

Supplemental Table S3. Differentially expressed genes that show significant strain x treatment interaction (*adj. p* < 0.05) and fold change > 1.5.

Accession	Gene Symbol	Gene Name	Adj <i>p</i> -value	Fold Change
NR_015488	<i>A930003A15Rik</i>	RIKEN cDNA A930003A15 gene	4.29E-26	1.9
NR_033609	<i>A930017M01Rik</i>	RIKEN cDNA A930017M01 gene	4.49E-23	1.6
NM_030210	<i>Aacs</i>	acetoacetyl-CoA synthetase	3.23E-27	-1.5
NM_001166556	<i>Abca6</i>	ATP binding cassette subfamily A member 6	2.43E-15	1.6
NM_013851	<i>Abca8b</i>	ATP-binding cassette, sub-family A (ABC1), member 8b	6.79E-26	1.8
NM_178162	<i>Agfg2</i>	ArfGAP with FG repeats 2	7.23E-27	-1.7
NM_007428	<i>Agt</i>	angiotensinogen (serpin peptidase inhibitor, clade A, member 8)	7.82E-15	2.0
NM_001172146	<i>Aimp2</i>	aminoacyl tRNA synthetase complex-interacting multifunctional protein 2	2.43E-23	-1.6
NM_019764	<i>Amotl2</i>	angiomotin-like 2	1.94E-17	1.5
NM_020581	<i>Angptl4</i>	angiopoietin-like 4	6.11E-27	1.9
NM_001024851	<i>Ankrd34a</i>	ankyrin repeat domain 34A	1.84E-19	-1.6
NM_028390	<i>Anln</i>	anillin, actin binding protein	5.20E-13	1.5
NM_001109914	<i>Apold1</i>	apolipoprotein L domain containing 1	1.16E-18	1.6
NM_009705	<i>Arg2</i>	arginase type II	2.83E-16	1.5
NM_001172205	<i>Arid5a</i>	AT rich interactive domain 5A (MRF1-like)	6.65E-29	2.0
NM_023598	<i>Arid5b</i>	AT rich interactive domain 5B (MRF1-like)	1.80E-33	1.7
NM_001042591	<i>Arrdc3</i>	arrestin domain containing 3	1.48E-47	2.7
NM_001042592	<i>Arrdc4</i>	arrestin domain containing 4	1.68E-29	1.8
NM_016847	<i>Avpr1a</i>	arginine vasopressin receptor 1A	1.21E-29	-1.9
NM_001159407	<i>B3gnt5</i>	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 5	1.13E-25	1.6
NM_001284410	<i>Bcl2l11</i>	BCL2-like 11 (apoptosis facilitator)	7.31E-40	2.5
NM_007570	<i>Btg2</i>	BTG anti-proliferation factor 2	1.05E-33	1.9
NM_009770	<i>Btg3</i>	BTG anti-proliferation factor 3	2.19E-27	1.7
NM_016859	<i>Bysl</i>	bystin-like	2.35E-18	-1.5
NM_144817	<i>Camk1g</i>	calcium/calmodulin-dependent protein kinase I gamma	3.04E-28	-1.5
NM_178396	<i>Car12</i>	carbonic anhydrase 12	5.90E-06	1.6
NM_144820	<i>Ccdc28a</i>	coiled-coil domain containing 28A	1.43E-22	1.7
NM_011337	<i>Ccl3</i>	chemokine (C-C motif) ligand 3	1.47E-14	1.7
NM_007631	<i>Ccnd1</i>	cyclin D1	1.59E-24	-1.5

NM_001170395	<i>Cd163</i>	CD163 antigen	6.04E-10	1.5
NM_007646	<i>Cd38</i>	CD38 antigen	8.27E-18	1.7
NM_001111060	<i>Cd59a</i>	CD59a antigen	1.05E-13	1.5
NM_001081345	<i>Chd2</i>	chromodomain helicase DNA binding protein 2	1.32E-26	1.5
NM_001271496	<i>Chka</i>	choline kinase alpha	2.30E-13	1.6
