

Online Resource 1. Genes changed in expression by at least two diets(p<0.01) in intestine

Gene Symbol	Gene Title	p-value (SM)	p-value (SS)	p-value (YS)	FC (SM)	FC (SS)	FC (YS)
FasI	Fas ligand (TNF superfamily, member 6)	0.0000	0.0027	0.0271	3.63	5.35	3.88
Dolpp1	dolichyl pyrophosphate phosphatase 1	0.0019	0.0013	0.0417	1.37	1.46	1.42
Jak2	Janus kinase 2	0.0008	0.0079	0.8092	-1.08	1.16	1.01
Gpd2	glycerol phosphate dehydrogenase 2, mitochondrial	0.0061	0.0062	0.5201	-1.33	-1.35	-1.06
Srsf2ip	serine/arginine-rich splicing factor 2, interacting protein	0.0044	0.0033	0.0114	-1.73	-1.82	-1.63
Pla1a	phospholipase A1 member A	0.0070	0.1148	0.0080	1.84	1.46	2.26
Txndr1	thioredoxin reductase 1	0.0039	0.0125	0.0044	1.7	1.79	1.86
Odc1	ornithine decarboxylase, structural 1	0.0083	0.0229	0.0047	1.44	1.59	1.64
Lrmp	lymphoid-restricted membrane protein	0.0030	0.1933	0.0026	1.3	1.54	1.29
Aadat	aminoadipate aminotransferase	0.0019	0.1726	0.0024	-2.84	-1.54	-2.91
Lrp5	low density lipoprotein receptor-related protein 5	0.3120	0.0054	0.0000	1.44	4.25	3.92
Dmpk	dystrophin myotonic-protein kinase	0.1108	0.0021	0.0071	-1.48	2.99	3.32
Anpep	alanyl (membrane) aminopeptidase	0.9735	0.0004	0.0003	1.01	2.45	2.62
Polr2a	polymerase (RNA) II (DNA directed) polypeptide A	0.3735	0.0012	0.0009	-1.38	2.09	2.52
Rasa2	RAS p21 protein activator 2	0.5756	0.0003	0.0005	1.08	2.65	2.33
Scly	selenocysteine lyase	0.9135	0.0029	0.0004	1.02	1.89	2.33
Leng8	leukocyte receptor cluster (LRC) member 8	0.9007	0.0020	0.0010	1.03	2.22	2.29
Oxcl1	3-oxoacid CoA transferase 1	0.2905	0.0027	0.0018	1.42	2.24	2.23
Dak	dihydroxyacetone kinase 2 homolog (yeast)	0.5011	0.0030	0.0049	-1.14	1.83	2.23
2210023G05Rik	RIKEN cDNA 2210023G05 gene	0.1103	0.0005	0.0010	1.3	2.52	2.2
Syvn1	synovial apoptosis inhibitor 1, synoviolin	0.7290	0.0005	0.0000	1.05	1.93	2.18
Ncstn	nicastatin	0.0252	0.0017	0.0055	1.65	1.9	2.18
Brwd1	bromodomain and WD repeat domain containing 1	0.6222	0.0008	0.0061	1.11	2.38	2.1
Fmo5	flavin containing monooxygenase 5	0.3687	0.0003	0.0050	1.16	2.27	2.06
Cic	capicua homolog (Drosophila)	0.1168	0.0072	0.0032	1.33	2.06	2.05
Tra2a	transformer 2 alpha homolog (Drosophila)	0.4087	0.0016	0.0076	1.19	2.21	2.04
Mical2	microtubule associated monooxygenase, calponin and LIM domain containing 2	0.2606	0.0000	0.0001	1.24	1.98	2.03
Src	Rous sarcoma oncogene	0.0806	0.0000	0.0012	-1.28	2.01	2
Gbf1	golgi-specific brefeldin A-resistance factor 1	0.1923	0.0042	0.0038	1.23	1.98	2
Sic25a42	solute carrier family 25, member 42	0.7378	0.0043	0.0095	1.05	1.85	1.95
Ppargc1a	peroxisome proliferative activated receptor, gamma, coactivator 1 alpha	0.0518	0.0001	0.0046	-1.38	2.19	1.95
Capn1	calpain 1	0.1895	0.0027	0.0001	1.21	1.98	1.92
Ihh	Indian hedgehog	0.4503	0.0006	0.0042	-1.12	1.91	1.92
Phf1	PHD finger protein 1	0.1321	0.0009	0.0000	1.17	1.96	1.89
Zbtb7b	zinc finger and BTB domain containing 7B	0.3251	0.0051	0.0048	1.23	2.01	1.87
