

Supplementary Figure Legends

Supplementary Figure 1. Male offspring heart and kidney weights for each dietary comparison. Heart or kidney weight (A) on a post-weaning high fat diet and (B) on an LF12 post-weaning diet. *p-value<0.05, **p-value<0.01

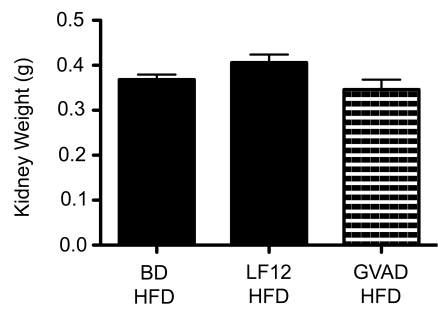
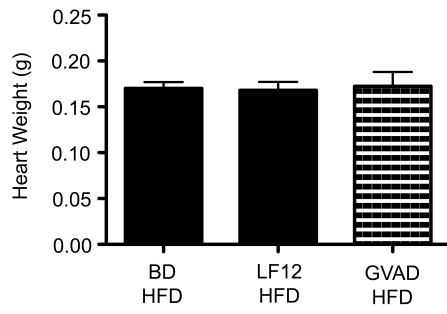
Supplementary Figure 2. GVAD-LF12 does not affect body composition in female littermates. Physiological parameters are presented for female littermates of the diet parameters in **Figure 3**. (A) Body weight (B) Epididymal fat pad weight (C) Correlation between fat and body weight (D) Liver weight (E) Kidney weight *p-value<0.05, **p-value<0.01

Supplementary Figure 1

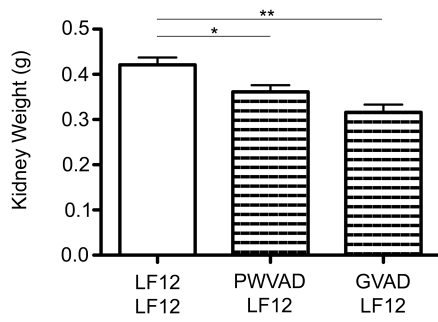
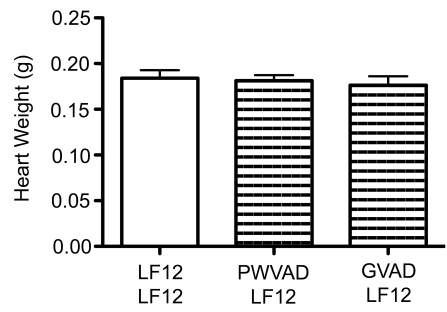
Heart

Kidney

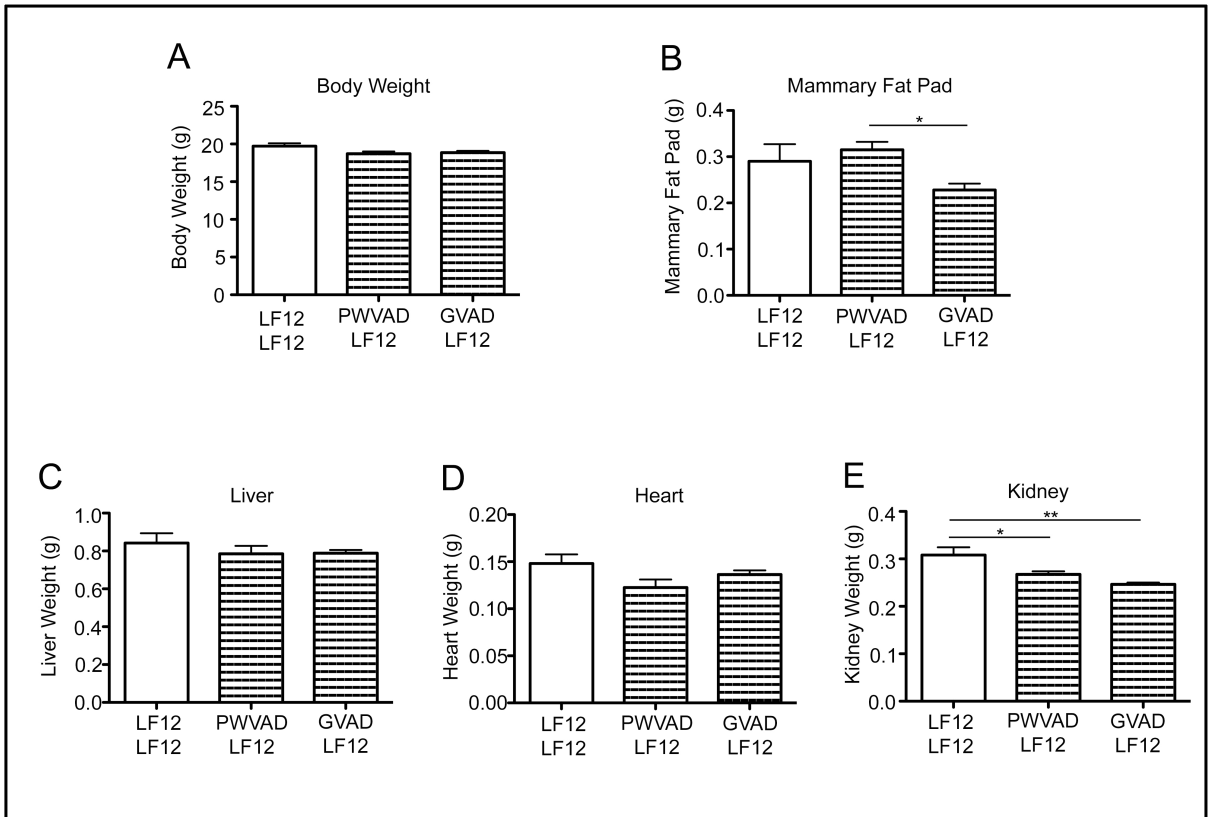
A



B



Supplementary Figure 2



Supplementary Table 1. Diet Compositions

	BD⁺	LFD	LF12	VAD	HFD	HFD-VAD
Catalog Number	2019	D12450B	TD. 07291	TD. 07655	D12492	TD.08210
Production Company	Harlan Teklad	Research Diets	Harlan Teklad	Harlan Teklad	Research Diets	Harlan Teklad
Casein (g)	Crude Protein	200	190	190	200	190
L-Cystine (g)		3	3	3	3	3
Cornstarch (g)		315	393.2	393.2	0	13
Maltodextrin (g)		35	130	130	125	200
Sucrose (g)		350	150	150	69	150
Cellulose (g)		50	40	40	50	40
Lard (g)		20			245	310
Cottonseed Oil (g)			50	50		50
Soybean Oil (g)	U.Q.	25			25	
Mineral Mix (g)		S10026 10	AIN-93G-MX 35	AIN-93G-MX 35	S10026 10	AIN-93G-MX 35
Vitamin Mix (g)		V10001 10	83171 5	83171 5	V10001 10	83171 5
Choline (g)		2	3.5	3.5	2	3.5
Vitamin E (IU/kg)	110		121	121		121
Vitamin D ₃ (IU/g)	1.5		2.2	2.2		2.2
Vitamin A Palmitate (IU/g)	15	5.2	24	0.22	5.2	0.22
Protein (%kcal)	23.0	20.0	18.8	18.8	20.0	12.9
Carbohydrate (%kcal)	55.0	70.0	69.0	69.0	20.0	26.9
Fat (%kcal)	22.0	10.0	12.2	12.2	60.0	60.1

⁺ BD (2019, Harlan Teklad) diet is largely a proprietary composition

U.Q. Unknown Quantity, diet contains this ingredient, but at an undisclosed quantity

Supplementary Table 2: HF genes are largely reversed by GVAD-HFD

Relative expression calculated as the mean LFD Cy5 value (n=3)

Data represented as fold change (FC) of the upper condition versus the lower condition with p-value.

Supplementary Table 3: *Shp*^{-/-} responses

Data represented as fold change (FC) of the upper condition versus the lower condition with p-value. *Shp*^{-/-} values were determined by Kim S.C, et al. (2014) [39]

Supplementary Table 2

Gene Symbol	Relative Expression	BD-HFD	P.Value	GVAD-BD-HFD	P.Value
		BD-LFD			
Arrdc3	2011	3.51	0.01	-3.69	0.00
Aatk	873	3.62	0.03	-3.68	0.02
Cyp2c54	2380	7.41	0.01	-3.64	0.02
Nr0b2	552	2.24	0.00	-2.90	0.01
Cyp2c37	7277	4.35	0.03	-2.90	0.01
Hmgcs1	812	2.16	0.03	-2.71	0.01
Oat	35497	2.17	0.02	-2.51	0.00
Sult5a1	221	3.60	0.02	-2.42	0.00
Hpgd	1900	2.04	0.01	-2.38	0.00
Car8	1842	2.48	0.01	-2.31	0.00
Cyp2c39	7367	2.94	0.01	-2.27	0.01
N4bp211	1054	2.06	0.01	-2.22	0.00
2810007J24Rik	21292	4.12	0.05	-2.21	0.04
Chpt1	4164	2.10	0.00	-2.17	0.00
Lect2	10904	2.33	0.04	-2.15	0.00
ENSMUST0000008036	30219	2.02	0.01	-2.04	0.00
Idi1	18166	2.04	0.01	-2.03	0.07
Apol7a	4554	2.10	0.02	-2.03	0.00
Cyp51	1851	2.12	0.00	-2.02	0.03
Herpud1	24252	3.40	0.00	-2.00	0.00
Dnaja1	2026	2.32	0.00	-2.00	0.00
Apol7c	3618	2.14	0.03	-1.93	0.01
Nr1i3	1631	3.01	0.03	-1.82	0.00
Tsc22d3	5570	3.04	0.05	-1.73	0.01
Slco1b2	52166	2.32	0.03	-1.71	0.06
Aldh1a1	57622	2.03	0.02	-1.70	0.03
Slc1a2	385	4.05	0.05	-1.69	0.01
Acpp	272	-2.95	0.01	-1.69	0.05
Sult1b1	1272	3.16	0.00	-1.66	0.05
9530008L14Rik	227	2.04	0.03	-1.66	0.00
Mmd	3804	2.60	0.00	-1.64	0.00
4933403F05Rik	433	2.04	0.00	-1.64	0.00
Ncald	614	2.17	0.00	-1.61	0.02
Prkd3	636	2.70	0.00	-1.60	0.03
3110001K24Rik	431	2.04	0.00	-1.58	0.00
3110049J23Rik	2306	2.09	0.02	-1.53	0.00
Rnf125	14651	-2.61	0.04	-1.53	0.00
Hif	533	2.21	0.04	-1.50	0.10
Klf15	9525	2.28	0.00	-1.49	0.00
5033411D12Rik	2182	2.03	0.03	-1.47	0.01
Hsd17b7	971	2.04	0.00	-1.47	0.02
Cyp2c29	27004	2.21	0.01	-1.44	0.07
Adam11	384	-2.78	0.00	-1.42	0.01
Tubb2a	77211	-2.88	0.04	-1.40	0.44
Nox4	518	2.36	0.03	-1.39	0.08
Setd4	390	2.38	0.00	-1.37	0.01
Chka	4049	-2.46	0.00	-1.36	0.39
Pon1	41764	2.13	0.02	-1.34	0.03
Pnpla3	422	-10.09	0.03	-1.32	0.35

