ACCSCIENCE PUBLISHING

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RESEARCH ARTICLE

Alginate–gelatin–silk fibroin-containing patches improve cardiac function in an *in vivo* myocardial infarction murine model

Supplementary File

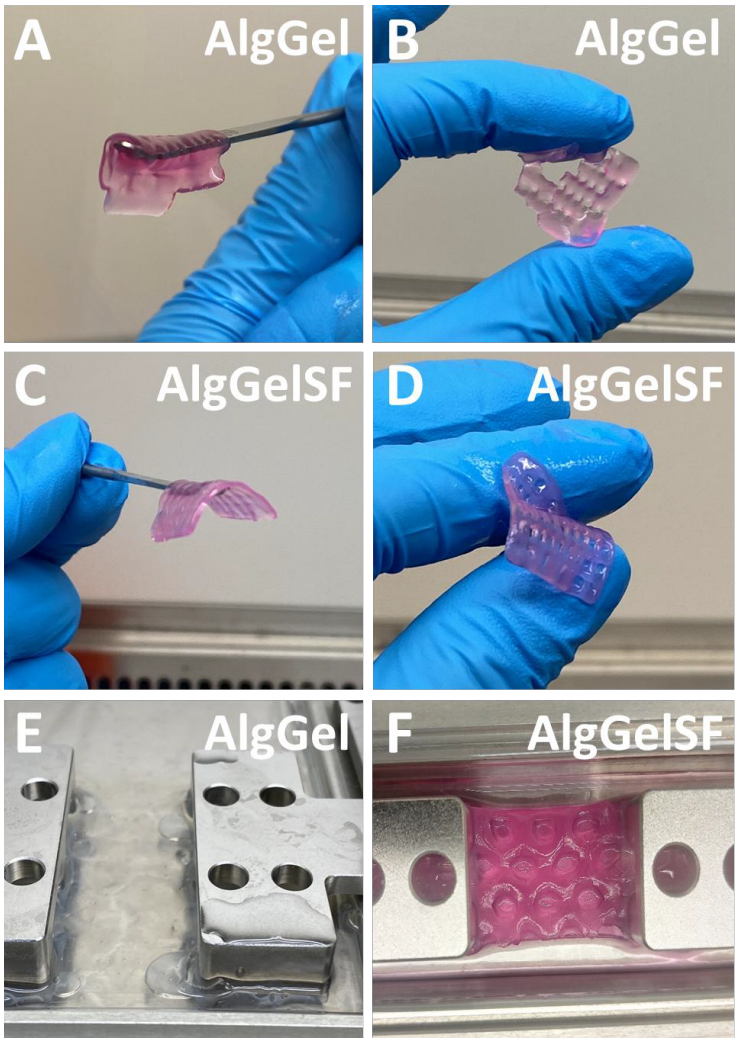

Figure S1. 3D-printed AlgGel and AlgGelSF patches handling ability and fatigue testing. (A–D) The images are representative illustrations of the handling properties of the printed patches. AlgGel patches are held on a spatula (A) and subsequently squeezed between the fingers until they reach the point of breakage (B). Similarly, AlgGelSF patches are held on a spatula (C) and squeezed between the fingers (D). (E–F) The figures represent the analysis of the behavior of AlgGel (E) and AlgGelSF (F) patches under cyclic loading using Taihoya. The test was performed for 24 hours by setting the instrument to 20% dynamic stretch and 60 bpm (which mimics conditions of a healthy human heart). (**E**) AlgGel patch's behavior after 3 h. (**F**) AlgGelSF patch's behavior after 24 h.
Abbreviations: Alg: Alginate; Gel: Gelatin; SF: Silk fibroin.

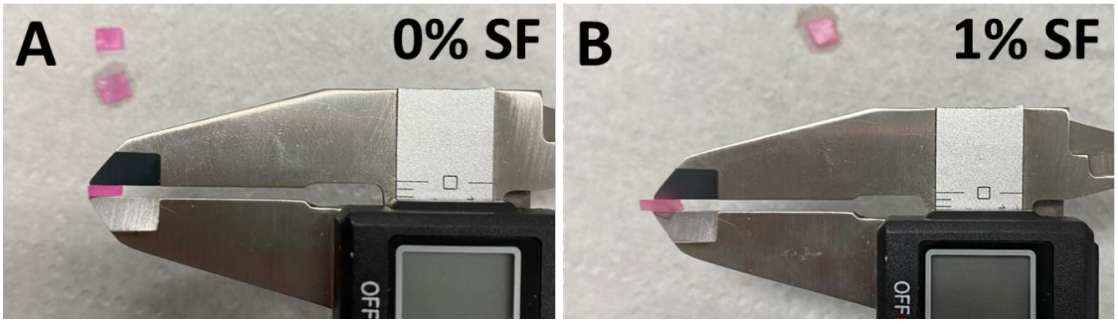

Figure S2. 3D-printed patch thickness. (A–B) The images show the height of the patches prepared for the *in vivo* transplantation: AlgGel (A) and AlgGelSF (B). Their height was measured using a micrometer. Note: $n \geq 3$.
Abbreviations: Alg: Alginate; Gel: Gelatin; SF: Silk fibroin.

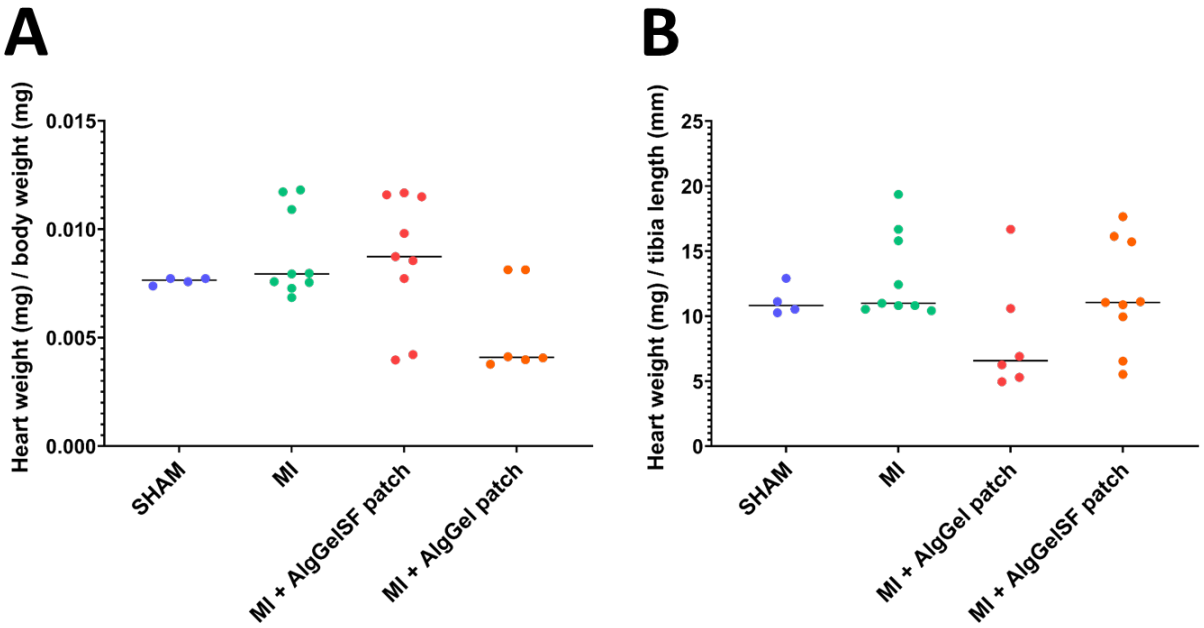

Figure S3. No changes in heart weight/body weight and heart weight/tibia length were observed in mice. (A–B) The images represent hypertrophic measurements performed across the four experimental groups: sham, MI, MI + AlgGel patch, and MI + AlgGelSF patch. The Brown–Forsythe and Welch ANOVA tests, together with a Dunnett's T3 multiple comparisons test, were performed, and the data are presented as medians. The statistical analyses show no significant differences between the data. Note: $n \geq 4$.
Abbreviations: Alg: Alginate; Gel: Gelatin; MI: Myocardial infarction; SF: Silk fibroin.

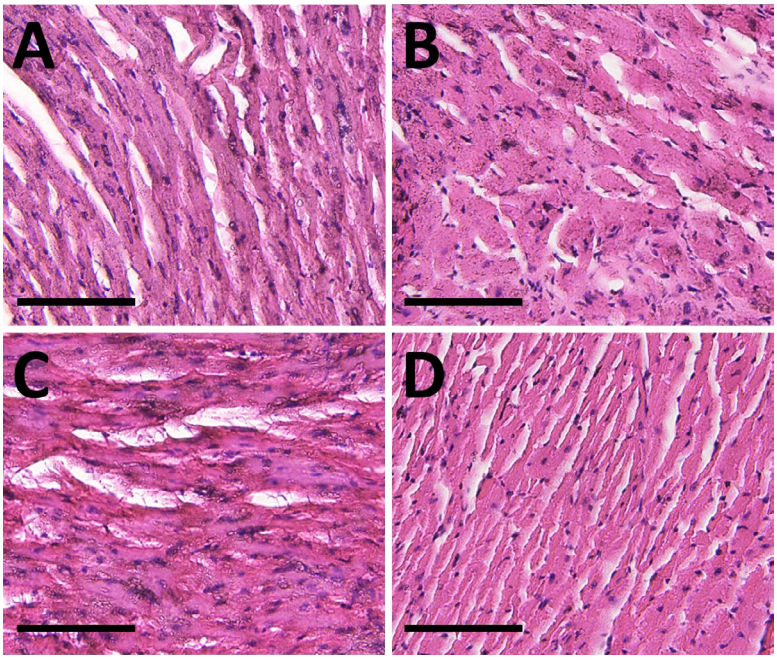

Figure S4. Hematoxylin and eosin staining. (A–D) Representative images of hematoxylin and eosin staining acquired through the Olympus BX61 upright fluorescence microscope. (A) Sham. (B) MI. (C) MI + AlgGel patch. (D) MI + AlgGelSF patch. Cardiac muscle cell nuclei were stained dark purple, while the extracellular matrix and cytoplasm were pink. Scale bars: 100 μm; magnifications: 20×. Note: $n \geq 3$.
Abbreviations: Alg: Alginate; Gel: Gelatin; MI: Myocardial infarction; SF: Silk fibroin.

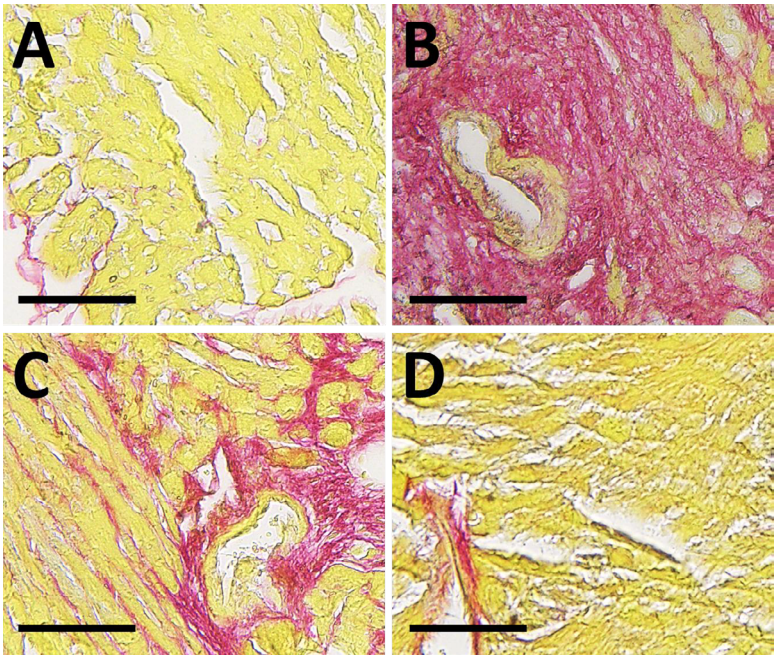

Figure S5. Picro-Sirius red staining and the analysis of fibrotic tissue. (A–D) Representative images of Picro-Sirius red staining acquired through the Olympus BX61 upright fluorescence microscope. (A) Sham. (B) MI. (C) MI + AlgGel patch. (D) MI + AlgGelSF patch. Collagen fibers were stained red, while cardiac muscle fibers and cytoplasm were stained yellow. Scale bars: 100 μm; magnifications: 20×. Note: $n \geq 3$.
Abbreviations: Alg: Alginate; Gel: Gelatin; MI: Myocardial infarction; SF: Silk fibroin.

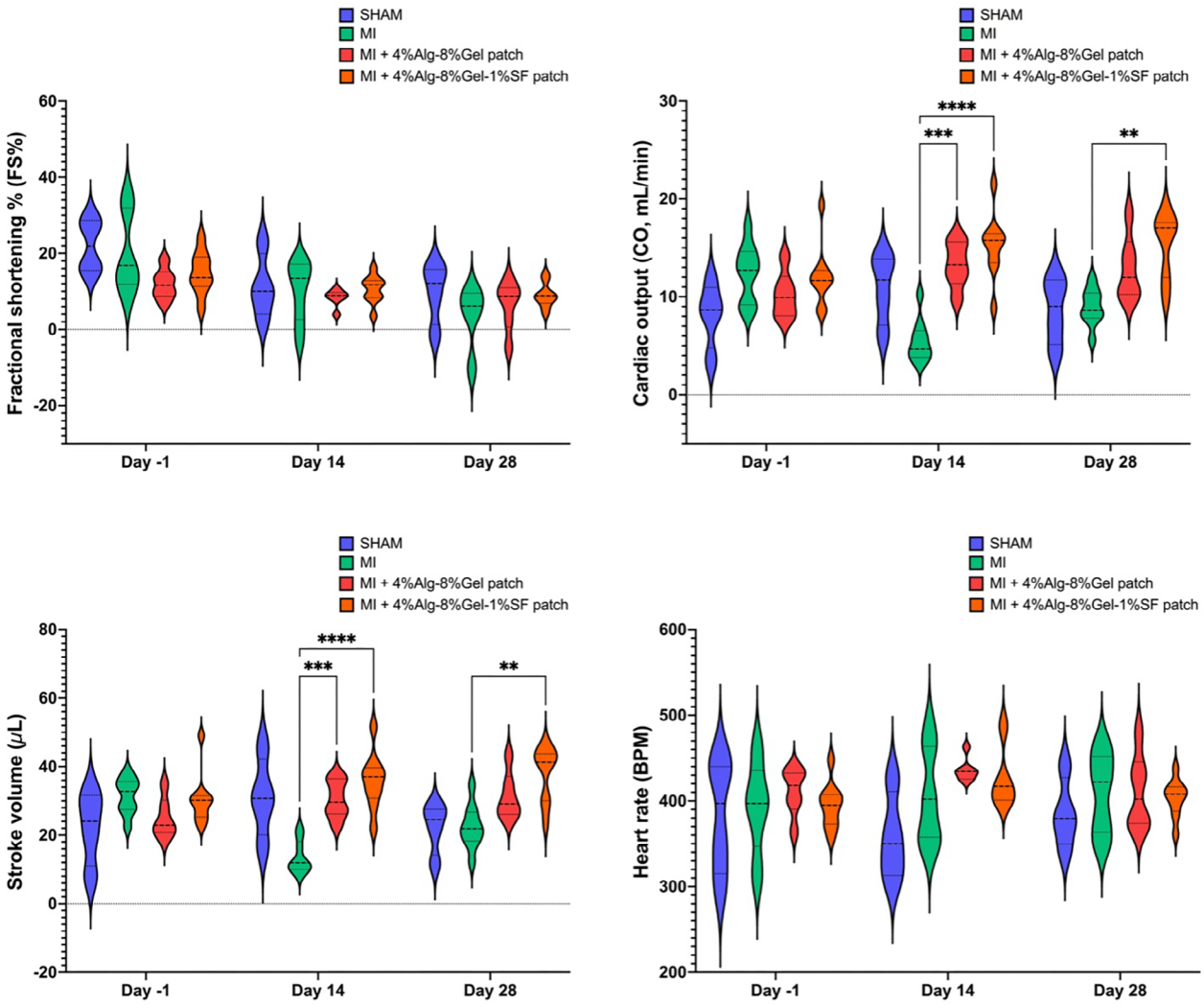

Figure S6. Fractional shortening percentage (A), cardiac output (B), stroke volume (C), and heart rate (D) in animals from Day −1 to Day 28. The two-way ANOVA with Tukey's multiple comparisons test was performed, and the data are presented as medians. Notes: $n \geq 4$; $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$, $^{****}p < 0.0001$.
Abbreviations: Alg: Alginate; Gel: Gelatin; MI: Myocardial infarction; SF: Silk fibroin; US: Ultrasound.