Fam114a2	family with sequence similarity 114, member A2	0.6530	0.0012	0.0007	1.08	1.94	1.85
Klf5	Kruppel-like factor 5	0.0804	0.0018	0.0035	1.32	1.75	1.77
Raver1	ribonucleoprotein, PTB-binding 1	0.5974	0.0046	0.0004	1.07	1.72	1.77
Tmem50b	transmembrane protein 50B	0.0493	0.0017	0.0012	1.65	1.88	1.77
Mapk8ip3	mitogen-activated protein kinase 8 interacting protein 3	0.6928	0.0013	0.0046	1.05	1.93	1.76
Casc3	cancer susceptibility candidate 3	0.9325	0.0004	0.0007	-1.01	1.82	1.76
Trim32	tripartite motif-containing 32	0.4256	0.0002	0.0025	1.11	2.01	1.73
Abxn713b	ataxin 7-like 3B	0.3312	0.0066	0.0078	-1.26	1.58	1.72
Actn4	actinin alpha 4	0.2636	0.0085	0.0091	1.2	1.89	1.71
Spry3	SPRY domain containing 3	0.1137	0.0039	0.0014	1.26	1.42	1.69
Dab2ip	disabled homolog 2 (Drosophila) interacting protein	0.6976	0.0011	0.0018	-1.06	1.77	1.69
Adipor1	adiponectin receptor 1	0.0585	0.0056	0.0081	1.35	1.75	1.68
Atp6v0a1	ATPase, H+ transporting, lysosomal V0 subunit A1	0.2799	0.0098	0.0006	-1.15	1.51	1.66
Nat6	N-acetyltransferase 6	0.5106	0.0065	0.0038	-1.1	1.55	1.66
Vasp	vasodilator-stimulated phosphoprotein	0.5178	0.0039	0.0014	1.1	1.72	1.66
Arid2	AT rich interactive domain 2 (ARID, RFX-like)	0.2078	0.0020	0.0014	1.09	1.64	1.64
Tmem184b	transmembrane protein 184b	0.5372	0.0015	0.0050	1.12	1.59	1.64
Zfp598	zinc finger protein 598	0.4949	0.0031	0.0045	1.07	1.61	1.63
Foxo1	forkhead box O1	0.0927	0.0000	0.0001	1.27	2.56	1.61
Hipk2	homeodomain interacting protein kinase 2	0.1014	0.0014	0.0033	-1.25	1.48	1.6
Ubf1	ubiquitin family domain containing 1	0.0448	0.0090	0.0009	1.31	1.43	1.58
Ace	angiotensin I converting enzyme (peptidyl-dipeptidase A) 1	0.4330	0.0001	0.0012	1.15	1.96	1.58
Txn2	thioredoxin 2	0.0364	0.0008	0.0002	1.23	1.34	1.52
Spns2	spinstar homolog 2 (Drosophila)	0.8241	0.0003	0.0007	1.02	1.68	1.51
Cdk18	cyclin-dependent kinase 18	0.3174	0.0005	0.0033	-1.12	1.55	1.51
Eif4ebp2	eukaryotic translation initiation factor 4E binding protein 2	0.0307	0.0040	0.0039	-1.46	1.5	1.48
Mlxip1	MLX interacting protein-like	0.8788	0.0020	0.0032	-1.01	1.54	1.48
Dhrs11	dehydrogenase/reductase (SDR family) member 11	0.4146	0.0037	0.0029	1.07	1.39	1.47
2810432L12Rik	RIKEN cDNA 2810432L12 gene	0.0101	0.0043	0.0007	1.22	1.35	1.46
Sox13	SRY-box containing gene 13	0.0292	0.0030	0.0098	-1.36	1.39	1.45
Mbd1	methyl-CpG binding domain protein 1	0.8151	0.0019	0.0030	-0.01	1.45	1.43
Fam114a1	family with sequence similarity 114, member A1	0.3156	0.0038	0.0088	-1.11	1.45	1.4
Phc2	polyhomeotic-like 2 (Drosophila)	0.9324	0.0100	0.0017	-1.01	1.42	1.4
Aamp	angio-associated migratory protein	0.1827	0.0067	0.0074	1.25	1.37	1.37
Rnf181	ring finger protein 181	0.2802	0.0013	0.0006	-1.14	1.3	1.36
Plxn2	plexin B2	0.4947	0.0003	0.0033	-1.06	1.46	1.35
Tex261	testis expressed gene 261	0.1941	0.0005	0.0012	1.16	1.33	1.34
Otu5	OTU domain containing 5	0.0108	0.0004	0.0004	1.58	1.51	1.34