BC057022	414	-2.65	0.04	-1.32	0.03
Ugt3a2	510	2.36	0.04	-1.29	0.07
Il1b	732	-3.05	0.00	-1.27	0.29
Cyp2e1	32365	3.94	0.03	-1.27	0.23
Pnpla5	358	-4.81	0.02	-1.19	0.08
Ppm1k	1305	2.55	0.00	-1.17	0.31
Tdo2	23318	2.20	0.00	-1.16	0.10
Slc2a9	250	2.07	0.01	-1.13	0.28
Cdca2	225	-2.74	0.04	-1.13	0.11
Decr1	271	2.15	0.01	-1.11	0.41
Slc16a6	2126	-2.11	0.01	-1.10	0.63
4930452B06Rik	297	-2.14	0.01	-1.08	0.52
Nudt12	206	2.02	0.00	-1.07	0.16
Map3k1	2495	-2.71	0.01	-1.03	0.47
Rhbd2	1335	-2.06	0.00	-1.02	0.79
Dars	1557	2.04	0.02	-1.01	0.82
Dhrs9	445	-2.04	0.01	-1.00	1.00
Pus10	328	2.00	0.03	-1.00	1.00
Rragd	492	-2.76	0.05	1.00	0.99
Col15a1	252	-2.57	0.00	1.01	0.94
Hnrnpa1	1753	-2.33	0.04	1.02	0.78
Incenp	2058	-2.01	0.03	1.02	0.73
Igf1	547	-3.28	0.04	1.04	0.29
Gpam	1381	-2.88	0.01	1.05	0.57
Gramd4	2127	-2.35	0.00	1.06	0.70
Nid2	562	-2.02	0.01	1.06	0.57
Orm2	30548	-2.37	0.02	1.08	0.72
Gpi1	74198	-2.01	0.00	1.09	0.38
Frmd5	323	-5.50	0.04	1.12	0.56
Atp2b2	421	-4.66	0.00	1.12	0.51
Car2	1142	-2.21	0.00	1.16	0.12
Gins2	236	-2.00	0.02	1.16	0.24
Cdca5	498	-2.78	0.04	1.16	0.43
Tuba8	763	-2.56	0.00	1.18	0.42
Mmp14	10280	-2.07	0.05	1.18	0.03
Tacc3	225	-2.46	0.03	1.18	0.31
Elf3	662	-3.36	0.04	1.20	0.39
Plk2	1948	-2.01	0.05	1.22	0.12
Nr4a1	3030	-3.48	0.00	1.24	0.15
9130404D14Rik	354	-2.45	0.00	1.25	0.16
Cotl1	5714	-2.03	0.02	1.28	0.14
Notch3	334	-2.96	0.00	1.29	0.05
Nfkb2	1094	-2.00	0.01	1.32	0.10
Acacb	9089	-3.16	0.02	1.35	0.00
Pdzk1ip1	1645	-2.30	0.01	1.35	0.07
Spon2	6497	-2.18	0.01	1.38	0.35
Apcs	4144	-2.36	0.05	1.40	0.12
G6pdx	1619	-3.39	0.00	1.42	0.00
Scd2	6265	-4.53	0.04	1.43	0.01
Fosl2	399	-2.05	0.03	1.45	0.05
Spink3	2935	-6.74	0.03	1.48	0.14
Ltb4dh	2303	-2.11	0.03	1.50	0.13

Cdc2a	547	-2.36	0.03	1.50	0.05
Ccnb1	232	-6.55	0.05	1.52	0.43
Foxm1	238	-2.93	0.01	1.53	0.23
Tubb6	7759	-2.46	0.04	1.54	0.08
Relb	2310	-3.26	0.01	1.56	0.05
4833422F24Rik	938	-2.04	0.03	1.57	0.03
5530400B01Rik	670	-2.79	0.02	1.58	0.17
Nck2	590	-2.07	0.01	1.61	0.07
Mcm10	5909	2.12	0.04	1.64	0.00
Prkx	921	-2.16	0.00	1.64	0.00
1200009I06Rik	410	-2.81	0.02	1.66	0.05
Itga6	551	-3.11	0.03	1.69	0.00
Fbln1	240	-2.64	0.05	1.71	0.08
Steap2	293	-2.51	0.05	1.72	0.00
Capg	1260	-2.02	0.01	1.73	0.02
Arhgef16	1264	-3.07	0.00	1.75	0.01
Tnfrsf12a	7032	-2.39	0.05	1.75	0.13
Chrna4	298	-5.12	0.05	1.76	0.09
Socs3	6345	-2.13	0.05	1.77	0.03
Fndc3b	2602	-2.51	0.04	1.78	0.00
Cdt1	1695	-2.18	0.04	1.83	0.00
Evc	378	-2.72	0.03	1.86	0.00
Sstr2	636	-2.17	0.04	1.86	0.02
Atg16l2	1600	-2.15	0.01	1.88	0.00
Vill	337	-2.03	0.01	1.90	0.00
Icam1	7595	-3.12	0.03	1.91	0.00
Kif4	292	-3.63	0.01	1.92	0.04
5730416F02Rik	231	-2.03	0.02	1.99	0.00
Adam8	515	-2.35	0.04	2.00	0.03
Tmem51	4160	-2.40	0.00	2.01	0.00
Igsf8	923	-2.09	0.00	2.02	0.00
Per1	327	2.38	0.02	2.04	0.01
Cdkn2c	2793	-2.04	0.01	2.05	0.00
A330021E22Rik	207	-2.71	0.04	2.06	0.01
Upp2	1361	3.04	0.01	2.08	0.00
Tmem159	697	-2.26	0.00	2.09	0.00
Tef	969	3.34	0.01	2.10	0.00
Ostb	241	-2.57	0.00	2.15	0.05
Slc37a1	548	-2.54	0.03	2.20	0.02
Ier3	423	-3.65	0.03	2.28	0.00
Setd7	740	-2.04	0.02	2.29	0.00
Gucy2c	501	-2.25	0.04	2.31	0.00
Slc7a7	3701	-2.38	0.01	2.33	0.00
Cd9	6878	-4.27	0.00	2.33	0.01
Phlda2	370	-3.46	0.04	2.40	0.01
Pck2	1682	-2.40	0.01	2.54	0.00
Lpl	3465	-3.34	0.02	2.66	0.01
Spag5	280	-4.09	0.01	2.76	0.00
Gipc2	305	-3.63	0.03	2.86	0.00
Smpd3	745	-2.77	0.03	3.10	0.00
Jazf1	226	-5.64	0.00	3.13	0.01
Rbp1	13838	-2.47	0.04	3.24	0.00

Slc6a8	1608	-3.00	0.00	3.26	0.00
Galnt12	648	-2.32	0.03	3.30	0.00
Dbp	1325	3.72	0.00	3.66	0.00
Igh-2	5158	-7.89	0.01	3.87	0.00
Prss8	385	-3.29	0.01	4.62	0.00
Rps6k11	327	-5.26	0.00	4.67	0.00
A_51P327496	76607	-4.00	0.03	4.75	0.00
Adrbk2	278	-2.08	0.01	4.79	0.00
Igh-VJ558	12561	-6.12	0.01	4.90	0.00
Marco	14716	-3.90	0.05	4.94	0.01
Gadd45g	30433	-4.79	0.01	5.06	0.00
Mtmt11	481	-6.28	0.02	5.83	0.00
Tff3	10204	-6.43	0.00	8.66	0.00

Supplementary Table 3

Gene Symbol	SHP-/- WD		P.Value	GVAD-HFD		P.Value	GVAD-LF12	
	WT	WD		BD-HFD	LF12-LF12		P.Value	
A930016D02Rik	3.43	0.00	-17.31	0.00	1.50	0.22		
BC027556	11.70	0.03	-11.63	0.00	-1.07	0.78		
Dct	17.10	0.00	-10.94	0.00	3.45	0.01		
Serpinb1a	8.02	0.00	-9.02	0.00	1.39	0.12		
Serpina12	-9.01	0.00	-7.51	0.03	2.44	0.01		
Aatk	2.22	0.05	-3.68	0.02	-1.06	0.73		
Rhbg	2.58	0.00	-3.45	0.00	-6.45	0.00		
Slc17a8	2.62	0.02	-3.41	0.01	3.48	0.01		
Gdf15	-2.90	0.00	-3.10	0.00	-2.65	0.00		
Cyp2c37	1.88	0.04	-2.90	0.01	7.44	0.00		
Fign	1.59	0.05	-2.79	0.00	1.46	0.08		
4432416J03Rik	1.71	0.16	-2.60	0.03	4.06	0.00		
Ddit3	-2.15	0.00	-2.46	0.00	-2.44	0.00		
Slc30a10	2.02	0.17	-2.39	0.00	4.03	0.00		
Glul	1.52	0.07	-2.38	0.01	2.22	0.01		
Cxcl10	-3.53	0.00	-2.34	0.00	-3.71	0.00		
Hsf2	1.56	0.13	-2.25	0.00	-1.00	1.00		
Mogat1	-4.14	0.06	-2.22	0.00	-1.94	0.03		
2810007J24Rik	2.84	0.00	-2.21	0.04	2.28	0.01		
Aqp8	-2.81	0.00	-2.15	0.01	-1.35	0.54		
Slc17a3	1.78	0.00	-2.15	0.01	1.43	0.09		
Olig1	-2.48	0.02	-2.12	0.00	-1.34	0.33		
Cxcl12	1.55	0.00	-2.06	0.00	1.01	0.98		
Tbx3	2.67	0.00	-2.06	0.01	1.21	0.27		
Adh4	1.54	0.00	-2.05	0.00	1.15	0.73		
Hsd3b5	243.33	0.00	-2.03	0.19	28.90	0.00		
Omd	-1.93	0.11	-1.99	0.00	1.33	0.30		
Dpyd	1.68	0.00	-1.97	0.00	1.10	0.59		
Cxadr	-1.88	0.00	-1.93	0.00	-2.10	0.00		
Cpox	1.96	0.06	-1.90	0.02	1.33	0.19		
Sdro	2.77	0.00	-1.90	0.00	1.59	0.14		
Akr1c19	-1.72	0.16	-1.88	0.00	1.05	0.79		
Abat	1.58	0.00	-1.88	0.00	1.00	0.99		
Nqo2	1.55	0.00	-1.86	0.00	-1.52	0.04		
Aldh3a2	-1.66	0.00	-1.84	0.00	-2.79	0.00		
Junb	-1.61	0.02	-1.83	0.00	1.44	0.43		
Fblim1	-3.35	0.13	-1.82	0.04	-1.05	0.79		
Nr1i3	1.69	0.07	-1.82	0.00	2.98	0.00		
Calca	1.70	0.11	-1.79	0.16	-1.08	0.72		
2410002O22Rik	1.55	0.20	-1.79	0.00	1.47	0.04		
Gsta1	-16.34	0.00	-1.79	0.00	-13.29	0.00		
Ccbl2	1.60	0.01	-1.78	0.00	1.15	0.61		
2510004L01Rik	-1.83	0.17	-1.77	0.04	-1.48	0.12		
Mmd2	2.27	0.00	-1.77	0.21	-9.51	0.00		
Eif2ak3	-1.78	0.00	-1.73	0.00	-1.46	0.10		
Akr1c14	1.81	0.08	-1.73	0.04	1.08	0.86		
Tsc22d3	1.94	0.01	-1.73	0.01	2.23	0.01		
Eif4e	2.16	0.02	-1.73	0.00	1.22	0.31		
Dmgdh	2.67	0.00	-1.71	0.00	1.19	0.36		