Table S1. Differentially expressed genes between the MI and MI + AlgGel patch groups

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
9272_5330439B14Rik	−2.024407881	7.83E−11	5.65E−7
13438_Zbtb16	−2.465440554	6.55E−09	2.37E−5
20439_A630019I02Rik	−2.226170788	3.07E−07	0.00058022
25300_F830208F22Rik	−2.241529787	3.62E−07	0.00058022
21815_Abra	−1.705169401	4.02E−07	0.00058022
16185_Cfd	8.445649314	8.09E−07	0.00087604
9321_4732416N19Rik	−1.591147026	8.49E−07	0.00087604
11397_Tacc2	−1.257751587	1.04E−06	0.00093817
865_Gm19461	−1.774509352	1.56E−06	0.00125397
19737_4930470G03Rik	−1.322174009	2.34E−06	0.00168614
22244_Tspo	1.852169572	3.75E−06	0.00245966
3828_Mccc1os	−1.421206505	4.33E−06	0.00260618
4369_Ecm1	1.593129159	5.07E−06	0.00281647
25384_Gstp1	1.075803045	6.10E−06	0.0031441
24247_Rn45s	2.023517351	6.94E−06	0.00330912
22783_Slc25a1	3.029523263	7.33E−06	0.00330912
4743_4930539J05Rik	−1.197225365	1.64E−05	0.00695824
12679_9430091E24Rik	−1.179387638	2.00E−05	0.00789776
601_Ugt1a6b	2.111642336	2.18E−05	0.00789776
8861_Syn2	−2.462977733	2.31E−05	–
12784_Gm27011	−2.414265145	2.50E−05	–
602_Ugt1a6a	2.088710329	2.63E−05	0.00789776
7990_Pdk4	−1.750525656	2.92E−05	0.00789776
597_Ugt1a10	2.078889905	2.95E−05	0.00789776
598_Ugt1a9	2.078889905	2.95E−05	0.00789776
599_Ugt1a8	2.078889905	2.95E−05	0.00789776
603_Ugt1a5	2.078889905	2.95E−05	0.00789776
604_Ugt1a2	2.078889905	2.95E−05	0.00789776
606_Ugt1a1	2.078889905	2.95E−05	0.00789776
18194_Igfbp4	1.513123524	3.23E−05	0.00834094
3816_Dnajc19	−0.965779785	3.74E−05	0.00930639
7829_Actb	1.025852988	3.89E−05	0.00936704
10286_Il4i1b	−1.414710529	4.37E−05	0.01017595
14222_Zcwpw2	−1.299294426	5.44E−05	0.01228217
19981_Dsp	−0.912155445	6.10E−05	0.01334519
3288_Romo1	−0.929423656	6.39E−05	0.01356747
17448_9630013K17Rik	−1.094197551	6.99E−05	0.01442899
20840_Tkt	1.415555824	9.30E−05	0.01848968
10285_Nup62	−1.292090601	9.62E−05	0.01848968

(*Cont'd...*)

Table S1. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
600_Ugt1a7c	1.979875584	9.75E−05	0.01848968
18198_Smarce1	−1.060126674	9.99E−05	0.01848968
13973_Trf	1.69296974	0.00011808	0.02131715
26195_Eif3a	−1.008849522	0.00012172	0.02143725
8327_Tmem176b	1.45733972	0.00013412	0.02305833
6501_Steap4	1.686128014	0.00013911	0.02336086
12644_Hp	3.620794911	0.00015389	0.02504388
8613_Zfp638	−1.329851383	0.00015607	0.02504388
6213_AI507597	−1.490287728	0.00016826	0.02507854
16069_1700094J05Rik	−1.12767586	0.00017089	0.02507854
26034_Scd1	5.029144526	0.00017138	0.02507854
14228_Golga4	−0.92015365	0.00017199	0.02507854
8070_Lmod2	−0.799826974	0.00017365	0.02507854
20837_Cacna1d	3.694472484	0.00018407	–
22890_Adipoq	6.100375831	0.00018622	0.02636631
8531_Particl	−1.366853872	0.0001908	0.0264954
8346_Cycs	−1.013283461	0.00020678	0.02817296
21293_Sacs	−1.033338831	0.0002209	0.02953865
6731_Spon2	1.932272479	0.00023541	0.03090686
21851_Enpp2	2.221402526	0.00024312	0.03101686
19234_Npc2	1.119577851	0.00024484	0.03101686
14082_Gpx1	1.174549869	0.00025337	0.03154509
8862_Timp4	−1.584732462	0.00026818	0.03282246
5239_Nr4a3	−2.622412955	0.00027951	–
17728_Serpinf1	1.380554666	0.00031824	0.03771273
2980_Cpxm1	1.77371775	0.00031858	0.03771273
8174_Chrm2	−1.000355228	0.00033078	0.03831102
3469_Ptgis	1.483676073	0.00033425	0.03831102
9199_1700055D16Rik	−2.323772484	0.00038626	–
3145_E130215H24Rik	−1.06111442	0.00038834	0.04341441
5167_Msmp	−1.401669964	0.0003908	0.04341441
13815_Filip1	−1.16029324	0.00040991	0.04463869
11731_Mcf2l	−1.552959359	0.00041418	0.04463869
1854_Ptpa	1.134674424	0.00045127	0.04730318
15754_Trdn	−0.789777099	0.00046341	0.04730318
4629_4930455H04Rik	−1.332952472	0.00046634	0.04730318
24494_C3	1.033108807	0.00046715	0.04730318
17368_1700007J10Rik	−1.177202639	0.00047625	0.04730318

(*Cont'd...*)

Table S1. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
2239_Ttn	−0.94646009	0.00047821	0.04730318
23117_Retnla	3.116708838	0.00048543	–
16187_R3hdm4	1.014038057	0.00048612	0.04743562
18683_Actg1	0.894860214	0.00050438	0.04747136
7731_Pcolce	1.19842764	0.0005054	0.04747136
10137_Cebpa	1.654940536	0.00051492	0.04747136
25964_Sorbs1	−0.801612638	0.00051579	0.04747136
1143_Rcsd1	−0.899282439	0.00051935	0.04747136
11665_Retn	4.026304573	0.0005368	–
9957_Rps16	1.054760326	0.00053974	0.04871813
8868_D830050J10Rik	−1.1292066	0.0005642	0.04977433
845_Mfsd4a	−1.430530751	0.00056523	0.04977433

Table S2. Differentially expressed genes between the MI + AlgGel patch and MI + AlgGelSF patch groups

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
16897_Gm46270	−5.0774428	1.11E−35	1.19E−31
3145_E130215H24Rik	−4.2215064	1.26E−33	6.77E−30
9272_5330439B14Rik	−4.9791974	3.32E−30	8.92E−27
12679_9430091E24Rik	−4.184991	2.66E−30	8.92E−27
20439_A630019I02Rik	−5.381429	6.27E−29	1.35E−25
9321_4732416N19Rik	−4.092455	7.39E−26	1.32E−22
21642_BC037032	−4.1791528	1.12E−25	1.73E−22
19737_4930470G03Rik	−3.3656459	2.26E−24	3.03E−21
16069_1700094J05Rik	−4.0756268	5.97E−24	7.14E−21
19226_Bbof1	−2.993014	2.03E−23	2.18E−20
4743_4930539J05Rik	−3.0442021	8.22E−23	8.04E−20
17368_1700007J10Rik	−3.8402373	1.09E−22	9.80E−20
24997_1700086O06Rik	−3.4652763	2.42E−22	2.00E−19
3828_Mccc1os	−3.5348899	7.29E−22	5.60E−19
12020_Sorbs2os	−5.1999324	3.24E−19	2.32E−16
8531_Particl	−3.4840708	3.28E−18	2.20E−15
14222_Zcwpw2	−3.1170725	7.89E−18	4.99E−15
21293_Sacs	−2.410573	2.22E−17	1.33E−14
13621_Rplp1	2.15127866	3.81E−17	2.16E−14
17448_9630013K17Rik	−2.6058567	8.75E−17	4.70E−14

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
15960_4930507D05Rik	−3.4686523	3.43E−16	1.75E−13
358_Ino80dos	−1.9940993	6.81E−16	3.33E−13
5167_Msmp	−3.4067424	1.42E−15	6.64E−13
4629_4930455H04Rik	−3.2538611	1.78E−15	7.98E−13
24787_Gm16090	−3.7311952	2.00E−15	8.61E−13
8868_D830050J10Rik	−2.8724528	2.40E−15	9.92E−13
2985_Gm52562	−4.2405613	2.65E−15	1.06E−12
19234_Npc2	2.38735961	3.58E−15	1.38E−12
4664_Synpo2	−3.3435026	4.06E−15	1.46E−12
19876_Gpld1	−2.5304928	4.02E−15	1.46E−12
2629_4931422A03Rik	−3.420978	5.59E−15	1.82E−12
18901_Dld	−1.6422278	5.55E−15	1.82E−12
20367_Ccdc127	−1.9784024	5.49E−15	1.82E−12
13417_A830035O19Rik	−4.0020951	9.83E−15	3.11E−12
3375_0610039K10Rik	−3.2681916	1.34E−14	4.12E−12
19067_4930512B01Rik	−4.3054681	2.06E−14	6.16E−12
11561_Rplp2	1.6428028	2.15E−14	6.24E−12
15689_Rps12	1.86653208	2.46E−14	6.96E−12
3369_2310001K24Rik	−2.5353093	2.94E−14	8.11E−12
21244_Gm16573	−3.7631705	5.34E−14	1.44E−11
16990_Pus10	−2.9806809	7.74E−14	2.03E−11
13843_A330041J22Rik	−3.4111481	8.17E−14	2.09E−11
11571_Gm16982	−2.9914177	8.83E−14	2.21E−11
17883_Unc45bos	−2.4727255	1.07E−13	2.63E−11
7337_1700095B10Rik	−2.9821333	1.16E−13	2.78E−11
22460_Gm34939	−3.0189405	1.59E−13	3.72E−11
11730_Gm15350	−4.4170757	1.95E−13	4.47E−11
5315_Hsdl2	−2.0365068	2.02E−13	4.52E−11
25846_Cdc37l1	−2.1475112	2.32E−13	5.10E−11
23986_Rps28	1.764015	2.56E−13	5.51E−11
420_Rpl37a	1.77965243	3.39E−13	7.16E−11
24652_Slc3a1	−2.0916775	3.70E−13	7.65E−11
14851_Gm32261	−3.2099922	8.53E−13	1.73E−10
19981_Dsp	−1.6420995	9.31E−13	1.85E−10
18360_Grn	2.19430251	1.16E−12	2.28E−10
21162_4930579G18Rik	−2.7401064	1.23E−12	2.37E−10
6675_Gm9899	−2.6556855	1.44E−12	2.72E−10
18907_Cog5	−2.4144671	1.96E−12	3.64E−10

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
9957_Rps16	2.12167985	2.32E−12	4.23E−10
865_Gm19461	−3.1489412	2.91E−12	5.22E−10
10344_Ftl1	2.79163194	3.15E−12	5.56E−10
13815_Filip1	−2.6225918	3.30E−12	5.72E−10
14082_Gpx1	2.19459083	4.65E−12	7.94E−10
19352_D130020L05Rik	−3.3421385	5.04E−12	8.47E−10
2572_D930015M05Rik	−3.4834153	6.92E−12	1.14E−09
6324_Gm13205	−2.7023698	7.65E−12	1.23E−09
12324_Gm10644	−3.5299757	7.58E−12	1.23E−09
3130_Cst3	1.59915615	8.55E−12	1.35E−09
9611_Ap2s1	2.08719693	9.42E−12	1.47E−09
19677_Ryr2	−1.5828876	1.20E−11	1.85E−09
23244_Fau	2.08560469	1.47E−11	2.22E−09
21371_1700001G11Rik	−3.0337719	1.51E−11	2.25E−09
11022_Rrp8	−2.3854021	1.57E−11	2.31E−09
25848_1700018L02Rik	−2.7388111	1.73E−11	2.52E−09
845_Mfsd4a	−3.2067457	2.41E−11	3.46E−09
23852_Rps10	1.53587283	2.60E−11	3.68E−09
21541_Lmo7	−1.7404026	2.80E−11	3.91E−09
4762_Gm5105	−3.9335575	2.90E−11	4.00E−09
7071_Grsf1	−1.6046539	3.19E−11	4.34E−09
16179_E130317F20Rik	−3.3398735	3.52E−11	4.74E−09
13438_Zbtb16	−3.107683	3.70E−11	4.87E−09
21892_9930014A18Rik	−3.788506	3.71E−11	4.87E−09
24503_Nudt12os	−3.9109176	4.04E−11	5.23E−09
2833_AV039307	−2.6372097	5.13E−11	6.57E−09
25384_Gstp1	1.55416385	5.24E−11	6.64E−09
4242_S100a6	2.43097765	8.48E−11	1.06E−08
9408_Rpl28	1.39612311	1.06E−10	1.28E−08
18665_A930037H05Rik	−4.1361909	1.04E−10	1.28E−08
22611_Gm41410	−2.640779	1.04E−10	1.28E−08
9586_Selenow	1.6093226	1.14E−10	1.37E−08
6777_4931431C16Rik	−3.0725139	1.16E−10	1.37E−08
15447_Tmsb4x	1.73407887	1.18E−10	1.37E−08
4369_Ecm1	2.22422332	1.46E−10	1.69E−08
9367_Rps9	1.56714959	1.49E−10	1.70E−08

