	-1.582867743	8.31E-08	2.06E-06	down	solute carrier family 22 (organic cation transporter), member 4 [Source:MGI Symbol;Acc:MGI:1353479]
ENSMUSG00000072674	Plac9b	9.828826333	29.47613867	-1.584456487	2.04E-12	1.29E-10	down	placenta specific 9b [Source:MGI Symbol;Acc:MGI:3711222]
ENSMUSG00000037254	Itih2	2.040668	6.126502333	-1.586022177	8.15E-10	3.33E-08	down	inter-alpha trypsin inhibitor, heavy chain 2 [Source:MGI Symbol;Acc:MGI:96619]
ENSMUSG00000050370	Ch25h	3.271623	9.952646333	-1.605073667	1.72E-08	5.10E-07	down	cholesterol 25-hydroxylase [Source:MGI Symbol;Acc:MGI:1333869]
ENSMUSG00000030849	Fgfr2	4.862876333	14.849589	-1.610541193	5.90E-23	1.10E-20	down	fibroblast growth factor receptor 2 [Source:MGI Symbol;Acc:MGI:95523]
ENSMUSG00000057719	Sh3rf2	4.073637667	12.514299	-1.61918791	1.65E-10	7.65E-09	down	SH3 domain containing ring finger 2 [Source:MGI Symbol;Acc:MGI:2444628]
ENSMUSG00000030760	Acer3	3.124105667	9.625158667	-1.623367073	0.000208192	0.001895862	down	alkaline ceramidase 3 [Source:MGI Symbol;Acc:MGI:1913440]
ENSMUSG00000037447	Arid5a	5.096591	15.86479433	-1.638224332	8.76E-06	0.000127514	down	AT rich interactive domain 5A (MRF1-like) [Source:MGI Symbol;Acc:MGI:2443039]
ENSMUSG00000004266	Ptpn6	3.612240333	11.267274	-1.641172725	1.39E-14	1.22E-12	down	protein tyrosine phosphatase, non-receptor type 6 [Source:MGI Symbol;Acc:MGI:96055]
ENSMUSG00000034656	Caena1a	4.761846667	15.089408	-1.663943135	2.27E-33	7.27E-31	down	calcium channel, voltage-dependent, P/Q type, alpha 1A subunit [Source:MGI Symbol;Acc:MGI:109482]
ENSMUSG00000027162	Lin7c	2.484481667	7.896534333	-1.66827472	2.65E-13	1.98E-11	down	lin-7 homolog C (C. elegans) [Source:MGI Symbol;Acc:MGI:1330839]
ENSMUSG00000032313	Tmem266	1.946644667	6.283904667	-1.69067173	1.14E-11	6.54E-10	down	transmembrane protein 266 [Source:MGI Symbol;Acc:MGI:2142980]
ENSMUSG00000036943	Rab8b	2.700098667	8.744835333	-1.695419091	1.90E-16	1.98E-14	down	RAB8B, member RAS oncogene family [Source:MGI Symbol;Acc:MGI:2442982]

ENSMUSG00000002107	Celf2	2.088720667	6.765162	-1.695504914	1.35E-09	5.19E-08	down	CUGBP, Elav-like family member 2 [Source:MGI Symbol;Acc:MGI:1338822]
ENSMUSG000000078202	Nrarp	2.617495667	8.578042	-1.712461231	5.74E-14	4.52E-12	down	Notch-regulated ankyrin repeat protein [Source:MGI Symbol;Acc:MGI:1914372]
ENSMUSG000000020467	Efemp1	6.475843333	21.268201	-1.715558017	4.01E-20	6.04E-18	down	epidermal growth factor-containing fibulin-like extracellular matrix protein 1 [Source:MGI Symbol;Acc:MGI:1339998]
ENSMUSG000000026131	Dst	2.193422667	7.240614	-1.7229282	1.04E-06	1.94E-05	down	dystonin [Source:MGI Symbol;Acc:MGI:104627]
ENSMUSG00000019866	Aim1	4.193531667	13.891706	-1.727986128	1.12E-22	2.07E-20	down	crystallin beta-gamma domain containing 1 [Source:MGI Symbol;Acc:MGI:109544]
ENSMUSG000000078429	Ctdsp2	38.12357833	129.215693	-1.761025849	0.008348351	0.037000948	down	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) small phosphatase 2 [Source:MGI Symbol;Acc:MGI:1098748]