Fahd2a	1.60	0.05	-1.71	0.00	1.28	0.16
Gsta2	-6.69	0.00	-1.70	0.15	-15.33	0.00
Cth	2.10	0.01	-1.69	0.00	-1.38	0.22
Slc1a2	2.38	0.00	-1.69	0.01	2.28	0.00
Caln1	2.19	0.04	-1.66	0.00	2.08	0.01
Tyki	-2.11	0.01	-1.66	0.01	-1.49	0.04
Lag3	3.57	0.00	-1.65	0.08	1.49	0.30
Ela1	2.79	0.04	-1.65	0.03	-2.29	0.01
Hdhd3	1.76	0.02	-1.65	0.00	1.40	0.16
Yaf2	1.53	0.20	-1.65	0.00	-1.09	0.66
D930010J01Rik	1.59	0.01	-1.64	0.00	2.07	0.01
BC029214	2.15	0.00	-1.62	0.00	2.14	0.01
Hist2h2aa1	1.51	0.00	-1.61	0.00	-1.37	0.08
Phtf2	1.51	0.16	-1.61	0.01	-1.17	0.36
Plxna2	-1.60	0.14	-1.61	0.02	1.09	0.75
Cib2	3.26	0.00	-1.61	0.00	1.45	0.05
BC005682	1.52	0.01	-1.59	0.00	-1.05	0.83
Cfhr1	1.59	0.00	-1.58	0.00	1.48	0.04
Slco1a4	-1.58	0.05	-1.57	0.07	4.61	0.00
1300012D20Rik	2.21	0.01	-1.56	0.09	-1.17	0.42
6430559E15Rik	1.55	0.00	-1.55	0.00	1.17	0.49
Cyp2d13	2.09	0.00	-1.54	0.01	-1.51	0.04
9130409I23Rik	-4.20	0.00	-1.54	0.01	-2.36	0.04
Ccl2	23.33	0.02	-1.54	0.22	-4.17	0.00
S100a10	-1.69	0.00	-1.54	0.01	-2.34	0.00
Mkks	1.51	0.00	-1.54	0.00	1.17	0.34
Igfals	1.83	0.00	-1.52	0.05	1.04	0.83
Wnt2	1.78	0.02	-1.52	0.05	1.39	0.11
Inhbc	1.67	0.01	-1.51	0.03	1.17	0.34
Shmt1	1.75	0.08	-1.49	0.00	1.79	0.01
Serpina6	1.93	0.05	-1.49	0.03	-1.57	0.10
Serpina7	-4.35	0.00	-1.48	0.03	1.30	0.18
Uchl5	1.63	0.00	-1.48	0.01	1.01	0.93
Hsd17b7	1.93	0.00	-1.47	0.02	2.18	0.02
Gcdh	1.71	0.02	-1.46	0.00	1.04	0.80
Cyp8b1	2.45	0.00	-1.46	0.08	4.86	0.01
Ppm1l	1.54	0.07	-1.46	0.01	1.57	0.02
1700001C19Rik	2.12	0.00	-1.46	0.01	1.48	0.09
2810055F11Rik	1.60	0.06	-1.45	0.00	-1.01	0.96
BC027088	1.78	0.05	-1.45	0.02	-1.04	0.84
Lgals1	-2.93	0.00	-1.45	0.05	-4.79	0.00
Zkscan1	1.61	0.02	-1.44	0.02	1.67	0.05
Ugt2a3	2.24	0.00	-1.44	0.00	1.12	0.47
Hsd3b2	1.64	0.08	-1.44	0.02	-1.40	0.40
Nnmt	2.17	0.11	-1.44	0.42	-1.03	0.94
AA175286	-2.13	0.01	-1.43	0.03	-1.36	0.09
Afmid	2.12	0.00	-1.43	0.00	1.24	0.36
D9Wsu20e	1.88	0.00	-1.42	0.03	1.23	0.22
Adam11	-1.91	0.00	-1.42	0.01	-2.35	0.01
Ntn3	1.68	0.00	-1.41	0.00	1.64	0.02
2310067E08Rik	-3.44	0.00	-1.41	0.01	-3.08	0.00
Nit2	1.58	0.00	-1.41	0.00	1.15	0.41

Avpr1a	3.75	0.00	-1.40	0.08	2.38	0.01
Dio1	-1.60	0.10	-1.40	0.16	1.81	0.01
1110025109Rik	1.57	0.00	-1.40	0.00	1.28	0.15
Fbxo36	1.59	0.19	-1.40	0.03	1.70	0.05
1100001G20Rik	1.76	0.00	-1.40	0.11	2.45	0.00
Ly96	1.58	0.12	-1.39	0.00	-1.28	0.27
4833421E05Rik	1.52	0.00	-1.39	0.01	1.50	0.04
Nox4	1.57	0.02	-1.39	0.08	2.22	0.00
Aldh1a7	-1.70	0.01	-1.39	0.00	-2.58	0.00
Mrps25	1.55	0.08	-1.38	0.03	-1.47	0.13
Slc16a2	1.66	0.09	-1.38	0.01	-1.30	0.13
Tmem86b	1.76	0.00	-1.37	0.10	-1.28	0.22
Kremen	1.50	0.09	-1.37	0.12	-1.00	1.00
Psen2	1.63	0.00	-1.35	0.06	-1.41	0.08
Wdr51b	1.54	0.00	-1.35	0.02	-1.02	0.92
AI317395	1.53	0.00	-1.35	0.15	2.56	0.00
1700020C11Rik	1.70	0.12	-1.35	0.01	1.08	0.71
Fhl1	-1.56	0.10	-1.35	0.01	-1.28	0.18
Hsd11b1	1.85	0.00	-1.34	0.02	2.94	0.00
Cyp4f14	1.96	0.03	-1.34	0.01	2.08	0.07
Pecr	2.00	0.00	-1.34	0.03	1.54	0.03
Slc10a1	2.17	0.05	-1.34	0.11	4.20	0.00
3110057O12Rik	1.56	0.08	-1.34	0.01	-1.14	0.40
Gstm6	1.55	0.06	-1.33	0.07	-1.03	0.88
Mnd1	1.58	0.01	-1.33	0.04	1.16	0.40
Aass	1.52	0.04	-1.33	0.03	1.39	0.53
Cxcl1	-3.57	0.02	-1.33	0.39	5.94	0.01
Paqr9	1.60	0.11	-1.32	0.06	-1.05	0.85
Mapt	-2.20	0.00	-1.32	0.01	1.02	0.90
Tnfrsf11b	-3.29	0.00	-1.32	0.15	1.20	0.36
Tubb2b	-5.51	0.00	-1.32	0.01	1.40	0.25
Bach2	1.60	0.01	-1.32	0.04	-1.75	0.04
Il1rap	1.71	0.00	-1.31	0.02	1.68	0.02
3830422K02Rik	1.63	0.01	-1.31	0.02	1.04	0.92
Irf1	-1.54	0.19	-1.31	0.07	-1.05	0.77
2500002K03Rik	1.52	0.20	-1.31	0.00	1.11	0.55
Extl1	4.70	0.00	-1.30	0.29	6.82	0.00
D19Wsu12e	-1.68	0.00	-1.30	0.01	-1.39	0.19
Ptp4a2	1.51	0.01	-1.30	0.00	-1.36	0.14
Plcl2	-1.92	0.00	-1.29	0.09	-1.46	0.09
Gstm2	-2.05	0.00	-1.29	0.13	-1.55	0.06
Tmem49	1.74	0.09	-1.28	0.00	1.08	0.65
P2ry1	2.50	0.05	-1.28	0.33	-1.71	0.12
D14Ert449e	3.01	0.00	-1.28	0.02	1.22	0.23
Dapk1	1.69	0.01	-1.28	0.02	-1.25	0.36
2310010G13Rik	1.62	0.00	-1.27	0.02	1.31	0.12
Tpmt	1.62	0.18	-1.27	0.01	-1.05	0.77
2610318118Rik	1.51	0.06	-1.27	0.04	1.02	0.91
3110001H15Rik	1.89	0.02	-1.27	0.00	1.05	0.75
Il1b	-1.72	0.02	-1.27	0.29	-1.28	0.16
Tfb1m	1.53	0.07	-1.27	0.03	1.11	0.60
Gpc4	2.10	0.00	-1.27	0.00	1.28	0.15

Ccl25	1.65	0.01	-1.27	0.01	1.28	0.24
Rfx4	2.44	0.01	-1.27	0.04	2.89	0.00
Hist1h2ak	-2.18	0.11	-1.26	0.02	-2.09	0.00
Rnase4	1.77	0.08	-1.26	0.13	1.57	0.11
Rchy1	1.54	0.04	-1.26	0.00	1.17	0.36
Sardh	1.71	0.00	-1.26	0.01	-1.08	0.62
Slc15a4	1.70	0.06	-1.25	0.05	-1.19	0.37
S3-12	-2.35	0.01	-1.25	0.53	-1.43	0.25
1200006F02Rik	1.93	0.07	-1.24	0.31	1.22	0.65
Hbs1l	1.64	0.02	-1.24	0.02	1.22	0.23
Sfxn1	-1.66	0.00	-1.24	0.08	-1.27	0.25
Mgst3	-3.46	0.00	-1.24	0.33	-1.19	0.29
Lsm2	1.51	0.20	-1.24	0.07	-1.39	0.22
Fgf1	1.74	0.01	-1.23	0.24	5.20	0.00
Ecsit	1.51	0.00	-1.23	0.00	1.05	0.78
Bmp1	1.67	0.00	-1.23	0.07	1.54	0.06
Pparg	-3.13	0.00	-1.23	0.07	-2.73	0.00
Timm9	1.69	0.00	-1.22	0.06	1.26	0.20
Pipox	1.77	0.00	-1.22	0.05	1.15	0.38
Nfe2l2	-1.93	0.00	-1.22	0.02	-1.48	0.05
Ifit3	-1.77	0.13	-1.22	0.11	-1.46	0.10
Rbm4	1.54	0.03	-1.21	0.02	-1.03	0.87
4930542G03Rik	-2.30	0.00	-1.21	0.21	-1.59	0.07
Aadat	1.57	0.12	-1.21	0.23	-1.30	0.22
Mospd3	1.84	0.00	-1.21	0.09	1.15	0.44
2700082D03Rik	1.56	0.00	-1.21	0.01	-1.12	0.49
2310061C15Rik	1.53	0.19	-1.20	0.00	-1.11	0.51
Vegfb	-1.62	0.00	-1.20	0.28	1.23	0.53
Rorc	2.54	0.07	-1.20	0.11	1.44	0.26
Nthl1	1.95	0.05	-1.20	0.00	1.08	0.76
Plscr4	-1.79	0.10	-1.20	0.05	-1.24	0.32
Wdr21	-2.63	0.04	-1.20	0.30	1.35	0.38
Tst	1.57	0.00	-1.20	0.02	-1.30	0.12
Cdh2	1.59	0.06	-1.20	0.01	-1.02	0.92
Cyp1a2	1.50	0.04	-1.20	0.51	1.62	0.18
Ift20	1.51	0.00	-1.20	0.00	-1.14	0.53
Zap70	1.58	0.14	-1.20	0.39	-3.26	0.00
1110002N22Rik	1.55	0.01	-1.19	0.04	1.22	0.30
Epha2	1.61	0.01	-1.19	0.52	1.01	0.94
Gbp2	-3.26	0.13	-1.19	0.11	-1.06	0.70
Clcn2	1.59	0.00	-1.19	0.12	1.21	0.32
Ftsj	1.59	0.13	-1.19	0.04	1.21	0.25
BC017612	1.82	0.00	-1.19	0.44	1.63	0.03
Pdzx	1.54	0.02	-1.18	0.11	1.32	0.19
Fxyd1	1.64	0.00	-1.18	0.02	1.25	0.27
3110004L20Rik	1.57	0.00	-1.18	0.05	1.07	0.73
Loh12cr1	1.67	0.04	-1.18	0.11	1.66	0.02
Arpc5	-1.55	0.00	-1.18	0.00	-1.21	0.25
Slc26a1	1.58	0.05	-1.18	0.05	-1.56	0.03
Scnn1a	2.33	0.00	-1.17	0.32	2.29	0.00
Tk1	2.11	0.00	-1.17	0.34	-1.06	0.75
Actr3	-1.60	0.03	-1.17	0.10	-1.26	0.17