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
10366_Rpl18	1.81036554	1.94E−10	2.17E−08
12197_Rpl18a	1.46986119	1.94E−10	2.17E−08
4506_Rhoc	1.61533424	2.02E−10	2.23E−08
12401_Itfg1	−1.8031536	2.04E−10	2.23E−08
16725_Rpl41	1.85015238	2.10E−10	2.28E−08
4679_Ank2	−1.935858	2.14E−10	2.29E−08
25142_Cd74	1.97848296	2.15E−10	2.29E−08
25300_F830208F22Rik	−4.3379111	2.34E−10	2.47E−08
19567_Ckb	2.50002234	2.60E−10	2.72E−08
25964_Sorbs1	−1.4881412	2.76E−10	2.85E−08
8755_Gm15737	−3.9206957	2.97E−10	3.01E−08
21968_Ly6e	1.83452684	3.00E−10	3.01E−08
24833_Gm26533	−2.0969935	3.00E−10	3.01E−08
22825_Klhl24	−2.3610262	3.22E−10	3.21E−08
16211_Rps15	1.49640328	3.32E−10	3.28E−08
12395_Mylk3	−1.4212869	3.60E−10	3.52E−08
1039_Tor1aip2	−1.9742891	3.66E−10	3.52E−08
13097_Gm16845	−1.7812734	3.66E−10	3.52E−08
12358_G430095P16Rik	−3.0204444	3.80E−10	3.61E−08
12274_0610038B21Rik	−2.9801942	4.14E−10	3.87E−08
16290_Gm16104	−2.9682993	4.10E−10	3.87E−08
5066_Gm6297	−2.2922319	4.28E−10	3.97E−08
11994_B430010I23Rik	−2.7418512	4.50E−10	4.13E−08
18194_Igfbp4	2.24698086	6.11E−10	5.57E−08
6198_C630004L07Rik	−2.9095388	6.26E−10	5.65E−08
21649_Rpl37	1.39312242	6.50E−10	5.82E−08
22550_Pfdn5	1.65475216	6.78E−10	6.03E−08
7342_4833439F03Rik	−3.5478043	8.61E−10	7.59E−08
14257_Rpsa	1.64542814	9.54E−10	8.34E−08
9546_Rps5	1.50882784	1.02E−09	8.82E−08
24285_Clic5	−1.8714476	1.06E−09	9.09E−08
11565_Gm10575	−1.8516878	1.09E−09	9.31E−08
14465_Usp9x	−2.7630212	1.10E−09	9.31E−08
8833_Arpc4	2.26098939	1.24E−09	1.04E−07
20192_Rmi1	−2.2867333	1.26E−09	1.05E−07
6863_Ppargc1a	−2.7037101	1.35E−09	1.10E−07

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
13441_Usp28	−2.124767	1.35E−09	1.10E−07
18186_Gm12359	−1.9215472	1.34E−09	1.10E−07
22055_Rpl8	1.40595665	1.41E−09	1.14E−07
2794_Gm14207	−2.9102401	1.45E−09	1.17E−07
7268_Slc26a1	−2.81391	1.53E−09	1.22E−07
25279_Gm10532	−3.4226939	1.57E−09	1.24E−07
4908_Rps20	1.50775484	1.97E−09	1.55E−07
5298_Txn1	2.52944364	2.10E−09	1.64E−07
3310_Mroh8	−2.4534409	2.34E−09	1.81E−07
12792_Cyba	2.83866835	2.42E−09	1.86E−07
3816_Dnajc19	−1.4083655	2.80E−09	2.12E−07
22108_Lgals1	1.61687291	2.79E−09	2.12E−07
10786_Rps3	1.42444513	2.89E−09	2.17E−07
20438_Gm4814	−2.0819598	3.06E−09	2.28E−07
3047_Plcb4	−2.4251577	3.20E−09	2.37E−07
24666_Pigf	−2.3130236	3.92E−09	2.89E−07
1775_Rpl7a	1.17791876	4.14E−09	3.03E−07
17282_Atox1	1.94628075	4.44E−09	3.22E−07
3551_Ctsz	2.65309204	4.59E−09	3.31E−07
553_Itm2c	1.52251489	5.27E−09	3.78E−07
513_Cul3	−1.5067713	5.60E−09	3.99E−07
10676_2610206C17Rik	−1.9078115	5.71E−09	4.04E−07
22244_Tspo	2.31090717	6.49E−09	4.56E−07
19048_Rps29	1.45282523	6.63E−09	4.63E−07
2980_Cpxm1	2.7963224	6.74E−09	4.67E−07
10811_Ucp2	1.80895556	6.78E−09	4.67E−07
15041_Rps4x	1.21651054	8.41E−09	5.76E−07
25074_C030005K06Rik	−2.3729499	8.52E−09	5.80E−07
11131_Ipo7	−1.4825867	9.32E−09	6.31E−07
19004_Prorp	−2.3240635	9.62E−09	6.47E−07
15668_4930455C13Rik	−2.2270098	9.73E−09	6.50E−07
8327_Tmem176b	2.16976668	9.93E−09	6.59E−07
11177_Rps13	1.3886015	1.01E−08	6.63E−07
14968_Eif2s3x	−2.1267153	1.01E−08	6.63E−07
25376_Unc93b1	2.28396675	1.02E−08	6.63E−07
8946_Tuba8	−1.6161186	1.22E−08	7.87E−07

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
16745_Cd63	1.96750386	1.22E−08	7.87E−07
7378_4930515G01Rik	−3.768721	1.35E−08	8.64E−07
20754_1810062O18Rik	−3.7667191	1.39E−08	8.88E−07
20796_Ppifos	−1.6149896	1.60E−08	1.01E−06
15421_Gm52456	−2.4256461	1.71E−08	1.07E−06
4852_Nexn	−1.0362574	1.79E−08	1.11E−06
11296_Mapk3	1.97658173	1.81E−08	1.11E−06
13684_Ppib	1.42842919	1.78E−08	1.11E−06
23828_Cuta	2.24909766	1.80E−08	1.11E−06
6047_Sh3bgrl3	2.50278937	1.98E−08	1.21E−06
15400_Pdha1	−1.3689218	1.99E−08	1.21E−06
4082_Gm35410	−3.1097782	2.12E−08	1.28E−06
24606_Gm17315	−2.5089897	2.13E−08	1.28E−06
5083_Gm46891	−2.2352077	2.20E−08	1.31E−06
4490_Syt6	−2.3102686	2.23E−08	1.32E−06
25596_Ubxn1	1.50496771	2.27E−08	1.34E−06
19875_9330162012Rik	−2.1416206	2.35E−08	1.38E−06
1919_6330409D20Rik	−3.0837585	2.38E−08	1.39E−06
3429_Neurl2	−1.834345	2.60E−08	1.51E−06
217_Tmem182	−3.1071009	2.65E−08	1.52E−06
13124_Septin7	−1.466571	2.65E−08	1.52E−06
19541_Gm19605	−2.6439007	2.63E−08	1.52E−06
1887_Gm13609	−3.1564462	2.73E−08	1.56E−06
13737_Myzap	−1.5424389	2.83E−08	1.58E−06
15980_1700120B22Rik	−3.7908767	2.84E−08	1.58E−06
18516_Rpl38	1.69996672	2.82E−08	1.58E−06
19134_4930426I24Rik	−2.4103941	2.82E−08	1.58E−06
22996_E130310I04Rik	−2.8563266	2.89E−08	1.60E−06
161_Ankrd23	−1.5820887	2.91E−08	1.61E−06
16830_Selenom	2.0746181	2.94E−08	1.61E−06
22944_Gm15743	−2.4078482	2.96E−08	1.62E−06
8834_Ttll3	2.56106977	3.22E−08	1.75E−06
14467_Ddx3x	−1.3620368	3.27E−08	1.77E−06
4795_Mir6381	−2.7695449	3.34E−08	1.80E−06
13166_Srpr	−1.4293376	3.48E−08	1.85E−06
24886_Matr3	−1.4737141	3.47E−08	1.85E−06

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
6076_Clic4	−1.3153379	3.59E−08	1.90E−06
22806_Cldn5	3.18812104	3.60E−08	1.90E−06
1973_Rbm18	−1.8085187	3.77E−08	1.98E−06
7766_Lamtor4	2.31057015	3.88E−08	2.02E−06
7817_Gna12	−2.1483404	3.90E−08	2.03E−06
3611_Rps21	1.64176895	4.27E−08	2.20E−06
22121_Polr2f	1.91747275	4.26E−08	2.20E−06
7515_Atp2a2	−1.4331961	4.33E−08	2.21E−06
17425_Ncor1	−1.3498424	4.34E−08	2.21E−06
24148_H2-T23	1.63398679	4.50E−08	2.28E−06
16962_Gm46272	−3.1936705	4.77E−08	2.41E−06
9027_4930557K07Rik	−3.2812562	4.89E−08	2.46E−06
25546_Trpt1	2.55978467	4.92E−08	2.46E−06
11612_R74862	−1.7322911	5.35E−08	2.66E−06
13986_Ackr4	−1.6042246	5.77E−08	2.86E−06
18735_Narf	−1.8033316	5.79E−08	2.86E−06
19869_BC005537	−1.4922855	6.19E−08	3.04E−06
11181_Rps15a	1.7050669	6.40E−08	3.13E−06
18976_Strn3	−1.7983825	6.96E−08	3.38E−06
3282_Ergic3	1.54166466	7.11E−08	3.45E−06
16197_Gpx4	1.39300301	7.23E−08	3.49E−06
22544_Csad	−1.9531927	7.27E−08	3.49E−06
25619_Fth1	1.49657136	7.33E−08	3.50E−06
359_Ndufs1	−1.3042379	7.55E−08	3.58E−06
1706_Uap1l1	2.31661999	7.53E−08	3.58E−06
13600_Hexa	1.94598432	7.60E−08	3.59E−06
22542_Igfbp6	2.00821893	7.88E−08	3.70E−06
9854_Rps19	1.4596313	7.95E−08	3.72E−06
7863_Dmrt1i	−3.5420719	8.07E−08	3.76E−06
11144_Eif4g2	−1.3510613	8.14E−08	3.77E−06
5738_Atp6v0b	1.9042431	8.38E−08	3.87E−06
7971_Gm52885	−2.3657984	8.51E−08	3.91E−06
17716_Tsr1	−1.4043589	8.71E−08	3.99E−06
11867_Gm15816	−1.4946184	8.84E−08	4.03E−06
16719_Myl6	1.4068253	9.84E−08	4.46E−06
16201_Atp5d	1.38299476	1.06E−07	4.79E−06

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
15754_Trdn	−1.2323765	1.11E−07	4.97E−06
20840_Tkt	1.91490494	1.11E−07	4.97E−06
3311_Rpn2	1.55292803	1.17E−07	5.24E−06
16985_1700030C12Rik	−1.8719923	1.18E−07	5.26E−06
1386_Mtarc2	1.67487016	1.22E−07	5.39E−06
10313_Rpl13a	1.36263036	1.29E−07	5.67E−06
1201_Apoa2	−1.470559	1.36E−07	5.97E−06
17018_Rps27a	1.56976445	1.44E−07	6.30E−06
25493_Gm10814	−2.2384502	1.45E−07	6.30E−06
1974_Mrrf	−1.7853632	1.46E−07	6.32E−06
6956_Corin	−1.9827153	1.50E−07	6.47E−06
24819_Fhod3	−1.3972773	1.55E−07	6.69E−06
22979_Rpl35a	1.80984936	1.59E−07	6.80E−06
23868_Rpl10a	1.2821437	1.60E−07	6.82E−06
13500_Gm16124	−3.1407493	1.72E−07	7.30E−06
9358_Ndufa3	1.6201872	1.74E−07	7.33E−06
19613_Crip1	1.99397531	1.73E−07	7.33E−06
17612_Pfn1	1.37792687	1.81E−07	7.57E−06
24103_H2-D1	1.27423458	1.81E−07	7.57E−06
11112_Eif3f	1.31906634	1.85E−07	7.73E−06
9021_Ptms	1.59062478	1.94E−07	8.02E−06
19634_Dnah11	2.63779659	1.93E−07	8.02E−06
5723_Rps8	1.05796	2.04E−07	8.40E−06
25803_Klf9	−1.4626974	2.11E−07	8.66E−06
9604_Tmem160	2.26014104	2.21E−07	9.01E−06
25552_Cox8a	1.71415889	2.21E−07	9.01E−06
13872_Tmed3	2.09119103	2.26E−07	9.19E−06
1337_Itpkb	−2.3593194	2.32E−07	9.39E−06
9116_1700101I11Rik	−2.0214667	2.35E−07	9.48E−06
16134_Cstb	2.44311337	2.38E−07	9.55E−06
23656_6330415G19Rik	−2.1710264	2.42E−07	9.68E−06
25316_Slc66a2	−1.430622	2.43E−07	9.68E−06
8085_Arf5	1.72008992	2.50E−07	9.89E−06
24916_Ndufa2	1.65132779	2.50E−07	9.89E−06
12312_Ndufb7	1.23185933	2.53E−07	9.97E−06
21008_Fermt2	−1.3108513	2.62E−07	1.03E−05

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
3699_Fabp5	2.03043288	2.70E−07	1.06E−05
20841_Mir3076	2.6825541	2.71E−07	1.06E−05
4218_Rps27rt	1.54423565	2.80E−07	1.09E−05
988_Ivns1abp	−1.2170871	2.84E−07	1.10E−05
4216_Tpm3	1.98628121	2.97E−07	1.14E−05
257_Nabp1	−2.2987945	3.05E−07	1.17E−05
7829_Actb	1.2750849	3.14E−07	1.20E−05
6329_Pgd	1.63497534	3.22E−07	1.23E−05
17274_Gm2a	1.98845288	3.24E−07	1.23E−05
26106_Slk	−1.3630162	3.29E−07	1.24E−05
5777_Gm12867	−2.5979468	3.35E−07	1.26E−05
4219_Rps27	1.54439952	3.37E−07	1.27E−05
24470_Ndufa11	1.39148197	3.46E−07	1.30E−05
11534_Ifitm3	1.4102007	3.47E−07	1.30E−05
22987_Heg1	−2.3485456	3.52E−07	1.31E−05
10311_Rps11	1.16849129	3.55E−07	1.32E−05
5706_Akr1a1	1.55952212	3.61E−07	1.33E−05
20333_Ice1	−2.4520744	3.60E−07	1.33E−05
4715_Rpl34-ps1	1.77535457	3.86E−07	1.42E−05
25318_D330025C20Rik	−1.4318362	3.90E−07	1.43E−05
19739_Mir1896	−3.853795	3.91E−07	1.43E−05
6867_C130083M11Rik	−2.3907283	3.95E−07	1.44E−05
10516_Tarsl2	−1.9776736	3.97E−07	1.44E−05
7404_Cox6a1	1.41055582	4.01E−07	1.45E−05
16243_Oaz1	1.24353419	4.03E−07	1.45E−05
16244_Oaz1-ps	1.24353419	4.03E−07	1.45E−05
4668_Snhg8	2.34183512	4.28E−07	1.53E−05
16250_Timm13	1.64866222	4.43E−07	1.58E−05
7704_Fis1	1.45720764	4.49E−07	1.60E−05
7336_Myo18b	−1.3196382	4.73E−07	1.67E−05
4714_Rpl34	1.73205499	4.88E−07	1.72E−05
17183_Canx	−1.3097348	4.92E−07	1.73E−05
10604_Anpep	2.28453025	4.94E−07	1.73E−05
12031_Acsl1	−1.2570192	5.05E−07	1.76E−05
12766_Cox4i1	1.29719575	5.36E−07	1.86E−05
1234_Copa	−1.3935848	5.50E−07	1.90E−05

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
22146_Cbx6	1.88712223	5.49E−07	1.90E−05
25594_Bscl2	2.56201842	5.53E−07	1.91E−05
17932_Ggnbp2os	−2.3311694	5.60E−07	1.93E−05
4015_Kpna4	−1.7612025	5.75E−07	1.96E−05
24712_Svil	−1.5672896	5.73E−07	1.96E−05
25597_Uqcc3	1.84916413	5.93E−07	2.02E−05
17024_Sptbn1	−1.4400942	6.03E−07	2.05E−05
24752_Rmc1	1.74589428	6.76E−07	2.29E−05
13890_B430319G15Rik	−2.9379866	7.01E−07	2.36E−05
14012_Rpl29	1.13222109	7.13E−07	2.40E−05
1946_Hspa5	−1.3222175	7.26E−07	2.43E−05
11397_Tacc2	−1.2788832	7.40E−07	2.46E−05
21120_Gm16617	−3.6563793	7.39E−07	2.46E−05
18670_Rptoros	−3.2858614	7.44E−07	2.47E−05
16946_Pno1	−1.9948198	7.53E−07	2.49E−05
13064_Gm39302	−2.9794283	7.67E−07	2.53E−05
23701_D330041H03Rik	1.89609474	7.70E−07	2.53E−05
18032_Tob1	−1.92412	8.22E−07	2.70E−05
15632_Txlnb	−1.4747871	8.71E−07	2.85E−05
7080_Ankrd17	−1.9414552	8.77E−07	2.85E−05
7812_Lfng	2.86630287	8.76E−07	2.85E−05
1143_Rcsd1	−1.3060815	8.89E−07	2.88E−05
10453_Herc2	−1.6742984	9.11E−07	2.94E−05
3267_Acss2os	−1.9852563	9.43E−07	3.04E−05
26195_Eif3a	−1.3010102	9.59E−07	3.08E−05
2240_Ccdc141	−1.7919236	9.67E−07	3.10E−05
22_1700034P13Rik	−3.3682141	9.79E−07	3.12E−05
3815_Fxr1	−1.144401	1.02E−06	3.23E−05
4305_S100a11	1.6201842	1.02E−06	3.23E−05
8528_Vamp8	1.61166799	1.02E−06	3.23E−05
12019_Sorbs2	−1.5809385	1.06E−06	3.33E−05
14736_Arhgef6	−1.8780741	1.10E−06	3.47E−05
2026_Rpl35	1.24184057	1.14E−06	3.53E−05
3550_Nelfcd	2.16307188	1.14E−06	3.53E−05
11711_Col4a2	−1.7483788	1.14E−06	3.53E−05
22558_Prr13	1.52943094	1.13E−06	3.53E−05