NM_001033302	<i>Ciart</i>	circadian associated repressor of transcription	2.05E-15	-1.7
NM_001243762	<i>Clcn5</i>	chloride channel, voltage-sensitive 5	4.55E-28	1.7
NM_016674	<i>Cldn1</i>	claudin 1	1.18E-04	1.6
NM_172469	<i>Clic6</i>	chloride intracellular channel 6	4.43E-02	1.8
NM_153384	<i>Clrn1</i>	clarin 1	3.27E-19	1.5
NM_009898	<i>Coro1a</i>	coronin, actin binding protein 1A	1.63E-18	-1.5
NM_001252525	<i>Cpeb1</i>	cytoplasmic polyadenylation element binding protein 1 [<i>Mus musculus</i>	2.06E-24	1.8
NM_011957	<i>Creb3l1</i>	cAMP responsive element binding protein 3-like 1 [<i>Mus musculus</i>	6.47E-15	-1.5
NM_172728	<i>Creb5</i>	cAMP responsive element binding protein 5	1.00E-26	1.8
NM_001110850	<i>Crem</i>	cAMP responsive element modulator	2.33E-33	1.8
NM_007762	<i>Crhr1</i>	corticotropin releasing hormone receptor 1	7.82E-32	-1.9
NM_001145799	<i>Ctla2a</i>	cytotoxic T lymphocyte-associated protein 2 alpha	9.60E-17	1.5
NM_153775	<i>Ctu2</i>	cytosolic thiouridylase subunit 2	7.39E-17	-1.5
NM_009994	<i>Cyp1b1</i>	cytochrome P450, family 1, subfamily b, polypeptide 1	2.67E-23	2.0
NM_001177713	<i>Cyp26b1</i>	cytochrome P450, family 26, subfamily b, polypeptide 1	6.96E-14	-1.5
NM_028979	<i>Cyp2j9</i>	cytochrome P450, family 2, subfamily j, polypeptide 9	3.50E-28	1.8
NM_010516	<i>Cyr61</i>	cellular communication network factor 1	2.20E-18	1.5
NM_007837	<i>Ddit3</i>	DNA-damage inducible transcript 3	1.24E-15	1.5
NM_053272	<i>Dhcr24</i>	24-dehydrocholesterol reductase	3.80E-48	-1.7
NR_002854	<i>Dlx1as</i>	distal-less homeobox 1	2.48E-17	-1.6
NM_013642	<i>Dusp1</i>	dual specificity phosphatase 1	2.94E-47	2.4
NM_019819	<i>Dusp14</i>	dual specificity phosphatase 14	6.09E-16	1.5
NM_001048054	<i>Dusp16</i>	dual specificity phosphatase 16	6.68E-35	2.0
NM_176933	<i>Dusp4</i>	dual specificity phosphatase 4	9.31E-19	-1.5
NM_026268	<i>Dusp6</i>	dual specificity phosphatase 6	7.13E-26	-1.6
NM_153459	<i>Dusp7</i>	dual specificity phosphatase 7	1.11E-16	-1.5

NM_008748	<i>Dusp8</i>	dual specificity phosphatase 8	5.63E-41	1.5
NM_010104	<i>Edn1</i>	endothelin 1	9.30E-23	2.1
NM_001289925	<i>Egr3</i>	early growth response 3	6.61E-34	-2.1
NM_018781	<i>Egr3</i>	early growth response 3 leucine rich repeat and fibronectin type	3.46E-15	-1.5
NM_175522	<i>Elfn1</i>	III, extracellular 1	1.53E-16	-1.5
NM_008815	<i>Etv4</i>	ets variant 4	6.10E-27	-1.6
NM_023794	<i>Etv5</i>	ets variant 5	3.01E-30	-1.7
NM_183187	<i>Fam107a</i>	family with sequence similarity 107, member A	6.75E-42	3.3
NM_153574	<i>Fam13a</i>	family with sequence similarity 13, member A	5.34E-17	1.5
NM_178908	<i>Fam26e</i>	calcium homeostasis modulator family member 5	3.31E-36	2.0