Tmem53	1.51	0.09	-1.17	0.01	-1.04	0.79
BC026782	1.51	0.00	-1.16	0.16	1.34	0.09
Ceacam1	1.58	0.01	-1.16	0.16	1.47	0.07
Tnfaip2	-1.92	0.15	-1.16	0.22	-1.72	0.02
1700123O20Rik	1.55	0.09	-1.16	0.01	1.33	0.15
Lbh	-1.94	0.04	-1.16	0.24	-3.44	0.00
Slc22a7	2.97	0.06	-1.16	0.24	1.35	0.12
9030607L17Rik	1.99	0.08	-1.16	0.09	1.01	0.97
Trp53inp2	1.60	0.00	-1.15	0.17	1.18	0.35
Slc16a10	2.01	0.01	-1.15	0.08	2.01	0.05
D10Ucla2	1.84	0.00	-1.15	0.27	1.62	0.02
2210021J22Rik	-2.45	0.05	-1.15	0.26	-1.74	0.06
Zfand6	1.54	0.02	-1.15	0.02	1.18	0.31
Anp32a	1.74	0.00	-1.15	0.15	1.57	0.04
Pxmp2	1.51	0.00	-1.15	0.05	1.15	0.47
Smpd3a	-1.50	0.02	-1.14	0.14	1.15	0.44
Tmem141	1.74	0.00	-1.14	0.07	-1.37	0.11
Hist1h2af	-2.20	0.14	-1.14	0.19	-1.86	0.01
Slc25a13	2.11	0.00	-1.14	0.09	1.31	0.14
Paox	2.11	0.09	-1.14	0.10	1.12	0.52
1810008A14Rik	1.55	0.01	-1.13	0.00	-1.14	0.59
Sqstm1	-2.00	0.00	-1.13	0.09	-2.10	0.00
Dyrk1a	1.69	0.16	-1.13	0.19	-1.18	0.37
Atp5l	1.58	0.10	-1.13	0.08	-1.04	0.79
Adcy9	1.57	0.06	-1.13	0.19	1.53	0.03
Gle1l	1.69	0.05	-1.13	0.01	1.05	0.78
Cd83	-3.92	0.04	-1.13	0.50	-4.30	0.00
BC025446	1.53	0.00	-1.12	0.34	1.41	0.25
Hrg	1.73	0.00	-1.12	0.51	1.43	0.06
Ctsc	-1.79	0.00	-1.12	0.26	2.05	0.01
Hps3	-1.53	0.04	-1.12	0.14	-1.09	0.62
Agpat6	1.83	0.02	-1.11	0.35	-1.20	0.42
Tax1bp3	-1.80	0.00	-1.11	0.30	-1.39	0.13
Mup4	5.87	0.06	-1.11	0.69	1.10	0.57
Hes6	1.97	0.21	-1.11	0.53	1.13	0.71
Oaf	1.69	0.01	-1.10	0.14	-1.19	0.43
2810405K02Rik	1.80	0.12	-1.10	0.35	1.30	0.25
2310004L02Rik	1.82	0.00	-1.10	0.36	1.93	0.01
Egr2	-8.80	0.04	-1.10	0.78	-4.25	0.00
Ctnnb1	1.57	0.00	-1.10	0.02	1.56	0.04
Ywhah	-1.58	0.00	-1.10	0.10	-2.10	0.01
Abca6	1.50	0.01	-1.09	0.27	1.70	0.01
Sat2	1.72	0.00	-1.09	0.19	1.27	0.17
Cyp4f18	-3.47	0.03	-1.09	0.43	1.02	0.92
Elmo1	-3.30	0.00	-1.09	0.50	-1.40	0.26
Papss1	-1.60	0.02	-1.09	0.30	-1.21	0.36
Gbp4	-1.82	0.09	-1.08	0.69	1.41	0.23
Ndufa5	1.70	0.00	-1.08	0.03	-1.05	0.77
2310009E04Rik	1.58	0.07	-1.08	0.19	1.12	0.47
Arpp19	-2.03	0.00	-1.08	0.22	-1.27	0.20
Ndrp2	1.56	0.02	-1.08	0.06	1.20	0.28
Cml1	1.68	0.00	-1.08	0.46	1.31	0.31

Cap1	1.64	0.00	-1.08	0.67	1.07	0.67
Pole4	1.91	0.03	-1.08	0.28	1.68	0.04
Mbl1	1.73	0.04	-1.08	0.45	1.19	0.29
2010323F13Rik	1.72	0.00	-1.08	0.28	1.22	0.24
Pnpo	1.55	0.11	-1.07	0.09	-1.18	0.32
2810439F02Rik	2.87	0.00	-1.07	0.57	-1.23	0.22
1110017O22Rik	1.63	0.20	-1.07	0.34	-1.27	0.16
Rps6ka1	1.52	0.00	-1.07	0.10	1.57	0.09
Igfbp5	-1.61	0.04	-1.06	0.79	1.26	0.48
Hpn	1.67	0.00	-1.06	0.45	-1.04	0.80
Large	-1.55	0.02	-1.06	0.60	-1.17	0.32
Nsun5	1.57	0.14	-1.06	0.35	1.30	0.12
B930041F14Rik	-9.09	0.00	-1.06	0.85	-2.47	0.01
Rassf1	-1.88	0.00	-1.06	0.26	-1.37	0.13
Stk39	-3.53	0.01	-1.06	0.66	-2.52	0.00
Wdr1	-1.55	0.01	-1.06	0.27	-1.59	0.03
Znrd1	1.87	0.00	-1.06	0.33	-1.09	0.62
Gpd2	-1.50	0.01	-1.06	0.50	1.35	0.26
Ppap2b	1.61	0.06	-1.06	0.47	1.29	0.20
Rhobtb3	1.72	0.07	-1.06	0.60	1.21	0.26
Oasl1	-1.63	0.00	-1.06	0.68	-1.40	0.11
Fn3k	1.89	0.00	-1.05	0.57	1.55	0.09
Mrpl13	1.51	0.19	-1.05	0.41	-1.18	0.30
Pank1	1.78	0.01	-1.05	0.54	2.03	0.01
Rgn	2.32	0.01	-1.05	0.77	1.56	0.07
Srebf2	1.81	0.01	-1.05	0.37	1.48	0.09
Slc13a3	-1.85	0.11	-1.05	0.55	-1.36	0.13
Hgfac	1.62	0.00	-1.05	0.56	1.93	0.01
Csrp3	1.98	0.00	-1.05	0.82	3.36	0.00
Arrdc2	1.66	0.03	-1.04	0.33	1.85	0.01
Shmt2	1.63	0.00	-1.04	0.67	1.12	0.53
4632417N05Rik	1.60	0.00	-1.04	0.80	1.38	0.09
Rbm3	-1.67	0.02	-1.03	0.58	1.22	0.52
Ube1l	-1.65	0.06	-1.03	0.67	-1.17	0.52
Cav1	9.89	0.00	-1.03	0.86	-1.11	0.55
Tnfrsf22	-3.12	0.00	-1.03	0.81	2.01	0.03
1500026D16Rik	1.54	0.02	-1.03	0.64	1.05	0.82
Otud7b	-2.36	0.17	-1.03	0.79	-1.93	0.01
Npr2	2.09	0.00	-1.03	0.58	1.26	0.19
Grtp1	2.55	0.00	-1.03	0.21	1.36	0.14
Ube2q2	1.61	0.08	-1.03	0.77	1.08	0.68
Aldh8a1	1.78	0.17	-1.02	0.74	1.28	0.14
Adprh	-1.52	0.04	-1.02	0.79	-1.37	0.08
Hist1h2ao	-2.23	0.15	-1.02	0.85	-2.80	0.00
Oas1g	-3.10	0.13	-1.02	0.91	1.41	0.36
1810037G04Rik	1.58	0.00	-1.02	0.70	1.08	0.62
Gulo	1.58	0.01	-1.02	0.87	-1.11	0.56
Aadac	1.60	0.05	-1.02	0.80	1.31	0.18
Cyp2a12	-2.33	0.00	-1.02	0.67	-1.21	0.24
Cstb	-1.85	0.01	-1.02	0.84	-2.19	0.00
Eno1	-1.61	0.00	-1.01	0.94	1.34	0.13
Plekha2	-1.84	0.09	-1.01	0.86	-1.45	0.05

1110018J18Rik	1.60	0.20	-1.01	0.89	1.13	0.46
4732475C15Rik	1.83	0.11	-1.01	0.82	1.21	0.26
D11ErtD18e	1.53	0.00	-1.01	0.84	1.06	0.75
Pfdn2	1.55	0.06	-1.01	0.84	1.11	0.51
Tpd52l1	1.86	0.00	-1.01	0.94	-1.63	0.03
Tm6sf2	1.67	0.00	-1.01	0.90	1.79	0.01
Cbr1	-1.59	0.07	-1.00	0.97	-1.47	0.08
Ndufb7	1.50	0.05	-1.00	0.96	-1.17	0.32
Tubb5	-2.11	0.00	-1.00	0.99	-3.12	0.00
Dscr1	-4.08	0.01	-1.00	0.98	1.00	0.99
Sdcbp	-1.68	0.03	-1.00	0.97	-1.39	0.08
Csf2ra	-3.79	0.12	-1.00	0.99	-1.74	0.02
Zw10	1.60	0.05	-1.00	0.99	1.25	0.20
BC049354	-3.95	0.00	-1.00	1.00	-1.12	0.63
Ear4	-4.32	0.05	-1.00	1.00	-1.67	0.14
Xlr4a	1.81	0.09	-1.00	1.00	-1.16	0.43
1300010A20Rik	2.58	0.00	1.00	1.00	1.22	0.39
Timp1	-6.70	0.09	1.00	0.96	-2.55	0.00
Lias	1.57	0.08	1.00	0.95	-1.02	0.91
Zfp2	1.91	0.03	1.00	0.89	1.83	0.01
P2ry14	-2.26	0.00	1.00	0.95	-1.31	0.12
2700038C09Rik	1.53	0.01	1.00	0.94	1.07	0.66
Mobkl2a	-2.08	0.06	1.01	0.94	-1.25	0.19
Tnfrsf19	-2.33	0.05	1.01	0.90	-2.80	0.01
Dgka	1.98	0.00	1.01	0.90	1.79	0.03
Sorl1	-4.42	0.00	1.01	0.91	-1.71	0.02
Al838661	-2.15	0.00	1.01	0.83	-1.11	0.58
Vat1	-1.69	0.00	1.01	0.90	-1.30	0.19
1810020D17Rik	1.50	0.01	1.01	0.89	1.36	0.18
D10Bwg1364e	-1.72	0.10	1.02	0.60	1.35	0.09
4930572J05Rik	-1.59	0.01	1.02	0.88	-1.69	0.07
5730453H04Rik	-1.52	0.06	1.02	0.84	-1.73	0.07
Limk1	-2.18	0.00	1.02	0.61	-1.51	0.07
Spp1	-2.21	0.00	1.02	0.45	-3.62	0.00
Tgm2	-2.70	0.00	1.02	0.36	-2.65	0.00
2510006D16Rik	1.66	0.00	1.02	0.65	-1.08	0.65
Cpn2	1.64	0.00	1.02	0.69	1.56	0.03
Hspbap1	-2.57	0.01	1.02	0.91	-2.94	0.00
Lgals3bp	-1.69	0.00	1.03	0.63	-1.50	0.04
H2-DMa	-3.13	0.20	1.03	0.74	-1.20	0.42
Polg2	1.55	0.05	1.03	0.59	1.21	0.32
4931440N07Rik	-6.63	0.00	1.03	0.72	1.53	0.03
Pla1a	1.54	0.00	1.03	0.72	1.38	0.08
Nudt7	2.02	0.13	1.03	0.87	-1.34	0.26
Map2k1	1.83	0.01	1.03	0.44	1.24	0.21
ltpr2	1.81	0.00	1.03	0.75	1.15	0.41
1110028N05Rik	1.55	0.02	1.04	0.50	1.22	0.25
Gas6	-2.52	0.00	1.04	0.73	-1.79	0.02
Lcp1	-1.65	0.10	1.04	0.60	-1.35	0.14
BC065078	1.61	0.00	1.04	0.33	-1.54	0.11
Cyp7b1	5.07	0.00	1.04	0.92	1.38	0.29
Igf1	1.76	0.00	1.04	0.29	-1.59	0.02