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
23675_Elob	1.29072044	1.14E−06	3.53E−05
17239_Uqcrq	1.50391992	1.15E−06	3.57E−05
3696_C030034L19Rik	−2.0311699	1.16E−06	3.57E−05
12187_Ifi30	2.16666166	1.17E−06	3.60E−05
15620_Adat2	−2.0006449	1.20E−06	3.68E−05
8772_Uba3	−1.6031638	1.21E−06	3.69E−05
7457_Gm10390	−3.1156032	1.25E−06	3.80E−05
8992_Gm52877	−2.599263	1.26E−06	3.83E−05
16252_Gadd45b	2.3593577	1.32E−06	3.98E−05
17594_Pelp1	2.15720467	1.32E−06	3.98E−05
18908_Gpr22	−2.1862718	1.33E−06	3.99E−05
3807_Actl6a	−1.3369105	1.34E−06	4.01E−05
3888_4930577N17Rik	−2.6969878	1.35E−06	4.05E−05
20373_Cast	−1.159469	1.37E−06	4.09E−05
6868_Sod3	1.64404355	1.38E−06	4.10E−05
20437_Cmya5	−1.1617065	1.38E−06	4.11E−05
21023_Samd4	−1.5914845	1.44E−06	4.27E−05
6158_Nbl1	1.68908708	1.45E−06	4.28E−05
18698_Mcrip1	1.81400191	1.45E−06	4.28E−05
4332_Psmb4	1.18818203	1.47E−06	4.33E−05
2540_Spi1	2.39526793	1.48E−06	4.34E−05
7069_Gm42107	−2.6042389	1.49E−06	4.35E−05
5585_Fam151a	−1.5441843	1.51E−06	4.40E−05
25924_A330032B11Rik	−2.9741479	1.54E−06	4.47E−05
22469_2310068J16Rik	−4.0600511	1.57E−06	4.56E−05
6889_Pcdh7	−1.4670213	1.59E−06	4.56E−05
16520_Csrp2	2.09458039	1.58E−06	4.56E−05
18767_Itsn2	−2.0435274	1.58E−06	4.56E−05
25143_Mir5107	1.66576682	1.60E−06	4.60E−05
960_Cfh	−1.7904691	1.66E−06	4.75E−05
9982_Gm19897	−1.8449994	1.73E−06	4.91E−05
25141_Rps14	1.52429503	1.73E−06	4.91E−05
24104_H2-L	1.15450394	1.81E−06	5.15E−05
12784_Gm27011	−3.1503019	1.86E−06	5.27E−05
1437_Nenf	1.34346071	1.87E−06	5.29E−05
16207_Ndufs7	1.30518442	1.88E−06	5.30E−05

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
6441_Aurkaip1	1.61608654	1.95E−06	5.48E−05
10633_Alpk3	−1.4535719	1.96E−06	5.48E−05
5138_Ccl21a	1.69947673	2.00E−06	5.58E−05
5139_Gm1987	1.69947673	2.00E−06	5.58E−05
24021_Tap2	1.50445523	2.03E−06	5.64E−05
2625_Caprin1	−1.3721793	2.06E−06	5.68E−05
4776_Eif4e	−1.341317	2.07E−06	5.68E−05
14228_Golga4	−1.1706601	2.05E−06	5.68E−05
24718_Kif5b	−1.5867708	2.06E−06	5.68E−05
16445_Nudt4	−1.1932141	2.08E−06	5.72E−05
5247_Cavin4	−1.3678647	2.11E−06	5.77E−05
19274_Pomt2	−1.8306445	2.16E−06	5.88E−05
13549_Man2c1os	−2.2616045	2.22E−06	6.04E−05
14253_Xirp1	−1.670594	2.23E−06	6.04E−05
18478_Gm45916	−1.8564808	2.23E−06	6.04E−05
326_Trak2	−1.2359198	2.28E−06	6.13E−05
18683_Actg1	1.21460298	2.27E−06	6.13E−05
21756_9430069I07Rik	−2.7552596	2.31E−06	6.21E−05
11556_Taldo1	1.25432104	2.33E−06	6.24E−05
23332_Sod1	1.16233711	2.34E−06	6.27E−05
3833_Anxa5	1.16389984	2.36E−06	6.28E−05
23779_Ciao3	1.50450466	2.36E−06	6.28E−05
5975_Laptm5	2.02356605	2.41E−06	6.39E−05
25230_4930549G23Rik	−1.4165146	2.43E−06	6.43E−05
1202_Fcer1g	3.00471749	2.48E−06	6.56E−05
8861_Syn2	−3.0806383	2.49E−06	6.56E−05
12811_Ankrd11	−1.529552	2.58E−06	6.78E−05
23392_Ttc3	−1.3375829	2.59E−06	6.80E−05
22447_1700120C14Rik	−1.5431152	2.61E−06	6.83E−05
14098_Dalrd3	1.59948912	2.63E−06	6.85E−05
8199_4930599N23Rik	−2.7005514	2.65E−06	6.89E−05
12170_Uba52	1.16944498	2.68E−06	6.97E−05
134_Dst	−1.3258072	2.75E−06	7.14E−05
14264_Rpl14	1.03524679	2.87E−06	7.42E−05
19307_4930473H19Rik	−1.4737427	2.91E−06	7.51E−05
19069_4931403G20Rik	−2.6977825	3.02E−06	7.76E−05

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
17269_Hint1	1.38936373	3.04E−06	7.81E−05
4432_Pde4dip	−1.3400852	3.06E−06	7.84E−05
18554_Jpt1	1.43603756	3.12E−06	7.96E−05
24020_Psmb8	2.08939367	3.16E−06	8.05E−05
17223_Ppp2ca	−1.1855486	3.19E−06	8.12E−05
5437_Plin2	1.41030312	3.22E−06	8.16E−05
21034_Ktn1	−1.1440095	3.36E−06	8.51E−05
5708_Prdx1	1.41619716	3.63E−06	9.17E−05
25272_Rpl17	1.20505376	3.66E−06	9.21E−05
24628_Slc8a1	−1.5020902	3.68E−06	9.26E−05
22931_Cpn2	−2.6732953	3.75E−06	9.40E−05
24838_Gpr17	−1.7881084	3.94E−06	9.87E−05
14171_Lrrc2	−1.2710186	4.03E−06	0.00010063
11134_Wee1	−2.7917263	4.07E−06	0.00010142
20921_5830448L01Rik	−3.0151331	4.09E−06	0.00010155
9859_Rabac1	1.41217697	4.15E−06	0.00010287
3469_Ptgis	1.89640084	4.19E−06	0.0001036
15940_D830039M14Rik	−2.3487683	4.23E−06	0.00010434
13514_Dnaja4	−1.4112548	4.27E−06	0.00010504
3431_Pltp	1.83978087	4.44E−06	0.00010886
4626_Agl	−1.3723566	4.44E−06	0.00010886
20879_Ncoa4	−1.9724914	4.54E−06	0.00011092
25301_Pstpip2	−2.6336757	4.57E−06	0.00011135
17831_Gm11201	−2.8097479	4.59E−06	0.00011175
15045_Phka1	−1.8885604	4.62E−06	0.00011228
12761_Gins2	2.24676495	4.64E−06	0.0001124
22213_Smdt1	1.56488219	4.74E−06	0.00011462
20032_Cap2	−1.2536311	4.75E−06	0.00011465
1145_Cd247	−2.1070349	4.77E−06	0.00011472
8525_Tmem150a	1.61376674	4.82E−06	0.00011578
14323_Fyco1	−1.5535448	4.88E−06	0.0001169
24465_Rpl36	1.00569626	4.91E−06	0.00011729
11532_Ifitm2	1.51722013	5.04E−06	0.00012013
22451_Tmbim6	1.15953755	5.20E−06	0.00012382
7731_Pcolce	1.56415811	5.37E−06	0.00012752
13520_AY074887	−1.4575644	5.39E−06	0.00012775

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
1215_Usf1	1.64471835	5.41E−06	0.00012778
13561_Fam219b	−1.3338406	5.44E−06	0.00012821
1163_Mgst3	1.51848579	5.63E−06	0.00013257
2740_C130080G10Rik	−1.4279825	5.81E−06	0.00013594
8070_Lmod2	−0.9718452	5.81E−06	0.00013594
10159_D530033B14Rik	−1.9257973	5.80E−06	0.00013594
23803_1700022N22Rik	−1.6176909	6.03E−06	0.00014062
17085_Ccng1	−1.2547399	6.06E−06	0.00014105
11295_Coro1a	1.96083763	6.31E−06	0.00014653
7482_Ptpn11	−1.2531656	6.34E−06	0.00014693
20261_Ctsl	2.00229969	6.55E−06	0.00015157
22192_Aco2	−1.1907142	6.67E−06	0.00015397
25988_Rrp12	−1.8916792	6.73E−06	0.00015492
9991_Eif3k	1.35503707	6.88E−06	0.00015821
16010_Ank3	−1.7145662	6.95E−06	0.00015929
11119_Rpl27a	1.18065557	6.97E−06	0.00015949
21606_Mbnl2	−1.7232724	7.09E−06	0.00016192
13869_Bcl2a1b	2.92505506	7.29E−06	0.00016615
10533_Mef2a	−1.3057456	7.45E−06	0.00016936
6062_Stmn1	2.17666284	7.62E−06	0.00017286
344_Carf	−2.2405579	7.71E−06	0.00017456
24416_Rab5a	−1.8683695	7.87E−06	0.00017792
12180_Lsm4	1.25104308	8.02E−06	0.00018084
17455_Myocd	−2.3502875	8.06E−06	0.00018105
18822_Lpin1	−1.3680594	8.05E−06	0.00018105
20768_Vcl	−1.5297094	8.58E−06	0.00019228
19357_Trip11	−2.7273654	8.71E−06	0.0001948
4650_Dnttip2	−1.5363853	8.74E−06	0.00019508
4661_1810037I17Rik	1.69106943	8.78E−06	0.00019559
10642_Fsd2	−1.1788304	8.83E−06	0.00019625
19385_Ifi27	1.73133507	8.95E−06	0.00019842
19545_Hsp90aa1	−1.2929053	9.02E−06	0.00019959
20814_Slmap	−1.1653536	9.06E−06	0.00020002
25835_Vldlr	−1.0129165	9.09E−06	0.00020036
25627_Tmem258	1.8951268	9.18E−06	0.00020186
14932_Dmd	−1.9578342	9.38E−06	0.00020589

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
12814_Rpl13	0.81623911	9.41E−06	0.00020603
13814_4930429F24Rik	−1.1714508	9.65E−06	0.00021102
4991_Ccnc	−1.5991405	9.68E−06	0.00021127
17567_Eif5a	1.07172455	9.80E−06	0.00021327
16187_R3hdm4	1.28163983	9.94E−06	0.00021601
24786_Dsg2	−1.9936254	9.99E−06	0.0002167
9703_Apoe	1.60303476	1.01E−05	0.00021954
6761_Gm15522	−1.9553677	1.02E−05	0.00022036
23490_Qk	−1.1531634	1.08E−05	0.00023176
20502_6430562O15Rik	−1.1941591	1.09E−05	0.00023552
1445_1700034H15Rik	−1.9724736	1.10E−05	0.00023659
4871_Acadm	−1.1045041	1.12E−05	0.00023921
1193_Fcgr3	1.64187781	1.13E−05	0.0002421
3553_Atp5e	1.38417605	1.14E−05	0.00024349
8754_A730049H05Rik	−3.3318054	1.14E−05	0.00024349
4474_Casq2	−1.0308682	1.19E−05	0.00025245
16426_Metap2	−1.0921388	1.19E−05	0.00025245
16888_Gck	−1.9278059	1.19E−05	0.00025245
24015_H2-DMa	2.63266667	1.20E−05	0.0002537
24296_Slc35b2	2.10140537	1.22E−05	0.00025733
2912_Trpm7	−2.2737053	1.23E−05	0.00025791
21757_Gm12191	1.03310876	1.24E−05	0.00026083
21758_Rpl30	1.03310876	1.24E−05	0.00026083
21323_Ctsb	1.4986662	1.25E−05	0.00026233
1717_C8g	−2.7950124	1.26E−05	0.00026323
16729_Rps26	1.33327974	1.27E−05	0.00026522
11294_Bola2	2.07982177	1.28E−05	0.00026653
25151_Pdgfrb	1.3036847	1.30E−05	0.00026928
21629_4930594M22Rik	−1.5205739	1.31E−05	0.00027045
468_Cnppd1	1.68864247	1.31E−05	0.00027114
24000_Rps18	1.17259016	1.31E−05	0.00027114
13925_Rbp1	1.76608203	1.32E−05	0.00027168
16383_Arl1	−1.5578877	1.34E−05	0.00027621
24592_Fez2	−1.0567744	1.36E−05	0.00027893
17573_Gabarap	1.49397929	1.37E−05	0.0002804
8491_Serbp1	−0.8975974	1.40E−05	0.00028555

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Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
20245_Gm16907	−1.577295	1.40E−05	0.00028655
19422_Glrx5	1.38572662	1.41E−05	0.00028655
22240_Pacsin2	−1.2040527	1.44E−05	0.00029199
15470_Ddx3y	−1.7915165	1.44E−05	0.00029203
18984_Arhgap5	−2.4773725	1.45E−05	0.00029332
7646_Lat2	2.49714455	1.46E−05	0.00029595
12169_Rex1bd	1.57884432	1.48E−05	0.00029828
1656_Yme1l1	−1.3975671	1.49E−05	0.00030064
21163_1700123O20Rik	−2.0728352	1.51E−05	0.00030338
9271_Abcc9	−1.3943179	1.52E−05	0.00030521
20136_Prelid1	1.3985888	1.52E−05	0.00030526
21197_Emc9	1.61079319	1.56E−05	0.00031146
5934_Sync	−1.6814592	1.57E−05	0.00031254
11467_Bnip3	−1.3965174	1.57E−05	0.0003134
10317_Mir5121	1.22097004	1.58E−05	0.00031365
18751_Kif3c	−1.2845434	1.58E−05	0.00031375
6705_Krtcap3	−2.7334816	1.59E−05	0.00031407
4155_Lamtor2	1.3995675	1.62E−05	0.00032045
8102_Atp6v1f	1.45822898	1.62E−05	0.00032045
1199_Nr1i3	−1.3046218	1.64E−05	0.00032297
24510_Pja2	−1.4879779	1.64E−05	0.00032297
2137_Xirp2	−1.4407053	1.68E−05	0.00032987
18978_Hectd1	−1.3848187	1.70E−05	0.00033208
9230_Mgp	1.43484938	1.70E−05	0.00033221
23498_Agpat4	2.63920173	1.73E−05	0.00033722
5440_Rps6	0.9660458	1.77E−05	0.00034419
23032_Fbxo40	−1.4467105	1.77E−05	0.00034481
20720_Il3ra	2.35590604	1.81E−05	0.0003508
16281_Mfsd12	1.69295705	1.88E−05	0.00036517
13560_Cox5a	1.20789584	1.95E−05	0.00037671
12592_Psmb10	1.39379339	1.95E−05	0.00037747
11856_Smim19	−1.4640872	1.96E−05	0.00037794
20629_Nnt	−1.2721232	1.97E−05	0.00037915
18030_Spag9	−1.1957719	2.00E−05	0.00038471
1709_Npdc1	2.10121314	2.06E−05	0.0003946
20035_Kif13a	−1.1411676	2.07E−05	0.00039581