Tgoln1	trans-golgi network protein	0.1435	0.0047	0.0100	-1.17	1.32	1.3
Ubr5	ubiquitin protein ligase E3 component n-recognin 5	0.5293	0.0069	0.0080	-1.06	1.19	1.24
Sod2	superoxide dismutase 2, mitochondrial	0.4199	0.0085	0.0046	-1.05	-1.18	-1.19
Polr2f	polymerase (RNA) II (DNA directed) polypeptide F	0.0651	0.0029	0.0016	1.12	-1.38	-1.38
Morfa1i	mortality factor 4 like 1	0.0441	0.0009	0.0035	-1.29	-1.46	-1.43
Nqo1	NAD(P)H dehydrogenase, quinone 1	0.7959	0.0031	0.0075	-1.03	-1.53	-1.47
Psmd14	proteasome (prosome, macropain) 26S subunit, non-ATPase, 14	0.9077	0.0030	0.0080	-1.02	-1.68	-1.52
Cops3	COP9 (constitutive photomorphogenic) homolog, subunit 3 (Arabidopsis thaliana)	0.2291	0.0042	0.0023	1.14	-1.52	-1.53
Pcpn	PEST proteolytic signal containing nuclear protein	0.0229	0.0051	0.0094	-1.55	-1.73	-1.55
Ptdn5	prefoldin 5	0.1968	0.0027	0.0008	1.12	-1.47	-1.56
Adh5	alcohol dehydrogenase 5 (class III), chi polypeptide	0.0668	0.0040	0.0007	-1.22	-1.43	-1.57
Xrn2	5'-3' exonuclease 2	0.1021	0.0001	0.0004	-1.19	-1.62	-1.59
Tic39b	tetratricopeptide repeat domain 39B	0.0169	0.0043	0.0058	-1.56	-1.78	-1.62
2010305A19Rik	RIKEN cDNA 2010305A19 gene	0.7126	0.0038	0.0003	1.08	-1.99	-1.64
Lman1	lectin, mannose-binding, 1	0.0677	0.0011	0.0053	-1.31	-1.86	-1.67
Tbrg1	transforming growth factor beta regulated gene 1	0.0750	0.0086	0.0053	1.28	-1.49	-1.68
Mrps18c	mitochondrial ribosomal protein S18C	0.4872	0.0020	0.0010	1.06	-1.47	-1.7
Sic30a9	solute carrier family 30 (zinc transporter), member 9	0.0760	0.0037	0.0005	-1.17	-1.66	-1.75
Trpkb	Tp53rk binding protein	0.4252	0.0021	0.0079	-1.15	-1.5	-1.79
Ppp1cb	protein phosphatase 1, catalytic subunit, beta isoform	0.1392	0.0017	0.0027	-1.34	-1.9	-1.82
Fzd4	frizzled homolog 4 (Drosophila)	0.0138	0.0053	0.0030	-1.7	-1.99	-1.89
Nans	N-acetylneuraminic acid synthase (sialic acid synthase)	0.0996	0.0038	0.0041	-1.32	-1.99	-1.97
Cpd	carboxypeptidase D	0.0467	0.0019	0.0025	-1.55	-2.02	-2.04
Homer2	homer homolog 2 (Drosophila)	0.0615	0.0078	0.0032	-1.47	-1.95	-2.25
Sic5a4b	solute carrier family 5 (neutral amino acid transporters, system A), member 4b	0.6943	0.0075	0.0042	-1.18	-2.16	-2.44
Ndufab1	NADH dehydrogenase (ubiquinone) 1, alpha/beta subcomplex, 1	0.2459	0.0045	0.0030	-1.26	-2.45	-3.07
Sepw1	selenoprotein W, muscle 1	0.0000	0.0000	0.0000	4.86	8.15	7.15
2700094K13Rik	RIKEN cDNA 2700094K13 gene	0.0005	0.0016	0.0000	5.25	3.82	4.73
Gpx1	glutathione peroxidase 1	0.0000	0.0001	0.0001	4.34	4.06	4.69
Gpx3	glutathione peroxidase 3	0.0007	0.0029	0.0004	3.63	2.74	2.95
Dio1	deiodinase, iodothyronine, type I	0.0044	0.0000	0.0035	1.95	2.87	2.28

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Gene Symbol	Gene Title	p-value (SM)	p-value (SS)	p-value (YS)	FC (SM)	FC (SS)	FC (YS)
Pias1	protein inhibitor of activated STAT 1	0.0083	0.0087	0.0000	1.27	1.61	1.63
Pnpo	pyridoxine 5'-phosphate oxidase	0.0035	0.0064	0.0016	1.25	1.2	1.31