Sat1	-1.94	0.00	1.04	0.64	-2.06	0.00
Cd44	-1.82	0.04	1.04	0.70	-2.62	0.00
Abcc10	1.56	0.05	1.04	0.29	1.29	0.18
Gng5	1.52	0.04	1.04	0.60	-1.07	0.67
Mcl1	-1.55	0.00	1.04	0.47	-1.37	0.16
Hapln4	1.91	0.00	1.05	0.72	1.52	0.13
Galnt10	-1.78	0.00	1.05	0.62	-2.10	0.01
Usp20	-1.63	0.00	1.05	0.44	-1.74	0.01
Hpd	1.60	0.00	1.05	0.66	1.28	0.33
Entpd8	1.75	0.01	1.05	0.39	1.39	0.08
Fchsd1	-2.94	0.01	1.05	0.43	-2.20	0.00
H2-M3	-2.20	0.00	1.05	0.72	-1.36	0.13
Plg	1.64	0.00	1.05	0.37	1.21	0.27
Anapc5	-1.52	0.05	1.05	0.28	-1.41	0.07
Hn1	-1.93	0.00	1.05	0.32	-1.66	0.03
Tpd52	-2.13	0.00	1.05	0.33	-1.14	0.42
Asgr2	1.54	0.00	1.06	0.17	1.25	0.20
5033414D02Rik	-1.63	0.04	1.06	0.35	-1.98	0.02
Slc25a42	1.79	0.00	1.06	0.60	1.35	0.18
Chchd7	1.52	0.00	1.06	0.28	2.06	0.01
Pltp	-1.95	0.00	1.06	0.68	4.08	0.00
D14Ert668e	-2.55	0.08	1.07	0.14	-1.01	0.95
Kng2	1.50	0.00	1.07	0.56	2.13	0.00
Slco2a1	-1.67	0.00	1.07	0.10	1.86	0.02
Faah	1.62	0.16	1.07	0.45	1.52	0.04
Actb	-1.82	0.00	1.07	0.38	1.05	0.78
Nap111	-2.00	0.00	1.07	0.12	-1.03	0.88
Cd40	-2.22	0.18	1.07	0.73	-1.51	0.03
Atpaf2	1.78	0.08	1.07	0.10	-1.03	0.86
BC030183	2.41	0.00	1.08	0.08	1.00	1.00
Tmem43	-2.55	0.00	1.08	0.62	-2.61	0.00
Tgfbr1	-1.53	0.02	1.08	0.05	-1.38	0.08
Alg9	1.66	0.15	1.08	0.14	-1.12	0.60
Setd8	-1.49	0.06	1.08	0.62	-2.13	0.03
Bat4	1.71	0.17	1.08	0.34	-1.32	0.20
Plscr1	-2.13	0.00	1.08	0.34	-1.45	0.11
Slpi	-2.63	0.07	1.08	0.81	-2.30	0.00
Gjb1	1.89	0.01	1.08	0.60	1.44	0.05
Stxbp2	-1.52	0.00	1.08	0.39	1.70	0.02
Hk3	-3.04	0.00	1.09	0.39	-1.45	0.16
Phf11	-3.85	0.08	1.09	0.30	-1.01	0.95
Lpxn	-3.47	0.01	1.09	0.28	-1.96	0.01
Kcnn2	1.85	0.03	1.09	0.46	1.72	0.02
Mapre2	-1.85	0.00	1.09	0.21	-1.13	0.65
A430005L14Rik	1.66	0.00	1.09	0.20	1.28	0.16
Lig1	-1.95	0.01	1.09	0.09	-1.50	0.04
Hspb1	-2.14	0.00	1.10	0.51	-2.09	0.01
Rgl1	-1.69	0.02	1.10	0.10	-1.82	0.05
Zfp691	1.96	0.14	1.10	0.14	-1.03	0.90
Tpcn2	-2.35	0.01	1.10	0.17	1.31	0.17
Psmc8	-1.63	0.00	1.10	0.07	-1.26	0.21
Tnfaip3	-4.63	0.00	1.10	0.37	-1.27	0.23

5930434B04Rik	1.54	0.05	1.10	0.06	1.11	0.59
Slc29a1	1.73	0.00	1.10	0.30	1.47	0.09
Arhgap17	-1.75	0.00	1.11	0.10	-1.40	0.07
AA960558	-2.41	0.00	1.11	0.40	-1.64	0.02
Sesn1	-1.55	0.01	1.11	0.27	1.25	0.20
Heatr1	1.73	0.00	1.12	0.25	1.41	0.14
Scarb1	1.97	0.00	1.12	0.28	1.16	0.41
Pgd	-1.99	0.00	1.12	0.24	-2.32	0.00
Lst1	-1.91	0.01	1.12	0.19	-1.65	0.06
2310008H09Rik	1.71	0.16	1.12	0.09	-1.07	0.67
Lcat	1.54	0.00	1.12	0.35	2.34	0.46
Fcna	1.84	0.00	1.12	0.51	-1.60	0.03
Nostrin	1.51	0.08	1.12	0.16	1.42	0.07
Parp16	1.92	0.03	1.12	0.26	1.47	0.27
4933422H20Rik	2.43	0.03	1.12	0.28	-1.07	0.77
Asah1	-1.71	0.01	1.12	0.10	1.00	0.99
Gnb1	-1.69	0.00	1.12	0.14	-1.54	0.03
Kctd12	-4.09	0.00	1.12	0.01	-1.10	0.60
Csnk1e	-1.73	0.05	1.12	0.19	-2.25	0.00
Slc8a1	-2.72	0.08	1.12	0.20	-1.07	0.67
Ubd	-8.51	0.04	1.13	0.74	-22.07	0.00
4732429D16Rik	-1.67	0.09	1.13	0.29	-1.08	0.73
Hk2	-5.03	0.00	1.13	0.15	-2.48	0.00
Grina	-1.51	0.00	1.13	0.40	1.55	0.03
Ctps	-1.63	0.17	1.13	0.01	-1.87	0.02
Gstm4	-1.51	0.01	1.14	0.06	1.11	0.60
Cd163	2.79	0.11	1.14	0.44	7.12	0.00
St3gal3	1.72	0.10	1.14	0.59	1.44	0.05
Gpx4	-1.74	0.00	1.14	0.16	-1.62	0.03
Ets2	-1.80	0.00	1.14	0.02	-1.29	0.29
H2-Eb1	-3.81	0.18	1.14	0.30	-1.94	0.01
9130211I03Rik	-2.81	0.01	1.14	0.28	-2.80	0.01
Rhou	-1.68	0.00	1.14	0.26	-1.51	0.08
Tpm3	-1.61	0.00	1.14	0.01	-1.38	0.10
Ccl4	-9.55	0.00	1.15	0.62	-5.64	0.00
Tnfaip8	-1.97	0.10	1.15	0.40	-1.40	0.09
Ly86	-3.01	0.00	1.15	0.23	-1.89	0.01
Gpld1	1.77	0.00	1.15	0.15	1.31	0.20
Anxa3	-2.61	0.02	1.15	0.24	-2.50	0.00
2610024G14Rik	1.50	0.17	1.15	0.08	-1.20	0.37
Casp6	-1.50	0.05	1.15	0.30	1.22	0.22
Alcam	-1.70	0.00	1.15	0.15	-1.87	0.02
A330080J22Rik	1.59	0.20	1.15	0.11	-1.05	0.76
Ggcx	1.56	0.06	1.16	0.04	1.30	0.13
1700022C21Rik	1.60	0.01	1.16	0.07	-1.09	0.62
Prelp	-1.61	0.00	1.16	0.03	-1.63	0.06
Fabp3	10.52	0.00	1.16	0.47	-1.83	0.02
6330505F04Rik	-1.59	0.06	1.16	0.09	-1.52	0.04
Dok2	-2.57	0.01	1.16	0.35	-1.76	0.02
Gadd45a	-2.11	0.09	1.17	0.49	-1.59	0.16
Nfkbiz	-1.68	0.01	1.17	0.42	1.58	0.06
1110012E06Rik	-1.70	0.05	1.17	0.00	-1.39	0.25

Il3ra	-1.89	0.05	1.18	0.05	-1.06	0.75
A830007P12Rik	-1.61	0.09	1.18	0.05	-1.07	0.68
Ephx1	-2.15	0.00	1.18	0.18	-1.30	0.19
Clec4a3	-2.21	0.04	1.18	0.18	-1.16	0.53
Wtip	-1.56	0.01	1.18	0.05	-1.44	0.05
5730593N15Rik	2.03	0.00	1.18	0.13	-1.02	0.96
Mmp14	-1.72	0.02	1.18	0.03	1.17	0.51
Mylc2b	-1.76	0.00	1.18	0.03	-1.61	0.02
Pla2g12a	-1.61	0.01	1.18	0.06	1.56	0.04
Rasgrp1	-2.57	0.03	1.18	0.12	-1.04	0.84
Ptprs	-1.82	0.00	1.19	0.09	-2.35	0.00
Kif1b	1.59	0.09	1.19	0.16	-1.08	0.69
A130092J06Rik	-1.93	0.00	1.19	0.07	-1.43	0.14
Tm4sf4	-1.97	0.08	1.19	0.34	-2.38	0.00
Tuba1a	-1.52	0.01	1.19	0.21	-2.45	0.00
Mrps5	1.58	0.01	1.19	0.00	1.31	0.12
Khdrbs1	-1.49	0.06	1.20	0.16	-1.08	0.63
Ccr5	-3.00	0.17	1.20	0.11	-1.51	0.21
Marcks	-2.28	0.00	1.20	0.17	-1.99	0.01
Tmem8	1.51	0.18	1.20	0.01	-1.22	0.28
Rgl2	-1.56	0.01	1.20	0.01	-1.22	0.26
Cpt1b	-2.28	0.00	1.20	0.09	1.97	0.10
Tnfrsf11a	-4.00	0.04	1.20	0.24	-1.24	0.28
2610027L16Rik	1.61	0.12	1.20	0.01	1.01	0.96
Pqbp1	1.83	0.05	1.20	0.05	1.15	0.40
Al415330	1.54	0.04	1.20	0.09	3.01	0.00
Slc39a6	-1.61	0.19	1.21	0.04	-1.18	0.33
Cryl1	-1.56	0.00	1.21	0.26	-1.52	0.09
Apobec1	-1.73	0.00	1.21	0.01	-1.45	0.05
D12Ert553e	-1.55	0.07	1.21	0.04	-1.23	0.22
2310005E10Rik	-1.84	0.02	1.21	0.04	-1.51	0.13
Plvap	-1.50	0.00	1.21	0.02	-1.32	0.13
Gusb	-1.66	0.00	1.21	0.00	1.17	0.34
Laptm5	-2.73	0.00	1.21	0.12	-1.90	0.02
Plk2	-2.00	0.01	1.22	0.12	-2.22	0.01
BC013712	-2.45	0.03	1.22	0.13	-1.83	0.02
Dcn	-1.67	0.00	1.22	0.02	-1.78	0.01
Spnb2	-1.70	0.04	1.22	0.01	-1.20	0.30
Frrs1	-1.81	0.00	1.22	0.05	-1.44	0.07
Papss2	1.65	0.06	1.22	0.30	1.27	0.19
Ccnd3	1.65	0.01	1.22	0.06	1.37	0.08
Ptpn18	-2.95	0.13	1.22	0.22	-2.31	0.01
Pddc1	1.79	0.16	1.23	0.06	-1.05	0.80
AY078069	-2.84	0.12	1.23	0.38	-1.36	0.09
Oas2	-3.21	0.00	1.23	0.06	-1.64	0.04
Cml2	1.93	0.01	1.23	0.17	1.22	0.24
Gngt2	-2.31	0.02	1.23	0.14	-1.40	0.20
Snn	-2.16	0.00	1.23	0.11	-1.43	0.05
Ear10	-3.68	0.04	1.23	0.14	-1.46	0.09
Znrf1	1.55	0.12	1.23	0.01	1.12	0.49
Irf5	-1.89	0.08	1.24	0.05	-1.77	0.15
Ifit2	-3.65	0.00	1.24	0.07	-1.25	0.24