ENSMUSG000000038301	Snx10	1.697869333	5.777878333	-1.76681439	5.05E-09	1.71E-07	down	sorting nexin 10 [Source:MGI Symbol;Acc:MGI:1919232]
ENSMUSG000000022598	Psea	4.223866	14.43340867	-1.772776082	6.11E-10	2.54E-08	down	prostate stem cell antigen [Source:MGI Symbol;Acc:MGI:1919623]
ENSMUSG000000063011	Msln	44.737292	154.1856077	-1.785118268	1.69E-37	6.17E-35	down	mesothelin [Source:MGI Symbol;Acc:MGI:1888992]
ENSMUSG000000041351	Rap1gap	1.794464667	6.238170333	-1.79756943	3.59E-06	5.80E-05	down	Rap1 GTPase-activating protein [Source:MGI Symbol;Acc:MGI:109338]
ENSMUSG000000027111	Itga6	1.601452	5.599344	-1.805877259	1.23E-10	5.85E-09	down	integrin alpha 6 [Source:MGI Symbol;Acc:MGI:96605]
ENSMUSG000000052485	Tmem171	2.23297	7.814072333	-1.807110742	4.36E-09	1.51E-07	down	transmembrane protein 171 [Source:MGI Symbol;Acc:MGI:2685751]
ENSMUSG000000031673	Cdh11	1.674723667	5.929943667	-1.824095332	3.19E-21	5.44E-19	down	cadherin 11 [Source:MGI Symbol;Acc:MGI:99217]
ENSMUSG000000057315	Arhgap24	4.143917	14.914295	-1.847628771	1.02E-20	1.61E-18	down	Rho GTPase activating protein 24 [Source:MGI Symbol;Acc:MGI:1922647]
ENSMUSG000000025407	Gli1	2.268811667	8.182043667	-1.85052438	1.20E-15	1.21E-13	down	GLI-Kruppel family member GLI1 [Source:MGI Symbol;Acc:MGI:95727]
ENSMUSG000000050368	Hoxd10	1.523004333	5.754278667	-1.917715043	5.12E-09	1.73E-07	down	homeobox D10 [Source:MGI Symbol;Acc:MGI:96202]
ENSMUSG000000042367	Gjb3	30.55394367	116.303093	-1.928458956	4.72E-26	1.06E-23	down	gap junction protein, beta 3 [Source:MGI Symbol;Acc:MGI:95721]
ENSMUSG000000027684	Mecom	2.237182333	8.693591667	-1.958269492	3.10E-19	4.54E-17	down	MDS1 and EVI1 complex locus [Source:MGI Symbol;Acc:MGI:95457]
ENSMUSG000000035847	Ids	4.691520667	18.345005	-1.967259772	2.64E-32	7.82E-30	down	iduronate 2-sulfatase [Source:MGI Symbol;Acc:MGI:96417]
ENSMUSG000000025473	Adam8	8.226755333	33.40830667	-2.021811417	1.74E-37	6.19E-35	down	a disintegrin and metallopeptidase domain 8 [Source:MGI Symbol;Acc:MGI:107825]
ENSMUSG000000058420	Syt17	1.363198667	5.638685667	-2.048363091	5.71E-14	4.52E-12	down	synaptotagmin XVII [Source:MGI Symbol;Acc:MGI:104966]
ENSMUSG000000056870	Gulp1	1.232578	5.270154667	-2.096166356	1.45E-09	5.55E-08	down	GULP, engulfment adaptor PTB domain containing 1 [Source:MGI Symbol;Acc:MGI:1920407]
ENSMUSG000000001819	Hoxd13	15.77083167	69.723545	-2.144387181	1.78E-44	9.62E-42	down	homeobox D13 [Source:MGI Symbol;Acc:MGI:96205]
ENSMUSG000000042357	Gjb5	1.138676	5.201166333	-2.191477877	7.90E-09	2.54E-07	down	gap junction protein, beta 5 [Source:MGI Symbol;Acc:MGI:95723]
ENSMUSG000000032036	Kirrel3	1.50192	6.893572333	-2.198443829	1.75E-18	2.30E-16	down	kirre like nephrin family adhesion molecule 3 [Source:MGI Symbol;Acc:MGI:1914953]
ENSMUSG000000045954	Sdpr	4.059399667	20.35699967	-2.326186652	3.18E-26	7.32E-24	down	caveolae associated 2 [Source:MGI Symbol;Acc:MGI:99513]
ENSMUSG000000022464	Slc38a4	2.318215333	11.69445	-2.334737526	1.81E-27	4.38E-25	down	solute carrier family 38, member 4 [Source:MGI Symbol;Acc:MGI:1916604]