NM_175104	<i>Fam53c</i>	family with sequence similarity 53, member C	1.05E-27	1.7
NM_011812	<i>Fbln5</i>	fibulin 5	3.39E-02	1.5
NM_026346	<i>Fbxo32</i>	F-box protein 32	1.33E-14	1.5
NM_010191	<i>Fdft1</i>	farnesyl diphosphate farnesyl transferase 1	2.21E-42	-1.5
NM_001253751	<i>Fdps</i>	farnesyl diphosphate synthetase	2.05E-23	-1.5
NM_010197	<i>Fgf1</i>	fibroblast growth factor 1	1.61E-13	1.5
NM_001163215	<i>Fgfr3</i>	fibroblast growth factor receptor 3	2.78E-24	1.6
NM_001164259	<i>Fgfr1l</i>	fibroblast growth factor receptor-like 1	5.65E-24	-1.5
NM_001159706	<i>Folh1</i>	folate hydrolase 1	4.16E-26	1.9
NM_011817	<i>Gadd45g</i>	growth arrest and DNA-damage- inducible 45 gamma	3.55E-16	1.5
NM_028022	<i>Gatsl3</i>	cytosolic arginine sensor for mTORC1 subunit 1	2.97E-19	1.7
NM_001010937	<i>Gjb6</i>	gap junction protein, beta 6	1.87E-11	1.9
NM_029102	<i>Glt8d2</i>	glycosyltransferase 8 domain containing 2	1.77E-22	1.8
NM_001110809	<i>Gpatch4</i>	G patch domain containing 4	1.70E-20	-1.5
NM_027518	<i>Gpr137c</i>	G protein-coupled receptor 137C	1.33E-46	2.1
NM_010338	<i>Gpr37</i>	G protein-coupled receptor 37	2.49E-27	1.6
NM_145066	<i>Gpr85</i>	G protein-coupled receptor 85	6.20E-26	1.5
NM_153419	<i>Grwd1</i>	glutamate-rich WD repeat containing 1	1.08E-21	-1.6
NM_008216	<i>Has2</i>	hyaluronan synthase 2	6.21E-16	-1.7
NM_198962	<i>Hcrtr2</i>	hypocretin (orexin) receptor 2	7.02E-22	-1.6
NM_144835	<i>Heatr1</i>	HEAT repeat containing 1	2.73E-26	-1.6
NM_175256	<i>Heg1</i>	heart development protein with EGF like domains 1	6.46E-21	1.5

NM_001162950	<i>Hif3a</i>	hypoxia inducible factor 3, alpha subunit	2.61E-17	1.7
NM_008252	<i>Hmgb2</i>	high mobility group box 2	1.16E-18	1.5
NM_008255	<i>Hmgcr</i>	3-hydroxy-3-methylglutaryl-Coenzyme A reductase	1.14E-33	-1.6
NM_008256	<i>Hmgcs2</i>	3-hydroxy-3-methylglutaryl-Coenzyme A synthase 2	1.58E-27	2.1
NM_007545	<i>Hrk</i>	harakiri, BCL2 interacting protein (contains only BH3 domain)	9.28E-20	1.5
NM_010476	<i>Hsd17b7</i>	hydroxysteroid (17-beta) dehydrogenase 7	2.95E-38	-1.7
NM_019564	<i>Htra1</i>	HtrA serine peptidase 1	2.19E-30	1.7
NM_015790	<i>Icosl</i>	icos ligand	1.00E-17	1.5
NM_010495	<i>Id1</i>	inhibitor of DNA binding 1, HLH protein	4.58E-17	1.5
NM_031166	<i>Id4</i>	inhibitor of DNA binding 4	1.30E-14	1.6
NM_145360	<i>Idi1</i>	isopentenyl-diphosphate delta isomerase	1.85E-48	-2.2
NM_001101605	<i>Ifit1bl1</i>	interferon induced protein with tetratricopeptide repeats 1B like 1	6.77E-16	1.6
NM_013562	<i>Ifrd1</i>	interferon-related developmental regulator 1	5.04E-24	-1.6