Lmna	-1.52	0.01	1.24	0.04	-1.70	0.02
Cd86	-2.35	0.00	1.24	0.09	-1.01	0.95
Htatif2	-1.56	0.00	1.24	0.09	-1.28	0.16
C9	-1.93	0.01	1.24	0.13	1.02	0.95
Sec14l4	1.74	0.09	1.24	0.01	1.21	0.41
Cyp17a1	-2.98	0.02	1.24	0.38	1.15	0.70
Trit1	1.58	0.00	1.24	0.03	-1.32	0.21
Slc24a3	-3.35	0.00	1.24	0.15	-2.63	0.00
Ehd4	-1.98	0.01	1.24	0.06	-1.29	0.18
Zfp90	-2.13	0.00	1.24	0.10	-1.94	0.01
Nt5c2	-1.83	0.07	1.25	0.02	1.43	0.13
Kif3a	-1.50	0.09	1.25	0.17	-1.51	0.11
Il15ra	1.57	0.06	1.25	0.03	2.17	0.00
Aif1	-2.36	0.00	1.25	0.13	-2.43	0.04
Als2cr4	-2.13	0.00	1.25	0.05	-2.32	0.00
Oasl2	-2.78	0.13	1.26	0.01	-1.78	0.03
Sh3kbp1	-2.25	0.15	1.26	0.07	-1.87	0.02
Spc25	2.17	0.00	1.26	0.14	-1.29	0.24
Mrps2	1.56	0.01	1.26	0.00	1.15	0.49
Plcg2	-2.34	0.02	1.26	0.01	-1.61	0.08
Lrp11	-1.84	0.19	1.26	0.16	-1.61	0.04
Ephb2	-11.09	0.00	1.26	0.55	-5.16	0.00
Lilrb4	-4.18	0.00	1.27	0.02	-1.66	0.04
Zfp289	1.53	0.00	1.27	0.03	1.21	0.26
Adrbk1	-1.52	0.00	1.27	0.01	-1.37	0.15
Trem14	-2.19	0.04	1.27	0.15	-2.01	0.01
F7	2.06	0.00	1.27	0.01	1.90	0.01
Abca8a	1.79	0.00	1.27	0.06	1.42	0.06
Tspan31	1.87	0.00	1.27	0.04	-1.50	0.04
Rab8b	-2.63	0.05	1.28	0.10	-1.11	0.52
Fcgr3	-2.42	0.17	1.28	0.01	-1.17	0.33
Tinagl	-1.52	0.06	1.28	0.01	-1.07	0.68
Vsig4	-1.86	0.00	1.28	0.02	1.51	0.07
Tnfrsf21	-1.56	0.16	1.28	0.04	-1.61	0.03
Trpt1	1.53	0.04	1.28	0.00	1.64	0.04
Tmsb4x	-2.24	0.00	1.28	0.11	-2.37	0.01
Cotl1	-2.70	0.01	1.28	0.14	-3.04	0.00
Cerk	-2.40	0.01	1.29	0.05	-1.14	0.62
Col14a1	-1.53	0.12	1.29	0.03	-1.48	0.10
Cxcl16	-2.66	0.00	1.29	0.01	-1.82	0.02
2700029E10Rik	2.53	0.00	1.29	0.10	-1.92	0.01
Arhgap25	-5.21	0.00	1.29	0.09	-2.37	0.00
Gpr65	-2.95	0.12	1.29	0.04	-1.67	0.04
Fcgr1	-4.20	0.03	1.29	0.10	-1.83	0.05
2810022L02Rik	-3.73	0.01	1.29	0.01	-1.24	0.25
Slc35c2	-1.49	0.08	1.30	0.06	-1.30	0.20
Arhgap30	-2.22	0.09	1.30	0.02	-2.02	0.01
Mast2	-1.50	0.01	1.30	0.00	-1.64	0.02
Cmtm7	-2.04	0.01	1.30	0.03	-1.76	0.01
9330129D05Rik	-2.79	0.00	1.30	0.06	-1.87	0.01
Rac2	-3.08	0.04	1.30	0.01	-1.79	0.03
Fez2	-1.55	0.00	1.30	0.01	-1.02	0.92

Al604832	-1.65	0.01	1.30	0.01	1.02	0.89
ldh2	-1.51	0.00	1.30	0.07	-1.46	0.06
AA691260	1.88	0.08	1.30	0.00	-1.14	0.41
1200002N14Rik	-3.20	0.04	1.30	0.02	-1.86	0.01
Oxct1	-2.35	0.05	1.30	0.02	-2.45	0.00
Timm10	1.84	0.00	1.30	0.01	1.00	1.00
Evi2a	-4.54	0.01	1.30	0.15	-1.81	0.01
Arrb2	-1.63	0.01	1.31	0.01	-1.23	0.30
4432409M07Rik	-1.83	0.07	1.31	0.01	-2.07	0.01
Anxa5	-3.24	0.00	1.31	0.09	-3.34	0.00
2410016O06Rik	1.54	0.10	1.31	0.02	-1.03	0.85
Fpr-rs2	-4.09	0.00	1.31	0.09	1.29	0.22
Pde1b	-1.62	0.05	1.31	0.01	-1.10	0.59
Gprk6	-1.87	0.13	1.31	0.01	-1.02	0.91
Pea15	-2.12	0.00	1.32	0.04	-2.32	0.01
Capn10	1.94	0.00	1.32	0.01	2.13	0.01
Fcer1g	-2.87	0.02	1.32	0.03	-1.94	0.01
Abhd1	1.75	0.04	1.32	0.03	2.04	0.04
9030625A04Rik	-1.74	0.01	1.32	0.02	-1.59	0.04
Mgat4b	-1.49	0.00	1.32	0.05	-1.54	0.04
Dnajc12	1.75	0.20	1.32	0.16	3.09	0.00
Pdlim4	-2.24	0.00	1.32	0.05	-2.51	0.01
Unc93b1	-1.58	0.01	1.32	0.00	-1.49	0.10
AA536743	-1.64	0.04	1.33	0.08	-1.59	0.03
1110063F24Rik	-2.73	0.00	1.33	0.01	-1.09	0.66
Cd52	-4.82	0.01	1.35	0.07	-2.53	0.01
Srd5a2l	-1.67	0.02	1.35	0.03	-1.14	0.43
2510048K03Rik	-1.98	0.00	1.35	0.00	-1.29	0.15
Tm6sf1	-4.42	0.04	1.35	0.02	-1.16	0.38
BC022145	-2.06	0.19	1.36	0.00	-1.53	0.12
Jun	-2.85	0.00	1.36	0.22	-1.76	0.19
BC003236	-2.06	0.07	1.36	0.00	1.07	0.70
Slc12a7	1.51	0.12	1.37	0.00	-1.19	0.52
Cxcl4	-2.95	0.09	1.37	0.04	-1.87	0.01
Myh9	-1.66	0.00	1.37	0.03	-2.15	0.00
2510009E07Rik	-1.58	0.00	1.37	0.00	-2.20	0.00
1700023M03Rik	-2.05	0.02	1.37	0.10	-1.69	0.01
Dok3	-1.60	0.01	1.37	0.00	-1.16	0.37
Hmox1	-1.74	0.08	1.38	0.11	-1.34	0.41
Tnip1	-2.17	0.00	1.38	0.01	-1.95	0.01
Spon2	-2.16	0.10	1.38	0.35	-2.53	0.00
Lgals3	-6.05	0.00	1.38	0.07	-3.00	0.00
Npc2	-1.50	0.00	1.38	0.00	-1.02	0.91
Sh3tc1	-1.75	0.00	1.38	0.01	1.10	0.59
Ikbke	-1.56	0.03	1.38	0.00	1.04	0.84
Aqp11	2.06	0.05	1.39	0.00	1.35	0.10
P2ry13	-1.87	0.02	1.39	0.02	-1.13	0.67
Rgs10	-2.51	0.13	1.39	0.02	-2.39	0.00
Ckb	-2.23	0.00	1.39	0.05	-3.87	0.00
Fgd2	-2.66	0.00	1.40	0.01	-1.59	0.09
Glt25d1	-1.69	0.00	1.40	0.00	-1.33	0.11
1810055G02Rik	1.74	0.00	1.40	0.07	1.76	0.04