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
24074_Ddah2	1.86562026	2.07E−05	0.00039581
11710_Col4a1	−1.3865391	2.09E−05	0.00039798
25593_Gng3	−1.7201552	2.09E−05	0.00039798
21637_Ccdc152	1.7623928	2.11E−05	0.00040093
15381_Sat1	1.60642883	2.17E−05	0.00041243
9191_LOC118027456	−2.5289035	2.23E−05	0.00042193
9989_Capn12	1.58400847	2.25E−05	0.00042596
13909_Atp1b3	1.26833714	2.27E−05	0.00042839
1928_Lrsam1	1.75296176	2.28E−05	0.00043019
3291_Scand1	1.50066596	2.37E−05	0.00044535
4046_Etfdh	−1.0088003	2.40E−05	0.00045048
8801_Trnt1	−1.1243526	2.40E−05	0.00045048
17961_Cltc	−1.3813185	2.45E−05	0.0004587
10450_A230056P14Rik	−1.7374007	2.48E−05	0.00046343
18523_Cd300a	2.51890814	2.50E−05	0.00046593
18552_Nt5c	2.0812997	2.50E−05	0.00046598
20788_Rps24	1.16609324	2.52E−05	0.00046802
3658_Uckl1os	−1.4466228	2.56E−05	0.00047387
21184_Zfhx2os	−4.0544399	2.56E−05	0.00047395
19612_Crip2	0.95115147	2.57E−05	0.00047452
13527_Nrg4	−1.425039	2.60E−05	0.00047919
4094_Rps3a1	0.89011753	2.61E−05	0.00048093
20130_Hk3	2.64234707	2.67E−05	0.00049021
6915_Rpl9	1.03595826	2.69E−05	0.0004935
23994_Gm19412	−1.5279078	2.73E−05	0.00050086
3401_Sdc4	1.57086629	2.83E−05	0.00051606
16185_Cfd	7.1703911	2.82E−05	0.00051606
18573_B230344G16Rik	−3.223284	2.83E−05	0.00051606
1002_Ncf2	2.02450778	2.84E−05	0.0005168
24024_H2-Aa	1.41170099	2.86E−05	0.0005195
12398_Dnaja2	−1.2320738	2.98E−05	0.00054056
13543_Imp3	1.88681541	2.99E−05	0.00054094
20832_Selenok	1.1093244	3.02E−05	0.00054543
25193_Fech	−1.3565982	3.02E−05	0.00054543
18428_Ccdc47	−1.1725583	3.06E−05	0.00055126
360_Eef1b2	1.01270235	3.13E−05	0.00056235

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
19124_Rplp2-ps1	3.5949073	3.20E−05	0.00057422
11595_Ctsd	1.27108439	3.27E−05	0.00058345
18144_Psmb3	1.3997156	3.27E−05	0.00058345
18642_Timp2	1.27952523	3.26E−05	0.00058345
15921_Psap	1.18269027	3.28E−05	0.00058418
22016_Smpd5	1.46127834	3.29E−05	0.00058596
24025_H2-Eb1	1.22435099	3.33E−05	0.00059147
10587_Mfge8	2.84495846	3.35E−05	0.00059387
13073_Carm1	1.26443608	3.35E−05	0.00059387
11020_Timm10b	2.14381424	3.37E−05	0.00059536
8328_Tmem176a	2.32111407	3.38E−05	0.0005968
10040_Tyrobp	2.0507593	3.42E−05	0.00060236
11986_Mtmr7	1.5318583	3.52E−05	0.0006198
22783_Slc25a1	2.80883832	3.53E−05	0.0006198
8028_Ppp1r3a	−1.7343382	3.55E−05	0.00062272
9008_Grcc10	1.34151093	3.57E−05	0.00062494
16463_Atp2b1	−1.5254905	3.60E−05	0.00062898
11962_Gm16793	−2.3583513	3.64E−05	0.00063573
18322_Vat1	1.24059848	3.67E−05	0.00063797
25541_LOC114841036	1.71164232	3.66E−05	0.00063797
18_2610203C22Rik	−1.1209539	3.69E−05	0.00063958
20858_Nt5dc2	1.87961108	3.68E−05	0.00063958
932_9230116N13Rik	−2.5275866	3.71E−05	0.00064307
16883_Pgam2	0.93560786	3.78E−05	0.00065321
3810_Usp13	−1.1149174	3.82E−05	0.00065889
2858_Frmd5	−1.4328517	3.85E−05	0.00066211
9861_Atp1a3	2.51844662	3.85E−05	0.00066211
26078_Cuedc2	1.22013206	3.84E−05	0.00066211
2997_4930402H24Rik	−1.7943434	3.87E−05	0.00066264
3260_Map1lc3a	1.10236942	3.88E−05	0.00066264
8870_Cand2	1.47503188	3.88E−05	0.00066264
13486_Rdx	−1.3014176	3.87E−05	0.00066264
11024_Taf10	1.34960683	3.90E−05	0.00066415
12381_A230103J11Rik	−1.7010703	3.97E−05	0.00067483
18157_Rpl19	0.99112165	3.97E−05	0.00067483
22681_Litaf	1.55442776	3.98E−05	0.00067483

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
22801_Txnrd2	−1.274831	3.98E−05	0.00067483
1826_Coq4	−1.5881884	4.06E−05	0.00068717
1625_Dnajc1	−1.4013368	4.12E−05	0.00069559
18963_Pnpla8	−1.0941652	4.16E−05	0.00070112
5887_Thrap3	−1.0966836	4.17E−05	0.0007016
6112_C1qb	1.36471805	4.18E−05	0.00070166
8541_Tmsb10	1.65671997	4.29E−05	0.00071792
15850_Gm15934	−2.3085406	4.29E−05	0.00071792
23048_Cox17	1.14079371	4.29E−05	0.00071792
20860_Gm52148	−1.7178728	4.33E−05	0.00072139
25542_Fkbp2	1.71818202	4.32E−05	0.00072139
21704_Golph3	−1.6219266	4.37E−05	0.00072781
13917_Ppia	1.28756046	4.41E−05	0.00073376
22120_1700088E04Rik	−1.0450074	4.42E−05	0.00073433
11617_Kcnq1ot1	−1.351347	4.46E−05	0.00073961
15794_Mfsd4b5	−2.5255986	4.47E−05	0.00073961
20862_Tnnc1	0.87618822	4.48E−05	0.00074089
20725_Oxsm	−1.6937173	4.59E−05	0.00075779
17212_Nhp2	1.46451205	4.62E−05	0.00076132
3351_Chd6	−1.8447163	4.71E−05	0.00077289
4886_Zranb2	−1.5865506	4.71E−05	0.00077289
15979_Mypn	−1.0635161	4.76E−05	0.00078059
23248_Usp25	−1.3276944	4.83E−05	0.00079083
17590_Rnasek	1.57205383	4.85E−05	0.00079202
804_Ubxn4	−1.3391266	4.86E−05	0.00079273
23902_Tbc1d22bos	−2.203777	4.87E−05	0.00079367
26149_Nrap	−1.1476409	4.92E−05	0.00080001
5690_Uqcrh	1.19756423	4.96E−05	0.00080445
7726_Gnb2	0.97248598	4.96E−05	0.00080445
2560_Mdk	2.05262844	5.01E−05	0.00081051
8492_Il12rb2	−1.6771503	5.01E−05	0.00081051
11160_Far1os	−2.5905396	5.07E−05	0.00081943
10814_Mrpl48	−0.9953074	5.19E−05	0.00083505
17497_Rpl26	1.15542038	5.19E−05	0.00083505
17498_Gm15772	1.15542038	5.19E−05	0.00083505
24307_Vegfa	−1.3486681	5.21E−05	0.00083622

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
13389_Atp5l	1.2339736	5.35E−05	0.00085679
15892_Serinc1	−1.2342996	5.44E−05	0.0008699
21882_Ndufb9	1.11646092	5.63E−05	0.00089952
4358_Setdb1	1.57259548	5.67E−05	0.00090477
6045_Cd52	2.1784681	5.70E−05	0.0009061
8613_Zfp638	−1.4557763	5.70E−05	0.0009061
24744_Gata6os	−2.1654553	5.70E−05	0.0009061
24035_Gpsm3	1.90353981	5.86E−05	0.000929
13413_Pcsk7	−2.0469615	5.89E−05	0.00093373
23782_Ccdc78	1.77491868	5.92E−05	0.00093697
25547_Fermt3	1.26676448	5.94E−05	0.00093823
17572_Ctdnep1	1.01970269	5.97E−05	0.00094213
10288_Tbc1d17	1.50541563	6.03E−05	0.00094895
6865_Dhx15	−1.2441035	6.04E−05	0.00094903
14018_Parp3	−1.6162551	6.08E−05	0.00095462
5239_Nr4a3	−3.2831036	6.13E−05	0.00096081
4727_Gstcd	−2.293565	6.14E−05	0.00096114
9919_BC024978	−1.3125422	6.17E−05	0.00096381
22622_Srl	−1.1391886	6.27E−05	0.00097906
7710_Ap1s1	1.32263892	6.33E−05	0.00098538
19563_Eif5	−0.9897434	6.32E−05	0.00098538
5100_Il11ra1	1.31417842	6.35E−05	0.00098686
21815_Abra	−1.3386896	6.39E−05	0.00099111
20031_Rbm24	−1.2637029	6.54E−05	0.00101362
7205_Hsd17b11	1.65421365	6.64E−05	0.00102754
10086_Fxyd1	1.11032812	6.67E−05	0.00102952
14864_Renbp	2.04353246	6.67E−05	0.00102952
21505_Elf1	−1.6474437	6.73E−05	0.00103699
4682_Gm51018	−1.9085654	6.85E−05	0.00105228
12669_Cog4	−1.2244165	6.84E−05	0.00105228
19141_Sptb	−1.2925839	7.00E−05	0.00107327
11662_Pet100	1.72482018	7.14E−05	0.0010946
12349_D8Ertd738e	1.06598523	7.15E−05	0.0010946
11223_Uqcrc2	−0.9989171	7.18E−05	0.00109678
7089_Pf4	2.26447587	7.25E−05	0.00110563
5186_Clta	0.96321063	7.35E−05	0.00111895

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
11411_Pstk	−1.6805324	7.40E−05	0.00112567
4166_Msto1	1.32202969	7.45E−05	0.001128
9199_1700055D16Rik	−3.0433035	7.43E−05	0.001128
23552_Psmb1	1.29656621	7.45E−05	0.001128
15582_Gm16254	−2.1758871	7.47E−05	0.00113
3288_Romo1	−0.9277121	7.50E−05	0.0011319
9932_Pld3	1.65313779	7.50E−05	0.0011319
11713_E230013L22Rik	−1.3109012	7.53E−05	0.00113408
12798_Ctu2	1.6346264	7.71E−05	0.00116002
23738_Spsb3	−1.1634573	7.85E−05	0.00117949
24018_Psmb9	2.24795453	7.89E−05	0.00118278
6723_Ppp1cb	−0.8842714	8.01E−05	0.00120019
7463_Slc8b1	2.03525702	8.06E−05	0.0012049
3862_Hspa4l	−1.6263908	8.08E−05	0.00120716
25394_Coro1b	1.15926543	8.11E−05	0.00120955
1854_Ptpa	1.27660214	8.18E−05	0.00121614
17951_Brip1os	−1.2176907	8.17E−05	0.00121614
11541_Rnh1	1.3311604	8.21E−05	0.00122
4161_Rit1	1.14012431	8.41E−05	0.0012469
256_Cavin2	−1.1473729	8.49E−05	0.0012573
2852_Serf2	0.8372162	8.69E−05	0.00128629
597_Ugt1a10	1.96328141	8.80E−05	0.00128795
598_Ugt1a9	1.96328141	8.80E−05	0.00128795
599_Ugt1a8	1.96328141	8.80E−05	0.00128795
601_Ugt1a6b	1.96328313	8.78E−05	0.00128795
603_Ugt1a5	1.96328141	8.80E−05	0.00128795
604_Ugt1a2	1.96328141	8.80E−05	0.00128795
606_Ugt1a1	1.96328141	8.80E−05	0.00128795
3430_Ctsa	1.36184104	8.80E−05	0.00128795
6551_Cd36	−0.9973682	8.87E−05	0.00129559
19101_Ppm1a	−1.0619494	8.89E−05	0.00129691
6409_Prxl2b	1.06957197	8.94E−05	0.00130155
10514_Tjp1	−1.4045278	8.94E−05	0.00130155
7565_Kmt5a	−1.1161377	9.11E−05	0.00132406
8802_Crbn	−1.0584568	9.15E−05	0.00132841
19123_Wdr89	2.78449524	9.23E−05	0.00133748

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
17728_Serpinf1	1.49880291	9.48E−05	0.00137161
24331_Mrpl2	1.01716101	9.49E−05	0.0013723
18996_Baz1a	−2.1533308	9.51E−05	0.00137344
20797_Zcchc24	1.36548675	9.57E−05	0.00138005
18909_Hbp1	−0.8898761	9.65E−05	0.00138906
14914_Tbl1x	−2.4991991	9.67E−05	0.00139101
15024_Il2rg	1.79805423	9.70E−05	0.00139316
15564_Akap12	−1.7051243	9.82E−05	0.00140776
7670_Nsun5	1.40908059	0.00010007	0.0014331
4405_Gm15441	−2.5874078	0.00010037	0.00143549
24790_Trappc8	−2.0417044	0.00010095	0.0014418
5785_Ybx1	−0.9458604	0.00010222	0.00145808
6589_Tomm7	1.82951164	0.00010252	0.00145847
12467_Mt1	1.26704119	0.00010248	0.00145847
24653_Prepl	−1.3353237	0.00010417	0.00147997
13162_4930581F22Rik	−1.6678474	0.00010528	0.0014918
23624_9330136K24Rik	−2.1233455	0.00010524	0.0014918
25041_Myot	−1.479176	0.00010611	0.0015016
7355_Selplg	2.09113888	0.00010713	0.00151408
152_Neurl3	2.12430618	0.00010827	0.0015281
2823_Ganc	−1.9836838	0.00011009	0.00155181
2965_Sirpa	1.51224002	0.00011045	0.00155272
17218_Sar1b	−1.1958291	0.00011037	0.00155272
25341_Cndp2	1.40563984	0.00011077	0.0015533
26133_Rbm20	−1.2539108	0.00011073	0.0015533
23709_Caskin1	1.46596268	0.00011181	0.00156582
2922_Tmem127	1.02856083	0.00011402	0.00159254
17719_Smg6	−1.3714924	0.00011392	0.00159254
602_Ugt1a6a	1.92664557	0.00011724	0.00163115
4507_Mov10	2.44339373	0.00011736	0.00163115
19056_Klhdc2	−1.2139543	0.00011716	0.00163115
24247_Rn45s	1.73477395	0.00011739	0.00163115
15968_Ccar1	−1.4689729	0.00011821	0.00164045
7488_Erp29	1.15020563	0.0001189	0.00164144
12369_Dnase2a	2.40162994	0.00011886	0.00164144
23729_Ndufb10	1.11516897	0.00011904	0.00164144