ENSMUSG000000044037	Als2cl	2.619264	14.16704367	-2.435305349	2.42E-44	1.23E-41	down	ALS2 C-terminal like [Source:MGI Symbol;Acc:MGI:2447532]
ENSMUSG000000029304	Spp1	25.24436633	141.44871	-2.48624565	1.17E-48	8.70E-46	down	secreted phosphoprotein 1 [Source:MGI Symbol;Acc:MGI:98389]
ENSMUSG000000023019	Gpd1	1.384984	8.090656333	-2.546387433	7.28E-30	1.90E-27	down	glycerol-3-phosphate dehydrogenase 1 (soluble) [Source:MGI Symbol;Acc:MGI:95679]

ENSMUSG00000110537	Gm4316	3.618143667	23.78678333	-2.716838591	7.28E-28	1.78E-25	down	predicted gene 4316 [Source:MGI Symbol;Acc:MGI:3782497]
ENSMUSG00000055805	Fmnl1	1.546641333	10.21169267	-2.723011445	7.88E-33	2.37E-30	down	formin-like 1 [Source:MGI Symbol;Acc:MGI:1888994]
ENSMUSG00000028545	Bend5	0.987886	7.006658	-2.826310006	2.33E-14	1.99E-12	down	BEN domain containing 5 [Source:MGI Symbol;Acc:MGI:1914871]
ENSMUSG00000063651	Cnfn	1.994726333	14.63205633	-2.8748698	1.68E-11	9.31E-10	down	cornifelin [Source:MGI Symbol;Acc:MGI:1919633]
ENSMUSG00000030693	Klk10	3.073782333	23.70496767	-2.947102514	2.87E-32	8.34E-30	down	kallikrein related-peptidase 10 [Source:MGI Symbol;Acc:MGI:1916790]
ENSMUSG00000049404	Rarres1	0.922242667	7.365505333	-2.997566192	5.95E-13	4.12E-11	down	retinoic acid receptor responder (tazarotene induced) 1 [Source:MGI Symbol;Acc:MGI:1924461]
ENSMUSG00000113949	Scamp4	11.11290233	95.784621	-3.107558387	0.000816328	0.005768034	down	secretory carrier membrane protein 4 [Source:MGI Symbol;Acc:MGI:1928947]
ENSMUSG00000051669	AU021092	1.717935	16.61772033	-3.273975126	1.67E-29	4.29E-27	down	expressed sequence AU021092 [Source:MGI Symbol;Acc:MGI:2146559]
ENSMUSG00000081375	Gm14686	0.255788	5.757121333	-4.492327129	6.81E-05	0.000725617	down	predicted gene 14686 [Source:MGI Symbol;Acc:MGI:3712656]
ENSMUSG00000019139	Isyna1	0.820866	19.644575	-4.580840414	1.19E-67	2.07E-64	down	myo-inositol 1-phosphate synthase A1 [Source:MGI Symbol;Acc:MGI:1919030]
ENSMUSG00000028989	Angptl7	1.515355667	40.32624133	-4.733990592	2.94E-107	1.54E-103	down	angiopoietin-like 7 [Source:MGI Symbol;Acc:MGI:3605801]
ENSMUSG00000103081	Pcdhgb8	0.287187667	9.295489667	-5.016465166	0.001886659	0.011482609	down	protocadherin gamma subfamily B, 8 [Source:MGI Symbol;Acc:MGI:1935200]
ENSMUSG00000074846	Gm10774	0.104929333	9.254638	-6.46268661	2.83E-05	0.000349314	down	predicted pseudogene 10774 [Source:MGI Symbol;Acc:MGI:3642325]
ENSMUSG00000065388	Gm23099	0.0001	6.549475	-15.99909165	9.83E-06	0.000140124	down	predicted gene, 23099 [Source:MGI Symbol;Acc:MGI:5452876]
ENSMUSG00000110104	Gm45717	0.0001	518.3187257	-22.30540809	9.03E-13	6.13E-11	down	predicted gene 45717 [Source:MGI Symbol;Acc:MGI:5804832]

DEGseq was performed for determining differential expression genes, and threshold with q-Value < 0.05 and absolute values of |log₂(fold change)| > 1. The details of DEGs are listed, including some parameters, such as: ensembl Gene ID, Gene Symbol, MeanTPM (mean transcripts per million) (NF639R), MeanTPM (NF639), log₂FoldChange, P value, q-value, Result (up or down), Gene Description, etc.