NM_172439	<i>Inpp5j</i>	inositol polyphosphate 5-phosphatase J	7.71E-25	1.7
NM_153526	<i>Insig1</i>	insulin induced gene 1	1.44E-42	-2.2
NM_016851	<i>Irf6</i>	interferon regulatory factor 6	5.41E-19	1.5
NM_010591	<i>Jun</i>	Jun proto-oncogene, AP-1 transcription factor subunit	3.20E-60	3.2
NM_001286944	<i>Jund</i>	JunD proto-oncogene, AP-1 transcription factor subunit	1.05E-34	1.7
NM_001081134	<i>Kcng1</i>	potassium voltage-gated channel, subfamily G, member 1	7.56E-30	-1.8
NM_001110227	<i>Kcnj13</i>	potassium inwardly-rectifying channel, subfamily J, member 13	2.69E-02	2.0
NR_045177	<i>Kctd16</i>	potassium channel tetramerisation domain containing 16	1.43E-27	1.6
NM_026135	<i>Kctd16</i>	potassium channel tetramerisation domain containing 16	9.88E-21	1.5
NM_078477	<i>Klf16</i>	Kruppel-like factor 16	6.82E-34	-1.8
NM_001252658	<i>Ldlr</i>	low density lipoprotein receptor	2.07E-37	-2.3
NM_001083125	<i>Lhx6</i>	LIM homeobox protein 6	3.47E-15	-1.5
NM_028894	<i>Lonrf3</i>	LON peptidase N-terminal domain and ring finger 3	1.79E-14	1.5
NM_181470	<i>Ltv1</i>	LON peptidase N-terminal domain and ring finger 3	3.80E-18	-1.5
NM_001271416	<i>Ly6a</i>	lymphocyte antigen 6 complex, locus A	1.40E-13	1.5

NM_001252055	<i>Ly6c1</i>	lymphocyte antigen 6 complex, locus C1	3.71E-24	2.0
NM_001171187	<i>Mal</i>	myelin and lymphocyte protein, T cell differentiation protein	3.92E-17	1.5
NM_011737	<i>Map3k19</i>	mitogen-activated protein kinase kinase kinase 19	6.66E-09	1.5
NM_008563	<i>Mcm3</i>	minichromosome maintenance complex component 3	1.28E-16	-1.5
NM_001012335	<i>Mdk</i>	midkine	4.22E-14	1.5
NM_008587	<i>Mertk</i>	MER proto-oncogene tyrosine kinase	1.83E-26	1.9
NM_001163833	<i>Msl3l2</i>	MSL3 like 2	2.40E-15	1.5
NM_025436	<i>Msmo1</i>	methylsterol monooxygenase 1	5.20E-43	-2.3
NM_013602	<i>Mt1</i>	metallothionein 1	4.56E-34	1.6
NM_008630	<i>Mt2</i>	metallothionein 2	1.98E-43	2.7
NM_138656	<i>Mvd</i>	mevalonate diphosphate decarboxylase	6.34E-38	-2.1
NM_001008542	<i>Mxi1</i>	MAX interactor 1, dimerization protein	1.63E-46	1.8
NM_178728	<i>Napepld</i>	N-acyl phosphatidylethanolamine phospholipase D	2.98E-14	1.6
NM_022565	<i>Ndst4</i>	N-deacetylase/N-sulfotransferase (heparin glucosaminyl) 4	2.63E-17	1.5
NM_028995	<i>Nipal3</i>	NIPA-like domain containing 3	6.65E-23	1.6
NM_024193	<i>Nop56</i>	NOP56 ribonucleoprotein	5.39E-23	-1.5
NM_010342	<i>Npbwr1</i>	neuropeptides B/W receptor 1	1.85E-20	1.5
NM_178644	<i>Oaf</i>	out at first homolog	5.42E-16	1.6
NM_011859	<i>Osr1</i>	odd-skipped related transcription factor 1	1.91E-05	1.5
NM_001286481	<i>Otx2</i>	orthodenticle homeobox 2	3.05E-02	1.7