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
24091_Aif1	2.00694262	0.00011889	0.00164144
25200_Alpk2	−1.6242203	0.00011869	0.00164144
18551_Armc7	1.61232241	0.00012003	0.00165293
22011_Grina	1.20964265	0.0001206	0.00165861
23668_Paqr4	1.49557901	0.00012081	0.00165939
9678_Rtn2	1.4547917	0.00012228	0.0016774
8098_Calu	−0.8979262	0.000124	0.00169885
2281_Ube2l6	1.73439809	0.0001258	0.00172128
3682_Pkia	−1.2636371	0.00012614	0.00172386
25650_Tmem109	1.1087476	0.00012645	0.0017258
13352_Thy1	1.8850794	0.00012702	0.00173145
4851_Fubp1	−1.1793881	0.00012897	0.00175575
760_Clasp1	−0.9736111	0.00013	0.00176763
14206_Dync1li1	−1.5174749	0.00013059	0.00177329
15031_Taf1	−1.7502869	0.00013135	0.00178145
8101_Flnc	−1.0856938	0.0001317	0.00178182
18358_Slc25a39	1.02940982	0.00013171	0.00178182
11378_9130023H24Rik	−1.8012339	0.0001338	0.00180781
7569_Tmed2	−1.1235426	0.00013731	0.00185293
8516_Ptcd3	−0.9793939	0.00013758	0.0018542
13065_Slc44a2	1.17775069	0.00014096	0.00189743
14093_Qrich1	−1.6491991	0.00014247	0.00191534
25455_Drap1	0.97867747	0.00014292	0.00191897
22389_Slc48a1	1.08398758	0.00014402	0.00193135
1423_Prox1os	−3.3533106	0.00014421	0.00193145
1927_Niban2	1.47447939	0.00014637	0.00195796
6358_Park7	0.80644659	0.00014693	0.00196187
16261_Map2k2	0.94676175	0.00014703	0.00196187
5098_Gm42274	−1.2463486	0.00014924	0.00198898
5023_Rragd	−1.2284781	0.00015033	0.00200102
24302_Mrpl14	1.28824017	0.00015057	0.00200172
10649_Tm6sf1	−1.7879571	0.00015208	0.0020193
19084_Arid4a	−1.9362995	0.00015249	0.00202222
685_Hdlbp	−0.9912641	0.00015361	0.0020321
16967_Ugp2	−1.1009833	0.00015355	0.0020321
13919_Slc25a36	−2.2167633	0.00015513	0.00204761

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
18035_Luc7l3	−1.410675	0.00015536	0.00204761
22566_Atp5g2	1.16651188	0.00015522	0.00204761
3120_Gzf1	−1.6446711	0.00015587	0.0020519
10267_Josd2	1.37481159	0.00015693	0.00206331
10292_Ptov1	0.96027768	0.00015748	0.00206805
1499_Optn	−1.184084	0.0001594	0.00208954
16375_Dram1	1.94026191	0.00015951	0.00208954
13563_Scamp2	1.7764864	0.00016164	0.00211489
9226_Wbp11	−1.4171909	0.0001627	0.00212619
12360_Gadd45gip1	1.16970119	0.00016307	0.00212837
6715_Mrpl33	1.25536681	0.00016393	0.00213701
13345_Arhgef12	−1.0878385	0.00016483	0.00214619
6100_Id3	1.43275287	0.00016557	0.00215324
18992_Mir1892	2.72089743	0.000169	0.00219522
25449_Banf1	1.00460302	0.00016934	0.00219694
19100_Dhrs7	1.23899755	0.00017031	0.00220689
854_6030442K20Rik	1.78435072	0.00017128	0.00221672
12226_Pgls	1.52531137	0.00017197	0.00222038
14847_Bgn	1.45480895	0.00017197	0.00222038
8527_Vamp5	1.41294818	0.00017236	0.00222264
24549_Myl12b	1.30264952	0.00017337	0.0022331
6593_Klhl7	−1.4545647	0.000174	0.00223575
7773_Gm10874	−1.2776255	0.00017399	0.00223575
20419_Rps23	0.80016378	0.00017739	0.00227662
25463_Cfl1	1.02007278	0.00017804	0.00228232
17595_Arrb2	1.72366007	0.00017861	0.00228685
7948_Hsph1	−1.1813568	0.0001795	0.00229554
10462_Snhg14	−1.0232492	0.00017994	0.00229837
1643_Arhgap21	−1.1828279	0.0001816	0.00231688
11866_Ank1	−0.7202358	0.0001843	0.00234571
21150_Lrp10	1.11604634	0.00018416	0.00234571
12750_Cotl1	1.68043211	0.00018634	0.00236278
17718_Snord91a	−1.9866175	0.00018652	0.00236278
21186_Ap1g2	1.22339028	0.00018636	0.00236278
22434_Tuba1b	0.92528842	0.00018634	0.00236278
6114_C1qa	1.30514853	0.00018739	0.00237099

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
10826_Arap1	1.28890344	0.00018833	0.00238008
12249_Klf2	1.50835045	0.00018967	0.0023943
16203_Cirbp	1.6123456	0.00019028	0.00239532
22235_Cyb5r3	1.07210887	0.00019021	0.00239532
24355_Bysl	1.27015132	0.00019042	0.00239532
6559_Rsbn1l	−1.2856862	0.00019139	0.00240472
24845_Bin1	1.56672923	0.00019218	0.00241184
17429_Trpv2	2.41948612	0.0001927	0.00241451
22688_2610020C07Rik	−1.1432593	0.00019285	0.00241451
25630_Syt7	−1.6807262	0.00019322	0.00241641
6932_Limch1	−1.2541556	0.00019452	0.00242984
12892_Itgb1	−0.8587037	0.00019498	0.0024324
24472_Nrtn	1.59133609	0.00019518	0.0024324
11127_Scube2	−2.3019869	0.00019551	0.00243364
269_Hibch	−1.0696127	0.00019693	0.00244019
16958_Cep68	−1.496836	0.00019694	0.00244019
17107_Clint1	−1.338243	0.00019694	0.00244019
24773_Cdh2	−0.9080057	0.00019644	0.00244019
17257_Pdlim4	1.81958685	0.00019825	0.0024536
16749_Mettl7b	2.39759369	0.00019969	0.00246856
11183_Smg1	−1.6462921	0.00019994	0.00246882
3477_Cebpb	1.2484681	0.00020197	0.00248894
11343_1700008J07Rik	−2.4151754	0.00020203	0.00248894
7411_Rplp0	0.72514845	0.00020279	0.00249543
19576_Atp5mpl	1.08603848	0.00020565	0.00252779
8766_Suclg2	−1.0739417	0.00020688	0.00253992
5226_Anp32b	1.062574	0.00020754	0.00254072
13354_C1qtnf5	2.07589874	0.00020765	0.00254072
13355_Mfrp	2.07589874	0.00020765	0.00254072
18575_H3f3b	0.96899828	0.00020791	0.00254097
4850_Dnajb4	−1.2989282	0.00020855	0.00254592
4553_Ahcyl1	−1.2227448	0.00020908	0.00254955
16055_Chchd10	0.92739946	0.0002096	0.00255006
18320_Rpl27	1.13372793	0.00020939	0.00255006
24359_Tomm6	1.29389669	0.00021121	0.00256676
26105_Gm19557	−1.4304085	0.00021847	0.00265201

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
3254_Eif2s2	−0.9877247	0.00021904	0.00265591
16955_Spred2	−2.6462596	0.00021979	0.00266195
180_Mitd1	−1.3626258	0.00022049	0.00266751
18415_Mrc2	1.39156357	0.00022441	0.00271186
4388_Bola1	1.77074353	0.00022526	0.002719
13156_Fli1	−2.1750456	0.0002262	0.00272424
17539_Cd68	1.81076244	0.00022596	0.00272424
8505_Krcc1	−1.2270848	0.00022734	0.0027349
5238_Sec61b	1.83430344	0.00022803	0.00273716
19091_Daam1	−1.3774055	0.00022786	0.00273716
12158_Homer3	1.18633029	0.00023011	0.00275902
7954_Fry	−1.2190811	0.00023121	0.0027691
17131_Rack1	0.8831956	0.00023216	0.00277735
22976_Fyttd1	−1.4897476	0.00023286	0.00278267
3870_Larp1b	−1.0035491	0.00023315	0.00278301
3766_Fndc3b	−1.7756612	0.00023491	0.00280096
26044_4930414N06Rik	−1.8262742	0.00023573	0.00280757
6390_Cep104	−1.912977	0.00023681	0.00281741
21643_Oxct1	−0.9760563	0.00023831	0.00283204
16544_Rab21	−1.1764226	0.00023977	0.00284227
24051_Skiv2l	1.47445009	0.00023996	0.00284227
25222_Tubb6	−0.9315612	0.00023946	0.00284227
12393_Vps35	−1.1366411	0.00024096	0.00285091
14493_Ndufb11	1.010837	0.00024172	0.00285685
12423_Brd7	−1.0184769	0.00024402	0.00288086
8417_Pde1c	−1.1645057	0.00024429	0.00288089
22417_9330020H09Rik	−2.4077488	0.00024617	0.00289989
15334_Huwe1	−1.4192166	0.00024719	0.0029087
24418_Kat2b	−1.3247805	0.0002503	0.00294199
1313_Akt3	1.08506481	0.00025142	0.00294872
18986_Akap6	−1.1835162	0.00025127	0.00294872
20366_Sdha	−0.7994179	0.00025329	0.0029665
26012_Got1	−0.8266993	0.00025348	0.0029665
287_Sf3b1	−1.0768255	0.00025521	0.00296727
3809_Ndufb5	1.20246182	0.00025509	0.00296727
5438_Gm6521	−3.3381726	0.00025415	0.00296727

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
7943_Alox5ap	2.06632057	0.00025487	0.00296727
21859_Mrpl13	1.30155445	0.00025386	0.00296727
24264_Mmut	−1.3064636	0.00025485	0.00296727
438_Aamp	0.90792087	0.00025639	0.00297782
2827_Snap23	−1.3521974	0.00025737	0.00298578
5457_Klhl9	−1.4388142	0.00025763	0.00298578
17603_Psmb6	1.25396396	0.00025874	0.00299214
18036_Ankrd40	−0.7625426	0.00025864	0.00299214
2124_Cobll1	−1.3084524	0.00026211	0.00302788
316_Clk1	−1.1874597	0.00026569	0.00306595
15221_Tceal9	1.33626205	0.00026655	0.00307266
1241_Igsf8	1.72406846	0.00026821	0.00308839
23276_Adamts1	−1.5605747	0.00026918	0.00309632
8872_Rpl32	0.865954	0.00027151	0.00311971
18991_Sptssa	1.61766766	0.00027266	0.00312964
7609_Nipsnap2	−1.073985	0.00027661	0.0031687
22956_Nrros	2.89225818	0.00027665	0.0031687
6791_D5Ertd579e	−1.1255724	0.00027764	0.00317663
6825_Bod1l	−1.5033216	0.00028002	0.00320032
22344_Kif21a	−1.5709362	0.00028031	0.00320032
4763_1110002E22Rik	−0.8771924	0.00028201	0.0032163
3067_Kif16b	−1.5863038	0.00028527	0.00325008
18600_Cygb	1.10591317	0.00028559	0.0032503
3272_Edem2	1.95984171	0.00028624	0.00325375
17501_Gm32273	−2.4511636	0.0002865	0.00325375
19592_Siva1	2.11928753	0.00028922	0.00328123
7706_Znhit1	−1.094422	0.00029017	0.00328193
12156_Armc6	−1.9666871	0.00029051	0.00328193
21820_Emc2	−0.9779085	0.00029045	0.00328193
24632_Cox7a2l	0.9581107	0.00029021	0.00328193
1247_Tagln2	1.27723435	0.00029699	0.00335169
22152_Rpl3	0.79434606	0.00029792	0.00335857
5730_Eri3	1.13942997	0.00029941	0.00336736
8753_Adamts9	−1.6563035	0.00029963	0.00336736
18309_Coa3	1.24420971	0.00029914	0.00336736
14405_Ebp	1.9110057	0.0003003	0.0033713

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
840_Slc41a1	−1.2124415	0.00030173	0.00338036
5948_Eif3i	1.09997915	0.00030144	0.00338036
13482_Arhgap20os	−2.5929717	0.00030276	0.00338378
23008_Kpna1	−1.7878593	0.00030298	0.00338378
25832_Smarca2	−1.0796559	0.00030297	0.00338378
8915_Cacna1c	−1.0792837	0.0003034	0.00338496
7995_Sem1	1.16064898	0.00030525	0.00340206
12743_Dnaaf1	1.44734293	0.00030647	0.00341208
16861_Nf2	−1.0982249	0.00030765	0.0034217
4746_Nfkb1	−1.3496569	0.0003105	0.00344583
12526_Cmtm3	1.48131064	0.00031025	0.00344583
13102_Acp5	1.72276369	0.00031078	0.00344583
15993_Jmjd1c	−1.560404	0.00031489	0.00348779
1589_Fbh1	−1.096312	0.00031595	0.00349591
7284_Crlf2	1.90464251	0.00031691	0.00350297
22279_Ppara	−1.5009135	0.00031777	0.00350882
18452_Bptf	−1.4212767	0.00032211	0.00355315
2061_Rbm43	2.30632583	0.00032277	0.00355672
3990_4931440P22Rik	−2.584728	0.00032576	0.003586
22380_Slc38a2	−1.1982108	0.00033061	0.00363566
19364_Lgmn	1.0504248	0.00033255	0.00365326
24568_Lbh	0.92109999	0.00033344	0.00365934
3289_Rbm39	−1.0579698	0.00033504	0.00366942
16051_Mif	1.19798797	0.00033474	0.00366942
20686_Flnb	−1.1698912	0.00033617	0.00367802
12386_Wdr83	1.13001787	0.00033708	0.00368423
13546_Gm10658	−1.6894869	0.00034065	0.00371951
23472_Gm1604a	−1.2504779	0.00034675	0.00378223
3143_Apmap	1.08268763	0.00034926	0.00380109
3458_Gm29679	1.62538303	0.00034941	0.00380109
19959_Prpf4b	−1.5217785	0.00034954	0.00380109
8759_Slc25a26	1.15861812	0.00035078	0.00381077
16817_Sfi1	1.66332909	0.00035974	0.00390418
7543_Clip1	−0.8187926	0.00036314	0.00393704
7862_Gm15708	−1.3596308	0.00036528	0.00395232
12208_Use1	0.96018347	0.00036519	0.00395232