Cd97	-1.55	0.19	1.40	0.00	-1.36	0.13
Tmem176a	-1.96	0.00	1.40	0.00	-1.62	0.02
Apcs	-1.54	0.00	1.40	0.12	2.11	0.01
Asb2	-3.83	0.11	1.40	0.09	-2.36	0.01
C230090D14	-3.66	0.00	1.41	0.01	-1.59	0.04
Crtap	-1.67	0.02	1.41	0.00	-1.54	0.04
Ppfbp1	-1.92	0.06	1.41	0.05	-1.16	0.41
BC049975	-2.18	0.11	1.41	0.01	2.38	0.00
Prkcz	1.55	0.00	1.41	0.00	1.56	0.03
Gpr109a	105.50	0.04	1.41	0.19	-1.21	0.66
Dapk2	-1.63	0.00	1.41	0.09	-1.32	0.23
Pdlim7	-1.77	0.02	1.41	0.03	-1.32	0.11
Serpina1c	1.53	0.00	1.41	0.02	1.21	0.26
Dscr1l2	-2.08	0.00	1.42	0.00	-1.15	0.43
5430435G22Rik	-3.16	0.07	1.42	0.09	-3.86	0.00
Pip5k2a	-2.04	0.00	1.42	0.00	-1.48	0.14
Nxn	-1.58	0.01	1.42	0.01	-1.55	0.03
Sort1	-2.84	0.00	1.42	0.05	1.09	0.79
Rassf4	-2.51	0.00	1.42	0.00	-1.52	0.05
Emr1	-3.29	0.00	1.42	0.05	-1.64	0.04
C8b	2.90	0.01	1.42	0.03	1.05	0.74
Tgfb1	-1.94	0.09	1.42	0.01	-1.51	0.06
Ly9	-2.81	0.14	1.43	0.03	-1.44	0.05
Treh	-6.55	0.00	1.43	0.11	-1.82	0.06
Prkcb	-2.49	0.05	1.43	0.00	-1.42	0.14
Nid1	-2.96	0.00	1.43	0.01	-2.52	0.00
Zkscan17	1.64	0.09	1.44	0.00	1.22	0.24
Slc2a8	1.58	0.05	1.44	0.00	1.42	0.06
Ncf4	-2.90	0.00	1.45	0.03	-2.11	0.00
Elovl1	-1.65	0.00	1.45	0.00	-1.38	0.08
Tspan17	-2.02	0.01	1.45	0.01	1.21	0.33
Pbxip1	-1.65	0.18	1.45	0.00	-1.21	0.28
Myo1g	-3.06	0.05	1.45	0.02	-1.59	0.03
Thbs2	-2.63	0.01	1.45	0.03	-3.35	0.00
Ly6e	-2.50	0.07	1.46	0.04	-2.35	0.01
Epb4.1l3	-2.19	0.00	1.46	0.01	1.04	0.90
Ifi30	-3.39	0.01	1.46	0.02	-1.17	0.33
Rela	-1.49	0.00	1.46	0.01	-1.07	0.66
Elovl2	1.63	0.00	1.46	0.03	1.02	0.92
Btk	-2.41	0.00	1.46	0.00	-1.25	0.24
Entpd2	-1.96	0.00	1.47	0.05	-3.82	0.00
Flna	-2.12	0.00	1.47	0.00	-2.96	0.00
Btbd11	-2.26	0.00	1.47	0.01	-1.11	0.60
Apob48r	-1.92	0.21	1.47	0.00	-1.50	0.04
BC032204	-3.07	0.00	1.47	0.02	-1.17	0.40
Btc	-2.49	0.00	1.47	0.09	-2.03	0.01
Cyba	-2.85	0.04	1.48	0.03	-1.72	0.03
Serpina3g	-2.18	0.08	1.48	0.01	1.29	0.24
Ccl3	-10.86	0.00	1.48	0.13	-2.14	0.01
Cyp2f2	-2.59	0.00	1.48	0.00	1.06	0.72
Pld3	-1.68	0.00	1.48	0.01	-1.40	0.06
Spink3	-3.52	0.01	1.48	0.14	-6.64	0.00

F11	2.32	0.00	1.48	0.03	-1.39	0.08
Tbxas1	-2.19	0.15	1.48	0.03	-1.98	0.02
Serpinc1	1.55	0.01	1.49	0.02	1.08	0.65
Iqgap1	-2.80	0.00	1.49	0.00	-2.56	0.00
Mkl1	-1.72	0.14	1.49	0.05	-1.72	0.03
Kcnk5	1.69	0.00	1.49	0.15	1.95	0.26
D11Ert636e	2.84	0.00	1.50	0.02	4.73	0.00
Abi3	-2.21	0.00	1.50	0.00	-1.22	0.26
Lamc1	-2.60	0.00	1.50	0.00	-1.82	0.01
D15Ert735e	1.59	0.04	1.50	0.00	1.02	0.91
Mapkbp1	1.81	0.20	1.50	0.02	1.31	0.16
Fbn1	-5.87	0.03	1.51	0.01	-2.21	0.00
Lyzs	-5.60	0.00	1.51	0.04	-3.58	0.00
Micall2	-1.96	0.13	1.51	0.01	-2.39	0.00
Smpd3b	-17.35	0.05	1.51	0.00	1.00	0.99
Al840980	-2.49	0.00	1.51	0.00	-1.52	0.09
Serinc2	-5.24	0.00	1.51	0.01	1.19	0.35
Slc15a3	-3.08	0.00	1.51	0.01	-1.97	0.01
Sh3bgrl3	-3.40	0.03	1.51	0.01	-1.97	0.01
Slc7a8	-2.69	0.05	1.51	0.01	-2.21	0.01
Fkbp1a	-2.07	0.00	1.51	0.00	-1.09	0.60
Lum	-2.95	0.09	1.51	0.00	-3.27	0.00
Mpp1	-1.53	0.00	1.52	0.00	-1.71	0.03
Tmem65	-1.69	0.00	1.52	0.00	-1.29	0.22
Abcc5	-1.89	0.17	1.52	0.02	-2.71	0.00
Myo9b	-2.06	0.00	1.52	0.00	-2.38	0.00
Ccl9	-3.90	0.02	1.52	0.04	-1.70	0.03
Arhgdib	-2.28	0.02	1.52	0.00	-1.82	0.01
Slc40a1	-1.65	0.00	1.52	0.00	-1.66	0.06
Igfbp7	-1.62	0.00	1.53	0.00	-1.75	0.01
Acac	-1.49	0.06	1.53	0.01	1.46	0.15
EG13909	1.68	0.01	1.53	0.02	1.10	0.57
1810010N17Rik	1.67	0.03	1.53	0.00	1.11	0.49
Tmsb10	-3.19	0.15	1.53	0.01	-2.94	0.00
Lgals6	1.73	0.11	1.53	0.03	-1.10	0.60
P2ry6	-2.97	0.08	1.53	0.00	-2.21	0.01
Gnmt	1.61	0.00	1.53	0.01	-1.24	0.27
Coro1a	-3.14	0.00	1.54	0.02	-2.25	0.01
2310057H16Rik	-2.98	0.00	1.54	0.08	-5.76	0.00
Pkm2	-2.56	0.00	1.54	0.01	-1.87	0.01
Ang1	2.21	0.00	1.54	0.08	1.00	0.99
Serpinf2	1.57	0.00	1.54	0.01	1.02	0.91
Ppic	-2.11	0.02	1.54	0.01	-2.38	0.00
Tyrobp	-2.66	0.02	1.54	0.01	-1.88	0.01
Nedd9	-1.79	0.05	1.54	0.00	-1.29	0.32
Apaf1	-1.71	0.06	1.54	0.00	-1.20	0.27
2310061N23Rik	-3.08	0.06	1.54	0.02	-2.92	0.00
Ccl6	-3.90	0.00	1.55	0.01	-1.21	0.45
Tpm4	-1.90	0.00	1.55	0.01	-2.37	0.00
Rps6ka4	-1.63	0.02	1.55	0.00	-1.43	0.08
Msn	-2.58	0.09	1.55	0.00	-1.22	0.29
Anxa2	-7.06	0.00	1.55	0.05	-4.69	0.00

Apom	1.91	0.01	1.55	0.00	1.39	0.08
Serpinb6a	-1.85	0.00	1.55	0.00	-1.18	0.34
1810046124Rik	-4.51	0.01	1.55	0.03	-3.08	0.00
Irf7	-2.11	0.13	1.55	0.01	1.09	0.72
Hcls1	-2.39	0.00	1.56	0.01	-2.04	0.00
Atp6v1b2	-1.55	0.05	1.56	0.00	-1.12	0.49
1810008K03Rik	-2.22	0.00	1.57	0.08	4.26	0.00
Nagk	-1.69	0.00	1.58	0.00	1.04	0.85
Cyp2d9	1.68	0.02	1.58	0.00	1.42	0.07
Aoah	-7.63	0.00	1.58	0.00	-1.11	0.54
Col5a1	-2.32	0.00	1.59	0.01	-2.80	0.00
Mvp	-2.14	0.00	1.59	0.01	-1.07	0.68
Evl	-3.47	0.01	1.59	0.04	-2.63	0.00
Got1	1.75	0.03	1.59	0.02	1.12	0.83
Csf1r	-2.08	0.00	1.59	0.00	-1.26	0.27
Slc11a1	-1.79	0.00	1.60	0.00	-1.69	0.02
Sn	-2.27	0.11	1.60	0.00	-1.10	0.58
Cbr3	-10.69	0.03	1.60	0.06	-11.08	0.00
Nck2	-1.72	0.01	1.61	0.07	-1.53	0.13
Ms4a6d	-3.60	0.02	1.61	0.00	-1.00	0.99
D2Bwg0891e	-1.88	0.00	1.61	0.02	-1.95	0.01
Ppl	-1.87	0.02	1.61	0.01	-1.37	0.23
Samd4	-3.30	0.00	1.61	0.01	-2.39	0.00
Ctsk	-3.18	0.15	1.61	0.03	-2.09	0.01
S100a11	-7.90	0.00	1.61	0.01	-5.65	0.00
Igfbp3	-2.23	0.00	1.62	0.01	-1.23	0.40
Aldh3b1	-2.15	0.02	1.62	0.01	1.04	0.86
Abr	-3.25	0.00	1.62	0.00	-1.45	0.06
Fyb	-3.47	0.00	1.62	0.02	-2.02	0.01
Sirpb1	-7.28	0.02	1.62	0.04	-2.42	0.00
Cpxm1	-3.10	0.02	1.63	0.06	-5.95	0.00
Scara3	-1.71	0.03	1.63	0.00	-2.71	0.00
D330037A14Rik	-2.00	0.05	1.63	0.00	-2.20	0.00
Serpina11	1.79	0.06	1.63	0.00	2.04	0.00
Mknk2	-1.60	0.00	1.64	0.02	-1.63	0.03
Ccbl1	1.78	0.11	1.64	0.00	1.51	0.04
Enpp6	-2.65	0.03	1.64	0.00	3.65	0.00
Il10ra	-2.10	0.01	1.64	0.00	-1.73	0.01
Mcm10	1.80	0.00	1.64	0.00	-1.62	0.19
Prkx	-1.82	0.04	1.64	0.00	-1.34	0.12
Adora1	-1.73	0.02	1.65	0.01	-1.03	0.89
Il10rb	-1.73	0.13	1.65	0.01	-2.17	0.00
Mod1	-1.57	0.08	1.65	0.12	1.99	0.01
Slamf9	-3.08	0.02	1.66	0.04	-3.57	0.00
Usp18	-2.04	0.05	1.66	0.00	1.10	0.69
Vav1	-2.76	0.00	1.66	0.00	-1.51	0.04
Renbp	-2.04	0.00	1.66	0.00	1.17	0.35
P2rx4	-1.58	0.07	1.67	0.00	-1.04	0.83
Rbpms	-1.52	0.01	1.67	0.01	-1.40	0.08
Hmgn2	2.27	0.00	1.67	0.03	-1.18	0.53
Mfge8	-2.07	0.00	1.68	0.01	-2.51	0.00
Trib3	-1.91	0.04	1.68	0.06	-2.52	0.02