NM_001008497	<i>P2ry14</i>	purinergic receptor P2Y, G-protein coupled, 14	1.22E-11	1.5
NM_153594	<i>Pcmt2</i>	protein-L-isoaspartate (D-aspartate) O-methyltransferase domain containing 2	3.50E-25	1.6
NM_016861	<i>Pdlim1</i>	PDZ and LIM domain 1 (elfin)	6.76E-17	1.7
NM_001159367	<i>Per1</i>	period circadian clock 1	4.91E-24	1.5
NM_178149	<i>Pik3ip1</i>	phosphoinositide-3-kinase interacting protein 1	5.02E-37	2.1
NM_001024955	<i>Pik3r1</i>	phosphoinositide-3-kinase regulatory subunit 1	2.81E-52	1.8
NM_145478	<i>Pim3</i>	proviral integration site 3	1.05E-13	-1.5
NM_008872	<i>Plat</i>	plasminogen activator, tissue	1.50E-19	1.5
NM_152813	<i>Plcd3</i>	phospholipase C, delta 3	4.03E-28	1.7
NM_001033253	<i>Plekhg1</i>	pleckstrin homology domain containing, family G (with RhoGef domain) member 1	1.02E-38	2.0

NM_013807	<i>Plk3</i>	polo like kinase 3	1.70E-31	-1.7
NM_001164630	<i>Pwmp3b</i>	PWWP domain containing 3B	7.21E-14	1.5
NM_029494	<i>Rab30</i>	RAB30, member RAS oncogene family	4.38E-44	1.9
NM_001099624	<i>Rapgef2</i>	Rap guanine nucleotide exchange factor 2	4.60E-46	1.7
NM_001252494	<i>Rapgef6</i>	Rap guanine nucleotide exchange factor (GEF) 6	8.64E-46	2.1
NM_009062	<i>Rgs4</i>	regulator of G-protein signaling 4	1.98E-23	1.5
NM_153514	<i>Rhobtb2</i>	Rho related BTB domain containing 2	3.77E-24	-1.5
NM_172612	<i>Rnd1</i>	Rho family GTPase 1	1.45E-21	-1.5
NM_001166553	<i>Rnf145</i>	ring finger protein 145	1.01E-33	-1.5
NM_133982	<i>Rpp25</i>	ribonuclease P/MRP 25 subunit	4.57E-22	-1.5
NM_146244	<i>Rps6kl1</i>	ribosomal protein S6 kinase-like 1	1.01E-33	1.8
NM_011521	<i>Sdc4</i>	syndecan 4	6.79E-33	2.2
NM_030261	<i>Sesn3</i>	sestrin 3	4.25E-32	1.5
NM_016687	<i>Sfrp4</i>	secreted frizzled related protein 4	1.00E-15	1.6
NM_001168525	<i>Sgms1</i>	sphingomyelin synthase 1	8.19E-14	1.5
NM_028943	<i>Sgms2</i>	sphingomyelin synthase 2	3.96E-05	1.5
NM_027921	<i>Slc16a14</i>	solute carrier family 16 (monocarboxylic acid transporters), member 14	3.51E-27	1.5
NM_001029842	<i>Slc16a6</i>	solute carrier family 16 (monocarboxylic acid transporters), member 6	1.28E-23	1.8
NM_025807	<i>Slc16a9</i>	solute carrier family 16 (monocarboxylic acid transporters), member 9	2.35E-07	1.5
NM_011400	<i>Slc2a1</i>	solute carrier family 2 (facilitated glucose transporter), member 1	4.41E-28	1.7
NM_178934	<i>Slc2a12</i>	solute carrier family 2 (facilitated glucose transporter), member 12	3.84E-08	1.9
NM_001199283	<i>Slc43a2</i>	solute carrier family 43, member 2	9.51E-26	1.5
NM_001081263	<i>Slc44a5</i>	solute carrier family 44, member 5	4.36E-38	1.8
NM_139142	<i>Slc6a20a</i>	solute carrier family 6 (neurotransmitter transporter), member 20A	9.75E-06	1.6