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
24794_Garem1	−2.9030284	0.00036706	0.00396752
1115_BC055324	−1.4312575	0.00036815	0.00397535
12181_Jund	0.90059302	0.00036999	0.0039912
23352_Ifngr2	1.1942771	0.00037071	0.00399501
511_Serpine2	1.29648125	0.00037152	0.00399974
4484_Csde1	−0.7634218	0.00037266	0.00400793
5422_Snapc3	−1.5362599	0.00037598	0.00403963
3062_Esf1	−1.6319116	0.00037671	0.00404343
14880_Atp6ap1	1.05839567	0.00037729	0.00404565
24525_Washc1	1.34361052	0.00037974	0.00406781
7486_Gm42020	−1.7710534	0.0003849	0.00411895
1086_Prdx6	1.05012855	0.00038582	0.00412478
20137_Mxd3	1.4853373	0.00038637	0.00412648
7242_Glmn	−2.2733695	0.00038767	0.00413625
21290_C1qtnf9	−1.2111437	0.00038835	0.00413944
15713_Gm15270	−3.1713139	0.00039186	0.00417273
14279_Nktr	−1.4536155	0.0003955	0.00420732
3259_Dynlrb1	0.9018573	0.00039887	0.00423901
12102_Tmem192	2.03716642	0.00039999	0.00424559
19149_Gphn	−1.5660566	0.00040028	0.00424559
8692_Sec61a1	1.24170914	0.0004009	0.00424794
16644_Tsfm	1.28109216	0.00040203	0.00425576
6427_Gm16023	−2.7497176	0.00040396	0.00426776
12243_Tpm4	−0.9967125	0.00040374	0.00426776
2630_Fbxo3	−1.2369559	0.00040454	0.00426969
18842_Itgb1bp1	1.16263804	0.00040564	0.00427707
18863_Id2	1.62538282	0.00040706	0.00428788
10061_Cox6b1	1.03909646	0.00040812	0.00429487
11659_Rps23rg1	1.58856115	0.00041103	0.00432125
23987_Ndufa7	0.97130906	0.00041448	0.0043533
10407_Tmem86a	1.92040132	0.00041736	0.00437536
22028_Bop1	1.44286378	0.0004174	0.00437536
20911_Glud1	−0.9645465	0.00041909	0.00438876
4503_Slc16a1	−1.112637	0.00042162	0.00440245
5824_Ppt1	1.49367364	0.00042121	0.00440245
16747_Bloc1s1	0.90440253	0.00042149	0.00440245

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
17559_Tnk1	1.37065648	0.00042491	0.00443247
5067_Dnaja1	−0.9063535	0.00042601	0.00443966
25540_Ppp1r14b	1.03488971	0.00042767	0.00445266
4234_S100a1	1.01720083	0.00043042	0.00447698
22846_Eif4g1	−0.9751273	0.00043112	0.00447985
23272_Gabpa	−0.8815441	0.00043223	0.00448711
9470_Peg3os	−2.7696843	0.00043488	0.00449783
10032_Ovol3	1.37783283	0.00043494	0.00449783
13089_Gm45914	−1.8554502	0.00043438	0.00449783
17391_Llgl1	1.39053754	0.0004344	0.00449783
12603_Pla2g15	1.75452231	0.0004356	0.00449952
18974_Scfd1	−1.8371167	0.00043594	0.00449952
899_Ppp1r12b	−1.0179994	0.00043669	0.00450294
12644_Hp	3.36402485	0.00044043	0.0045372
14_Pcmtd1	−1.1470006	0.00044391	0.00456862
20915_Mmrn2	−1.4989663	0.00044493	0.00457482
6442_Mxra8	1.38615647	0.00044579	0.00457491
12221_Bst2	1.57044776	0.00044564	0.00457491
20535_1700099I09Rik	−2.9179916	0.00044919	0.00460535
23995_Tapbp	0.94222052	0.0004515	0.00462464
20753_Ppp3cb	−1.320902	0.00045203	0.00462564
25008_Arhgap26	−1.4002933	0.00045633	0.00466519
12388_Man2b1	1.1192364	0.000458	0.00467784
8191_Fmc1	1.43270653	0.00046216	0.00471591
20638_Gm41077	−2.5314795	0.00046442	0.00473448
22464_Cox14	1.25123621	0.00046553	0.00474128
13498_Acat1	−0.8981163	0.00046619	0.00474352
6733_Maea	−1.0856333	0.0004675	0.00475229
14502_Cfp	1.60308875	0.00047593	0.00483346
2607_Commd9	1.8504357	0.00047709	0.00484063
25044_A930012L18Rik	−3.6433789	0.00047809	0.00484626
22946_Dlg1	−1.0889002	0.00048413	0.00490282
5061_Ndufb6	1.1066296	0.00048893	0.00494677
17150_Zfp62	−1.9675211	0.00049041	0.00495711
16451_Btg1	1.45018227	0.00049145	0.00496295
11138_Ampd3	−1.5027861	0.00049231	0.004967

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
14313_Clec3b	1.42207256	0.00049495	0.00498892
16608_Lemd3	−2.0173129	0.00049732	0.00500816
5405_Dmac1	1.48883699	0.00050173	0.00504776
552_Cab39	−1.0432523	0.00050299	0.00505249
26160_Ablim1	−0.7243905	0.00050314	0.00505249
4494_Gm15471	−1.514292	0.000515	0.00516683
17270_Gpx3	1.07540234	0.00051749	0.00518306
21753_Mtdh	−1.1063344	0.00051758	0.00518306
2019_Psmb7	1.09685888	0.00052189	0.00522064
19027_Sec23a	−1.6357094	0.00052231	0.00522064
6381_Rpl22	0.94986401	0.00052982	0.00528593
20739_Rtraf	1.10672906	0.00052944	0.00528593
3201_H13	1.10147691	0.00053083	0.00529106
7747_Cyp3a13	−1.6186624	0.00053414	0.00531909
21324_Fdft1	1.36414493	0.00053573	0.00533008
16818_Eif4enif1	−1.3770291	0.00053794	0.00534711
9192_Gm17089	−1.7936125	0.00053968	0.00535946
643_Per2	−2.6593485	0.00054369	0.0053943
24848_4930455D15Rik	−3.0899391	0.00054419	0.0053943
8747_Fgd5	−1.7184358	0.0005483	0.00543001
6560_A630072M18Rik	−2.0645883	0.0005495	0.00543687
4994_4930528A17Rik	−2.4634957	0.00055056	0.00544237
321_Ndufb3	0.86139136	0.00055492	0.00548037
7924_Pomp	1.05378956	0.00055686	0.0054945
18426_Limd2	1.0831133	0.00056068	0.00552454
18701_Arhgdia	0.75207356	0.00056093	0.00552454
3276_Eif6	1.40919023	0.00056528	0.00555905
22628_Dnaja3	−0.9994823	0.00056547	0.00555905
775_Dbi	1.56123765	0.00056736	0.00556749
21193_Pck2	1.88153	0.0005671	0.00556749
14989_Msn	−0.9211165	0.00056917	0.00558013
595_Gm19582	−1.7027588	0.00057039	0.00558614
1724_Rabl6	−0.9189397	0.00057145	0.00558614
19240_Ylpm1	−1.2638887	0.00057145	0.00558614
21634_Fgf14	−2.243019	0.00057186	0.00558614
16228_Abhd17a	1.37409236	0.00057275	0.00558975

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
11712_Rab20	−1.2328607	0.00057379	0.00559236
15611_Sf3b5	1.47543824	0.00057406	0.00559236
3314_Src	1.80698647	0.00057736	0.00560666
10841_Numa1	−0.9491663	0.00057727	0.00560666
12406_Gm10638	−1.6177102	0.00057761	0.00560666
20410_Rasa1	−1.7214597	0.00057667	0.00560666
3635_Nkain4	2.38418964	0.00058573	0.00568035
11892_Gm16159	−2.127834	0.00058819	0.00569907
4306_S100a10	1.25797514	0.00059591	0.00576871
18183_Thra	1.176219	0.00059653	0.00576947
4356_Anxa9	1.37050809	0.00061227	0.00590053
4798_Pkn2	−1.6420641	0.00061089	0.00590053
10345_Bax	1.73275314	0.00061215	0.00590053
24801_Dtna	−1.306758	0.00061196	0.00590053
20831_Lrtm1	−1.0148263	0.00061387	0.00591065
18659_Eif4a3	0.99130411	0.00061992	0.00596356
25885_Gm29998	−1.7448282	0.00062221	0.00598024
24861_Reep5	0.97559122	0.00062348	0.00598711
23983_Rab11b	0.75120695	0.00062618	0.00600759
23808_Mrpl28	0.91361121	0.00062686	0.00600884
25881_Atad1	−1.172789	0.00062782	0.00601262
4789_Pdlim5	−0.9734737	0.00062903	0.00601888
6920_Pds5a	−1.3888058	0.00063667	0.00607818
12549_B3gnt9	1.12973871	0.00063644	0.00607818
22039_Vps28	1.18142494	0.00063692	0.00607818
20039_Dek	−1.3272827	0.00064477	0.00614763
7568_Rilpl1	−0.955642	0.00064676	0.00616111
12140_Ndufa13	0.83106104	0.00064932	0.00617999
9232_Arhgdib	1.1108241	0.00065099	0.00619045
17908_Ccl9	1.78098048	0.00065252	0.00619402
20933_Ghitm	−0.9174492	0.0006522	0.00619402
13374_Rps25	0.77952419	0.00065546	0.00621647
3323_Tgm2	−0.9133856	0.00065908	0.00624507
8016_Ndufa4	1.03121329	0.00065964	0.00624507
25458_Ccdc85b	1.32633921	0.00066184	0.00626044
11603_H19	−1.763784	0.00066263	0.00626237

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
6545_Cacna2d1	−1.3617375	0.00066396	0.00626395
10622_Furin	−1.0542787	0.0006639	0.00626395
22088_Tst	1.6975959	0.00066523	0.00627037
8809_0610040F04Rik	−2.3311678	0.00068073	0.00639971
13662_Dpp8	−1.1837742	0.0006801	0.00639971
15956_Hk1	−0.8840202	0.00068064	0.00639971
23006_Dtx3l	−1.7926515	0.00068147	0.00640106
1620_Gm17762	−1.485773	0.00068917	0.00646769
10030_Tbcb	1.06077213	0.00069154	0.00648435
5170_Hint2	1.22862066	0.00069598	0.00651461
14199_Crtap	1.33921676	0.00069541	0.00651461
1599_Vim	1.0467986	0.00069674	0.00651599
14627_Stag2	−1.1878841	0.00070635	0.00660015
6113_C1qc	1.02316224	0.00071168	0.00664415
25152_Csf1r	1.32013713	0.00071459	0.00666556
1609_Cacnb2	−1.3442764	0.00071744	0.00668637
3162_Fkbp1a	0.90650538	0.0007191	0.0066902
8399_Fkbp14	−1.7304379	0.00071886	0.0066902
11626_E230032D23Rik	−1.9419751	0.00072216	0.00671286
6447_Pusl1	1.34920919	0.00072368	0.00672124
17017_Mtif2	−1.0668568	0.00073101	0.00678344
11526_Psmd13	0.94765261	0.00073288	0.0067949
14114_Shisa5	1.09429973	0.00073505	0.00680918
17771_Coro6	−1.1529497	0.00073681	0.00681377
22097_Cyth4	1.51789915	0.00073662	0.00681377
10379_Emp3	1.35310423	0.00073775	0.00681659
13033_Ubl5	1.10323494	0.00074087	0.00683955
19913_Mboat1	−1.7751476	0.00074791	0.00689857
6422_Cfap74	−2.213632	0.00074905	0.00690321
1125_Blzf1	−1.2742094	0.00075744	0.00696855
21826_Ebag9	−1.6729821	0.00075679	0.00696855
5692_Rad54l	1.23568837	0.00076203	0.00700482
20616_Itga1	−1.8107166	0.0007658	0.00703341
17558_Plscr3	1.53691071	0.00077405	0.00710135
26058_Dpcd	1.29522501	0.00077451	0.00710135
16572_Lyz1	1.44985942	0.00077611	0.00710991

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
6429_Mmp23	1.29409549	0.00078369	0.00716001
7878_Atp5j2	1.0452968	0.00078248	0.00716001
9038_Mrpl51	0.95666282	0.00078438	0.00716001
10028_Cox7a1	1.09488775	0.00078557	0.00716001
16671_Ndufa4l2	1.80207792	0.00078538	0.00716001
23007_Parp9	−1.3382688	0.00078515	0.00716001
1473_Gm16897	−1.2903848	0.00078949	0.0071896
18154_Plxdc1	2.19603113	0.00079273	0.00721307
15793_Mfsd4b3-ps	−2.1113152	0.00079672	0.00724322
1360_Enah	−1.1071826	0.00080499	0.00730603
14875_Rpl10	0.80412852	0.00080471	0.00730603
8145_Plxna4	1.62546888	0.00080815	0.00731744
13847_Cyb5r4	−1.1768718	0.00080829	0.00731744
25273_BC031181	1.3653081	0.00080696	0.00731744
18330_Arl4d	1.45963423	0.00081222	0.00734685
12519_Cdh5	−1.0367008	0.00081445	0.00736081
658_Cops9	1.24811801	0.00082727	0.00746594
4665_Sec24d	−1.5988957	0.00082747	0.00746594
6325_Pex14	−0.9508088	0.00083505	0.00752802
19695_Tbce	−1.0266067	0.00083896	0.00755696
2910_Usp8	−1.3665666	0.00084371	0.00758705
6272_Tnfrsf1b	1.45967771	0.00084329	0.00758705
24433_Gm16712	1.53327532	0.00084563	0.00759794
20059_Wnk2	−1.1730619	0.00085088	0.00763875
2597_Ttc17	−1.2609698	0.00085336	0.00765463
3461_Arfgef2	−1.2278468	0.00085786	0.00768859
5682_Atpaf1	−1.545419	0.0008598	0.00769593
8503_Smyd1	−0.9098093	0.00086011	0.00769593
10309_Fcgrt	0.97597778	0.00086094	0.00769696
25390_Aip	0.96027218	0.00086318	0.00771056
6120_Cdc42	0.90982792	0.00088305	0.0078654
10808_Ppme1	−1.3208359	0.00088344	0.0078654
18113_Copz2	1.16814174	0.00088177	0.0078654
22095_Rac2	1.7036026	0.00088265	0.0078654
6330_Kif1b	−0.951513	0.00089296	0.00794354
4556_4933431E20Rik	−0.9436217	0.00089788	0.00798074

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
16858_Uqcr10	0.99824181	0.0009003	0.00799563
9225_H2aj	1.21011282	0.00090454	0.00802666
7894_Rnf6	−1.308738	0.00090609	0.00803379
13908_Tfdp2	−1.351362	0.00090758	0.00804036
18678_Ndufaf8	1.53611928	0.00091843	0.00812977
21262_Sap18	0.91514903	0.00091952	0.00813276
7506_Hvcn1	1.05015128	0.0009211	0.00814
5281_Rad23b	−0.9767211	0.00092461	0.00815943
14384_Tfe3	1.44981924	0.00092481	0.00815943
21148_Mrpl52	1.16733633	0.00092709	0.00817285
6_Tcea1	−1.475651	0.00093045	0.00819461
3144_Acss1	−0.9074375	0.00093109	0.00819461
15923_Vsir	1.19747612	0.00093349	0.00820906
24530_Ptprm	−1.0088346	0.00093446	0.00821092
7103_Thap6	−1.4243473	0.00093877	0.00822987
9964_Gmfg	2.07653609	0.00093791	0.00822987
18787_Sdc1	1.46203471	0.00093892	0.00822987
130_Bag2	−1.1420346	0.00094274	0.00824993
12016_Cyp4v3	1.81545416	0.000942	0.00824993
23780_Haghl	1.12956107	0.00094355	0.00825034
17955_Rps6kb1	−1.3525626	0.00095075	0.00830647
18747_Rab10os	−1.1070345	0.00095753	0.00835895
1147_Dusp27	−1.0760218	0.00096015	0.00837502
3036_Crls1	1.54799742	0.00096173	0.00838199
10461_Ube3a	−1.0942595	0.00096582	0.00841084
25172_Afap1l1	−1.0533838	0.00096668	0.00841153
3261_Pigu	1.47767412	0.00096986	0.00842555
10302_Scaf1	−0.9512612	0.00096933	0.00842555
1001_Arpc5	0.95211166	0.00099022	0.00859546
25476_Ehbp1l1	−0.6445302	0.00099248	0.00860817
16881_Ube2d-ps	−1.7609883	0.00099846	0.00865308
4157_Ssr2	1.2111075	0.00099936	0.00865388
18880_Rps7	0.79448852	0.00100355	0.00868314
11_Rb1cc1	−1.3761835	0.00100715	0.00870733
3405_Pigt	1.29843138	0.0010154	0.0087716
17537_Mpdu1	2.51848903	0.0010166	0.00877492