Gstm1	-2.40	0.00	1.68	0.00	-1.16	0.45
Sdc3	-2.18	0.00	1.68	0.00	-1.21	0.26
Sgk	-1.67	0.02	1.68	0.02	1.00	0.99
A030007D23Rik	-1.72	0.09	1.69	0.01	1.25	0.22
Cd14	-3.15	0.00	1.69	0.01	-1.37	0.50
Prkcd	-1.91	0.00	1.69	0.00	-1.68	0.05
4632428M11Rik	1.50	0.12	1.69	0.00	1.17	0.35
Hspg2	-1.69	0.00	1.69	0.00	-1.70	0.01
2610001E17Rik	-2.65	0.00	1.69	0.00	-4.07	0.00
8430438D04Rik	2.57	0.00	1.70	0.00	1.36	0.13
Golph2	-3.10	0.00	1.70	0.01	-2.51	0.01
Fbxo31	1.50	0.00	1.71	0.00	3.73	0.01
Aprt	-1.68	0.02	1.71	0.01	-1.65	0.02
1700093E07Rik	-1.81	0.00	1.71	0.00	-1.24	0.31
Nrg1	-5.81	0.00	1.72	0.25	-1.49	0.08
Lcn2	-5.64	0.11	1.72	0.11	2.34	0.46
Slc39a4	-6.87	0.00	1.72	0.00	1.01	0.97
C1qa	-1.96	0.00	1.73	0.00	-1.52	0.07
Dgkz	-1.60	0.00	1.73	0.00	-1.41	0.29
Arpc1b	-1.99	0.09	1.73	0.00	-1.43	0.09
Rras	-1.52	0.00	1.73	0.00	-1.25	0.19
Efha1	-1.80	0.00	1.73	0.00	-1.66	0.04
Capg	-5.21	0.00	1.73	0.02	-3.08	0.00
Efemp2	-1.96	0.04	1.74	0.00	-3.15	0.00
1810009M01Rik	-2.12	0.00	1.74	0.01	-1.55	0.02
C8a	1.53	0.05	1.74	0.00	1.01	0.96
Bgn	-1.54	0.15	1.74	0.03	-1.06	0.74
Fads2	1.76	0.00	1.74	0.01	-1.43	0.06
Tnfrsf12a	-2.64	0.00	1.75	0.13	-3.21	0.00
Tlr2	-4.46	0.00	1.76	0.01	-1.95	0.01
Kng1	2.31	0.00	1.76	0.01	1.10	0.57
Gltp	-2.67	0.01	1.76	0.00	-1.30	0.21
Atf3	-10.91	0.00	1.76	0.12	-5.85	0.01
Cd68	-3.64	0.00	1.76	0.00	-2.30	0.01
Col16a1	-1.90	0.00	1.77	0.00	-2.10	0.02
Col4a2	-1.57	0.01	1.78	0.00	-1.32	0.28
Olfml3	-2.45	0.06	1.78	0.00	-3.69	0.00
Scamp5	-1.88	0.00	1.78	0.00	1.00	0.99
Armxc3	-1.68	0.05	1.79	0.00	-1.28	0.20
Cd63	-5.73	0.00	1.79	0.01	-4.99	0.00
Cd84	-2.66	0.06	1.80	0.00	-1.29	0.23
Lyz	-4.50	0.00	1.81	0.01	-3.28	0.00
Saa3	-5.83	0.17	1.81	0.22	4.52	0.15
2410004L22Rik	-5.31	0.00	1.81	0.01	-5.04	0.00
Rab11fip5	-3.01	0.01	1.82	0.00	-1.95	0.01
AU040829	-3.33	0.02	1.82	0.02	-2.54	0.04
2610020H15Rik	-2.67	0.09	1.82	0.00	-1.11	0.59
Syt1	1.80	0.06	1.82	0.00	1.62	0.10
Gmip	-2.29	0.04	1.83	0.00	-1.60	0.05
Csad	4.11	0.00	1.84	0.00	-1.04	0.86
Arhgap4	-1.86	0.00	1.84	0.00	1.05	0.81
Gja4	1.79	0.00	1.87	0.00	1.83	0.01

Sparc	-2.21	0.02	1.87	0.01	-2.60	0.00
Phlda3	-3.48	0.00	1.88	0.03	-4.95	0.00
Syt11	-4.12	0.00	1.88	0.00	1.77	0.05
Clec4n	-2.81	0.02	1.90	0.01	1.07	0.73
Rhbd1	-1.91	0.00	1.90	0.00	-1.67	0.02
Selenbp2	3.27	0.03	1.90	0.01	-2.22	0.00
Rab34	-2.01	0.00	1.90	0.00	1.06	0.73
Ank3	-1.70	0.15	1.90	0.00	-1.22	0.25
Myo1f	-3.22	0.04	1.91	0.00	-2.48	0.01
C1qb	-2.80	0.00	1.91	0.00	-1.38	0.10
Icam1	-2.63	0.00	1.91	0.00	-1.32	0.24
Hp	-1.53	0.00	1.91	0.00	1.16	0.41
Col1a2	-3.89	0.00	1.92	0.00	-6.43	0.00
3732413111Rik	-1.74	0.00	1.92	0.00	-1.15	0.62
6330406P08Rik	1.90	0.00	1.93	0.02	1.30	0.34
E130012A19Rik	3.64	0.03	1.93	0.00	1.44	0.34
Pdgfa	-2.04	0.00	1.94	0.02	-2.90	0.01
Trim47	-2.16	0.00	1.94	0.00	-2.63	0.00
Ptpre	-2.78	0.02	1.95	0.02	-1.63	0.07
Smox	-1.54	0.06	1.95	0.01	-2.64	0.00
Spic	-3.19	0.00	1.96	0.02	-1.33	0.11
Tpm1	-1.87	0.00	1.98	0.00	-1.92	0.01
Serpina3m	1.56	0.15	1.98	0.00	1.27	0.19
Foxa3	1.54	0.06	1.99	0.02	1.19	0.40
Flot1	-1.68	0.00	1.99	0.00	-1.01	0.95
C6	1.55	0.03	2.00	0.01	-1.06	0.72
BC003277	-2.37	0.00	2.01	0.00	1.02	0.94
Adrb2	-3.56	0.16	2.03	0.01	1.14	0.52
Cdc42ep5	-2.08	0.01	2.03	0.02	-3.84	0.00
C230093N12Rik	-1.70	0.03	2.04	0.00	-2.33	0.09
Xlkd1	-2.34	0.00	2.04	0.00	1.01	0.99
Col6a1	-1.88	0.07	2.04	0.00	-3.59	0.00
Cyb561	-1.69	0.01	2.05	0.02	1.60	0.05
Bhlhb9	-3.78	0.00	2.05	0.00	1.41	0.32
Rab3d	-1.87	0.00	2.05	0.00	1.08	0.77
Sla	-2.79	0.01	2.06	0.00	1.05	0.78
Col4a1	-2.22	0.00	2.06	0.00	-1.69	0.13
Dtx3	-1.62	0.01	2.08	0.00	-1.70	0.05
Tlr1	-6.00	0.01	2.10	0.01	-4.50	0.01
Loxl1	-2.09	0.06	2.11	0.00	-4.37	0.00
Hey1	-2.68	0.04	2.11	0.01	-3.34	0.00
Maged2	-2.10	0.00	2.16	0.00	-1.91	0.03
Psd4	-3.83	0.01	2.18	0.00	-1.82	0.12
Fgf21	-2.40	0.01	2.19	0.04	-1.39	0.29
Unc5b	-1.88	0.17	2.20	0.00	-1.56	0.08
Adamts2	-1.90	0.00	2.22	0.00	-2.20	0.01
Gfra1	1.59	0.14	2.22	0.00	2.54	0.03
Hpxn	-1.73	0.00	2.23	0.00	-1.15	0.40
Rhoc	-2.32	0.09	2.23	0.00	-3.10	0.00
Serpina3k	2.68	0.00	2.26	0.00	1.29	0.19
Axl	-2.35	0.01	2.26	0.00	-1.76	0.02
Ier3	-1.87	0.18	2.28	0.00	1.15	0.59

6330416G13Rik	-2.11	0.00	2.28	0.00	1.58	0.12
Sprr1a	-3.36	0.01	2.30	0.02	-4.84	0.00
Vim	-3.12	0.01	2.34	0.00	-1.93	0.01
Gpx7	-2.67	0.13	2.37	0.00	-5.19	0.00
Sdcbp2	-61.53	0.00	2.39	0.00	-11.14	0.00
C330027I04Rik	-3.19	0.06	2.41	0.00	1.12	0.54
Csrp1	-2.23	0.00	2.45	0.00	-2.12	0.00
4933408F15	-2.23	0.00	2.54	0.02	-2.58	0.10
BC005471	-2.10	0.04	2.54	0.00	1.03	0.92
Ms4a7	-6.66	0.00	2.54	0.02	-6.90	0.00
Cyp4f16	-2.58	0.01	2.60	0.00	1.28	0.15
Tes	-2.97	0.13	2.61	0.03	-2.38	0.00
Lgmn	-2.77	0.00	2.62	0.00	-1.49	0.05
Cyp7a1	2.65	0.00	2.66	0.00	-1.18	0.72
Lpl	-6.19	0.04	2.66	0.01	-4.15	0.00
Nenf	-2.61	0.00	2.71	0.00	-1.37	0.09
Irak3	-3.29	0.03	2.72	0.00	1.33	0.31
Cln6	-1.99	0.00	2.73	0.00	-1.31	0.35
Emp1	-4.05	0.07	2.76	0.01	-5.15	0.00
Ntrk2	-11.45	0.00	2.77	0.03	-28.99	0.00
Parvg	-4.95	0.03	2.77	0.00	-1.80	0.02
Col3a1	-4.49	0.00	2.80	0.00	-9.94	0.00
Nupr1	-4.97	0.01	2.80	0.01	-3.33	0.00
Ly6d	-15.68	0.00	2.80	0.04	-39.84	0.00
Pla2g7	-3.17	0.07	2.82	0.00	-1.07	0.67
Smpd3	-2.14	0.00	3.10	0.00	-3.31	0.00
Rbp1	-2.88	0.09	3.24	0.00	-5.33	0.00
Slc6a8	-2.83	0.00	3.26	0.00	-1.35	0.12
Eppk1	-1.83	0.03	3.46	0.00	1.20	0.45
2310032D16Rik	1.73	0.16	3.52	0.00	-1.22	0.67
Mmp12	-15.25	0.01	3.55	0.01	-4.33	0.00
Uap111	-5.68	0.00	3.60	0.00	-5.59	0.00
Trem2	-12.38	0.11	3.74	0.01	-7.20	0.00
Apoa4	-1.79	0.06	3.79	0.01	-2.12	0.26
Gal3st1	-12.09	0.00	3.82	0.00	-1.18	0.51
Ccnd1	-4.17	0.03	4.25	0.00	-7.73	0.02
1810054O13Rik	-2.24	0.00	4.42	0.00	-2.11	0.01
Col1a1	-6.79	0.01	4.64	0.00	-14.89	0.00
Ccdc3	-2.83	0.00	4.74	0.00	-2.32	0.00
Slc41a3	-3.47	0.01	4.75	0.00	1.38	0.42
Gadd45g	1.58	0.13	5.06	0.00	4.03	0.03
Osbpl3	-2.74	0.00	5.50	0.00	-4.30	0.00
Psat1	-17.63	0.00	5.54	0.00	-2.93	0.00
4922503N01Rik	-4.39	0.00	5.61	0.00	-3.54	0.00
Cidec	-11.65	0.00	5.72	0.02	-4.32	0.18
BC051083	-12.15	0.00	5.83	0.00	-2.46	0.00
Esm1	-5.90	0.00	6.55	0.02	-16.23	0.00
Asns	10.86	0.01	8.50	0.00	-2.22	0.01
Gpnmb	-32.51	0.11	10.94	0.00	-1.20	0.53

Highlights

- High carbohydrate, LF12 diet stimulates stellate activation and inflammation genes
- Retinol and *Shp* modulate gene expression associated with a high carbohydrate diet
- Retinol restrains stellate and inflammation genes in mice fed a high fat diet
- Gestational VA deficient diet lowers serum retinol, liver retinoids, and *Cyp26a1*
- Maternal and post-weaning LF12 enhances VA deficiency-induced retinol suppression