NM_001038643	<i>Slco3a1</i>	solute carrier organic anion transporter family, member 3a1	3.95E-27	-1.5
NM_134133	<i>Smim3</i>	small integral membrane protein 3	4.01E-16	1.6
NM_182927	<i>Spred3</i>	sprouty-related EVH1 domain containing 3	1.66E-31	-2.0
NM_011898	<i>Spry4</i>	sprouty RTK signaling antagonist 4	3.04E-31	-1.9
NM_009270	<i>Sqle</i>	squalene epoxidase	2.68E-34	-1.6
NM_011358	<i>Srsf2</i>	serine and arginine rich splicing factor 2	3.51E-30	-1.5

NM_001195485	<i>Srsf7</i>	serine and arginine-rich splicing factor 7	2.69E-27	-1.6
NM_133774	<i>Stard4</i>	StAR-related lipid transfer (START) domain containing 4	8.50E-33	-1.8
NM_027399	<i>Steap1</i>	six transmembrane epithelial antigen of the prostate 1	1.31E-03	1.5
NM_019675	<i>Stmn4</i>	stathmin-like 4	2.23E-22	1.5
NM_013515	<i>Stom</i>	stomatin	2.98E-13	1.5
NM_133670	<i>Sult1a1</i>	sulfotransferase family 1A, phenol-preferring, member 1	1.42E-13	1.7
NM_017465	<i>Sult2b1</i>	sulfotransferase family, cytosolic, 2B, member 1	2.44E-11	1.5
NM_001040085	<i>Sytl2</i>	synaptotagmin-like 2	1.16E-28	1.8
NM_001082976	<i>Tc2n</i>	tandem C2 domains, nuclear	3.01E-03	1.6
NM_009368	<i>Tgfb3</i>	transforming growth factor, beta 3	3.69E-14	1.6
NM_174989	<i>Ticam1</i>	toll-like receptor adaptor molecule 1	2.03E-22	1.8
NM_133211	<i>Tlr7</i>	toll-like receptor 7	1.72E-17	1.6
NM_001160385	<i>Tmem196</i>	transmembrane protein 196	1.01E-18	1.5
NM_177344	<i>Tmem203</i>	transmembrane protein 203	5.70E-18	-1.5
NM_133706	<i>Tmem97</i>	transmembrane protein 97	1.57E-23	-1.6
NM_001170855	<i>Trim36</i>	tripartite motif-containing 36	2.58E-14	-1.5
NM_001170912	<i>Trim66</i>	tripartite motif containing 66	1.00E-15	1.6
NM_012035	<i>Trpc7</i>	transient receptor potential cation channel subfamily C member 7	1.27E-13	-1.5
NM_001009935	<i>Txnip</i>	thioredoxin interacting protein	1.51E-43	3.8
NM_001169576	<i>Ube2h</i>	ubiquitin conjugating enzyme E2 H	5.01E-33	1.5
NM_175158	<i>Utp20</i>	UTP20 small subunit processome component	3.61E-18	-1.5
NM_001039385	<i>Vgf</i>	VGF nerve growth factor inducible	1.37E-26	-1.9
NM_172372	<i>Wdr45</i>	WD repeat domain 45	5.48E-20	1.5
NM_020603	<i>Wdr46</i>	WD repeat domain 46	8.66E-18	-1.5
NM_001005342	<i>Ypel4</i>	yippee like 4	2.16E-34	2.4
NM_027166	<i>Ypel5</i>	yippee like 5	3.80E-34	1.5
NM_001033324	<i>Zbtb16</i>	zinc finger and BTB domain containing 16	3.70E-16	1.5
NM_001110309	<i>Zfp426</i>	zinc finger protein 426	3.11E-26	1.5
NM_001005425	<i>Zfp663</i>	zinc finger protein 663	3.60E-12	1.6
NM_001252584	<i>Zmynd8</i>	zinc finger MYND-type containing 8	3.03E-23	1.5