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
22425_Arf3	1.16446856	0.0010294	0.00887826
17189_Gm51860	−1.9455582	0.00103346	0.00890616
9333_Resf1	−1.365946	0.001039	0.00894673
600_Ugt1a7c	1.67933927	0.0010418	0.00896366
15820_Sesn1	−0.9901536	0.00105471	0.00906748
21449_Itm2b	0.71369743	0.00105848	0.00908967
25648_Slc15a3	1.42762999	0.00105898	0.00908967
6091_Fuca1	1.23816426	0.00106086	0.00909852
8313_Lrrc61	1.4051764	0.00106617	0.0091368
1336_Gm5069	−2.0095819	0.00106705	0.00913702
9554_Chmp2a	0.90261342	0.00107081	0.00916198
19281_Ahsa1	−0.7859314	0.00107384	0.00918052
10780_Mogat2	−2.41005	0.00108045	0.00921509
20777_A430057M04Rik	1.40724637	0.00107921	0.00921509
24749_Mir1901	−2.5248425	0.00108028	0.00921509
13419_Sik3	−1.1984982	0.00108217	0.00922245
24378_Trem2	2.59964427	0.00108514	0.00924044
3740_Armc1	−1.6911978	0.00109135	0.00927862
17028_Psme4	−0.9041895	0.0010905	0.00927862
24137_Gm16279	−1.8600435	0.00109551	0.0093066
24337_Pex6	1.09043151	0.00109658	0.00930835
17231_9530068E07Rik	0.91090048	0.00110251	0.00935129
1334_Psen2	1.73114028	0.00110394	0.00935612
13806_Eef1a1	0.70736479	0.00110557	0.00936252
4361_Arnt	−1.3868084	0.00110871	0.00938175
24710_Jcad	−1.092841	0.00111699	0.0094444
10301_Irf3	1.34112608	0.00112528	0.00950701
22214_Ndufa6	1.01657617	0.00112943	0.00953453
9363_Leng1	1.05489221	0.00113105	0.00954076
11361_Stx4a	0.78824573	0.0011326	0.00954635
3801_4930429B21Rik	−2.2519498	0.00113385	0.0095494
10343_Gys1	−1.0313023	0.00114181	0.00960888
10003_Yif1b	1.24353453	0.00114654	0.00964112
8568_Hk2	−0.7984797	0.00114962	0.00965194
10573_AU020206	2.11092881	0.00114935	0.00965194
21156_Psmb5	1.00666073	0.00115134	0.00965886

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
16629_Usp15	−0.8775215	0.0011539	0.00967278
6072_Tmem50a	0.84384811	0.00115921	0.00970974
9543_Zfp110	−1.6512466	0.00116249	0.00972965
22991_Kalrn	−1.2683421	0.0011643	0.00973717
8489_Gadd45a	1.33920904	0.00116929	0.00976374
23362_Atp5o	0.87192504	0.00116871	0.00976374
6098_Rpl11	0.94056807	0.00117447	0.00979941
20068_Aspn	−1.5377393	0.00117707	0.00980819
21869_9130401M01Rik	1.61606541	0.00117735	0.00980819
24758_Cabyr	2.298306	0.00118888	0.00989659
18112_Nfe2l1	−0.7951334	0.00119777	0.00996292
17785_Phf12	−1.2963276	0.0012041	0.01000781
1627_Bmi1	−1.3893722	0.00120633	0.01001541
9674_Opa3	−1.6046205	0.00120688	0.01001541
3539_Mir6340	−0.9559032	0.00121434	0.01006959
13086_Tmem205	1.33421654	0.0012326	0.01021309
4230_Npr1	1.40665501	0.00123504	0.01022546
18002_Akap1	−0.7926735	0.00124119	0.01026846
7912_Polr1d	1.01853664	0.00124581	0.01029878
10304_Rras	1.22437769	0.00124771	0.0103065
24354_Ccnd3	1.07039511	0.00125014	0.01031868
10644_Homer2	−0.9949229	0.00125245	0.0103298
20375_Mir682	1.83464535	0.00126511	0.01042628
5_Lypla1	−1.3823873	0.00126934	0.0104531
24054_Nelfe	1.15101517	0.00127135	0.01046162
13384_Arcn1	−1.1162885	0.00127268	0.01046461
19454_Evl	1.01560511	0.00127751	0.01049624
9023_Mlf2	0.7542186	0.00127969	0.01050145
15608_Utrn	−1.4111989	0.00128009	0.01050145
22503_Atg101	1.40228429	0.00128884	0.01056518
4006_Schip1	−1.042715	0.00129477	0.01060564
19589_Tmem179	−1.4370457	0.0013008	0.01064696
11731_Mcf2l	−1.4209213	0.00130205	0.0106491
11128_Dennd5a	−0.9325301	0.00130501	0.01066522
4004_Iqschfp	−1.0518136	0.00130971	0.01069543
12296_Smarca5	−1.0742513	0.00131704	0.01074266

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
18258_Krt19	2.050279	0.00131749	0.01074266
1368_Capn2	−0.8499157	0.0013213	0.01076556
10294_Fuz	1.01101346	0.00132821	0.01081369
24363_Frs3os	−1.9621499	0.00133051	0.01082425
12803_Trappc2l	1.19544935	0.00133283	0.01083489
4237_S100a16	0.94761156	0.00133639	0.01085567
6418_Faap20	2.36549615	0.00134288	0.01090017
4374_Mrps21	0.96409927	0.00134852	0.01093764
13044_S1pr2	2.00023416	0.00135938	0.01101745
8788_Pdzrn3	−1.3866008	0.00136259	0.01103511
12237_Zfp617	−1.7619437	0.00136996	0.01108649
21851_Enpp2	1.95109119	0.00137856	0.01114765
7741_Ppp1r35	1.41777942	0.0013835	0.01117919
14007_Twf2	0.88062426	0.00138569	0.0111885
6844_Lap3	−1.0430597	0.00139409	0.01123103
21464_Zc3h13	−1.4324372	0.00139377	0.01123103
25389_Pitpnm1	1.1781323	0.00139225	0.01123103
25719_Gm44505	−1.4426541	0.00139519	0.01123149
24004_H2-K1	0.89392904	0.0014103	0.01134461
19690_Gpr137b	2.56985907	0.00141423	0.01136778
5155_Tesk1	1.53201474	0.00141629	0.01137577
14292_Snrk	−1.1459572	0.00142274	0.01141386
18826_Rock2	−0.9272708	0.00142315	0.01141386
6415_Rer1	1.0077905	0.0014249	0.01141934
7250_Dipk1a	1.04798301	0.001428	0.01143566
17545_Tnfsf12	1.22712286	0.0014339	0.0114744
16649_Cdk4	1.2539052	0.00146766	0.01173585
8346_Cycs	−0.86881	0.00147102	0.01174581
17758_Timm22	1.33477708	0.00147109	0.01174581
9025_Pianp	2.76925196	0.00147641	0.0117795
8728_Klf15	−1.172703	0.00148331	0.01182583
908_Rnpep	1.18874673	0.00148924	0.01186426
5636_Rnf11	−0.9777243	0.00149247	0.011877
19050_Rpl36al	1.1318412	0.00149305	0.011877
21496_Vwa8	−0.8332782	0.00149593	0.01189115
13729_Adam10	−1.2524191	0.00151456	0.01203038

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
20411_Cox7c	1.06849602	0.00151794	0.01203939
23735_Hagh	1.04937358	0.00151762	0.01203939
12485_Coq9	−0.9302563	0.00152446	0.01208222
11569_Chid1	1.07011122	0.00153175	0.01213107
8314_Rarres2	1.03668548	0.00153448	0.01213483
21149_Mmp14	1.3297642	0.00153376	0.01213483
1443_Lpgat1	−1.1384302	0.00153702	0.01214593
3839_Ccna2	1.05018206	0.00154076	0.01216661
17129_Sgcd	−1.0487143	0.00154466	0.0121884
7294_Chfr	−1.1191218	0.00155555	0.01225639
18344_Tmem101	1.59903159	0.00155513	0.01225639
19030_Pnn	−1.4028829	0.00155858	0.01227122
19679_Mtr	−1.3731458	0.00156072	0.01227915
17179_Mgat4b	0.92925233	0.00156265	0.01228529
8251_Gstk1	1.116924	0.00156439	0.01229003
7003_Ppat	−1.3256495	0.00157408	0.01235713
5030_Pnrc1	0.94089316	0.00157943	0.01239006
15270_Col4a5	−1.5055479	0.00158091	0.0123926
6205_Hspb7	−0.9054992	0.00158336	0.01240277
6572_Pmpcb	−0.8267279	0.00158945	0.01244144
4090_Fam160a1	−1.499499	0.00159378	0.01246622
8576_Aup1	0.9417679	0.00159893	0.01249741
15092_Atrx	−1.1780926	0.00160315	0.01252133
289_Hspd1	−0.6499444	0.00160863	0.01255499
15469_Uty	−2.2753952	0.00161599	0.01260328
2622_Cat	−1.0760572	0.00162036	0.01262823
16195_Arhgap45	1.3188165	0.00162608	0.01266364
872_Snrpe	1.29408439	0.00163239	0.01268221
3278_Uqcc1	−0.9171108	0.00163977	0.01268221
7371_Mvk	2.49828639	0.00163495	0.01268221
7781_Prkar1b	−1.8586189	0.00163688	0.01268221
12569_Atp6v0d1	1.47852704	0.00163521	0.01268221
15467_Eif2s3y	−0.8164792	0.00163346	0.01268221
16973_Ehbp1	−1.0931469	0.00163251	0.01268221
20354_Slc12a7	−0.8833748	0.00163657	0.01268221
22468_Larp4	−1.2329478	0.00164026	0.01268221

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
23569_Lnpep	−1.6605975	0.00163912	0.01268221
1904_Naif1	−2.0070101	0.0016497	0.01272777
11266_Nsmce1	1.18618519	0.00164889	0.01272777
11734_F10	2.66293379	0.00164905	0.01272777
2952_Gm46764	−1.0062376	0.00165727	0.01273142
7074_Slc4a4	−1.7336783	0.00165417	0.01273142
12162_Gdf1	1.04330102	0.0016563	0.01273142
12402_Phkb	−1.0390056	0.00165472	0.01273142
16903_Myo1g	2.12390108	0.00165508	0.01273142
24443_Plin4	−1.0692416	0.00165483	0.01273142
25381_Nudt8	1.04250529	0.00165918	0.01273699
6666_Hadha	−0.8994627	0.00166127	0.0127439
6982_Lnx1	−0.9858914	0.00168006	0.01287882
8998_C1ra	1.21775854	0.00168384	0.01289862
25844_4430402I18Rik	−1.2792654	0.00168561	0.01290298
11313_Cdipt	1.066067	0.00168989	0.0129266
25561_Rtn3	0.92072215	0.0016926	0.01293811
11920_Eif4ebp1	1.04464132	0.00169419	0.01294103
13597_Arih1	−1.0576361	0.00170636	0.01302479
8942_Gm43915	−1.8795909	0.00170832	0.01303044
2725_Emc4	0.99795313	0.00171128	0.01304382
10029_Capns1	0.7239921	0.00171549	0.01306663
24023_H2-Ab1	1.28303303	0.00172672	0.01314284
18845_Adam17	0.96132525	0.00173042	0.01316168
20856_Pbrm1	−1.2792674	0.00174167	0.01323796
5305_Ecpas	−0.8724095	0.00175107	0.0133
905_Arl8a	1.02298868	0.00176512	0.01339723
17890_Slfn2	1.59551485	0.00178336	0.01352615
18326_Tmem106a	1.68067997	0.00179662	0.01361706
14303_Zfp445	−1.0256982	0.00180706	0.0136866
1079_Gas5	1.21971872	0.00181237	0.01371375
22076_Txn2	0.83629406	0.0018132	0.01371375
10068_Tmem147	1.02441162	0.0018176	0.01373737
21263_Sap18b	0.8806392	0.00182664	0.01379598
4039_Rapgef2	−1.6305332	0.00182924	0.01379627
21532_Pibf1	−1.6418937	0.00182799	0.01379627

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Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
4620_Lrrc39	−0.6661487	0.00183492	0.01380035
6488_Cyp51	1.32585508	0.00183126	0.01380035
18745_Metrnl	1.40346465	0.0018344	0.01380035
20727_Top2b	−0.9466235	0.00183483	0.01380035
25588_Gm2518	1.22708712	0.0018467	0.01387928
9961_Med29	−1.4510097	0.00186343	0.01399525
13324_1700110K17Rik	−2.2367175	0.00186614	0.01400581
4796_Kyat3	−1.3766448	0.00187882	0.01407153
6757_Add1	−0.7902216	0.00187651	0.01407153
12318_Ddx39a	−0.9458138	0.00187854	0.01407153
12374_Prdx2	0.73741587	0.00188067	0.01407559
16181_Plppr3	−1.3204851	0.00188329	0.01408541
19927_Mylk4	−1.1885486	0.00189074	0.01413131
7260_Atp5k	0.79480741	0.00189739	0.01417114
11640_Ppfia1	−1.3327503	0.00190061	0.01418533
156_Fer1l5	−0.9429817	0.00191309	0.01426855
23918_Abcg1	1.83497409	0.00191471	0.01427077
1915_Cdk9	1.16276818	0.00191917	0.01428919
23896_Mtch1	0.7986824	0.00191984	0.01428919
25345_Cyb5a	0.94239425	0.00192146	0.01429132
6601_Slc4a2	−1.0023754	0.00192851	0.01433391
13545_Ptpn9	−1.5024874	0.00193748	0.01439059
1616_Nebl	−0.9684399	0.00193944	0.01439523
24546_Tgif1	1.91518172	0.00194134	0.01439936
4532_Dennd2d	1.51490939	0.00195046	0.01445703
23984_Angptl4	1.65521233	0.00195516	0.01448191
21917_Phf20l1	−1.2926505	0.00195813	0.01449396
14625_Thoc2	−1.6827714	0.00196582	0.01454086
1175_3110045C21Rik	1.49058407	0.00198961	0.01469664
25457_Fosl1	−1.6631915	0.0019893	0.01469664
17598_Cxcl16	1.1604398	0.00199552	0.01472155
22026_Mroh1	1.10427385	0.00199572	0.01472155
12801_Aprt	1.60318846	0.00200676	0.01479282
11907_1700047A11Rik	−2.2047236	0.00202752	0.01493557
20488_Btf3	0.84717912	0.00203729	0.0149973
11527_Cox8b	0.95156983	0.00204312	0.01501965

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
22138_Tomm22	0.98258443	0.00204243	0.01501965
7650_Eln	1.24838026	0.00204709	0.01503087
21688_Gm10389	−2.642996	0.00204744	0.01503087
2869_Sord	−0.9507864	0.00205022	0.01504101
3177_Tcf15	1.50698183	0.00206488	0.01512795
20129_Unc5a	2.83191513	0.00206396	0.01512795
8515_Immt	−0.8080504	0.00207188	0.01516886
14262_Eif1b	1.11876288	0.0020803	0.01520978
24012_BC051537	1.97722209	0.00207924	0.01520978
17003_Vrk2	1.01470138	0.00208807	0.01525625
13210_Nrgn	1.72454946	0.0021056	0.01537387
25500_Tmem262	1.4331117	0.0021074	0.01537658
9960_Zfp36	1.20701611	0.00214013	0.01560477
11255_Tnrc6a	−1.4358153	0.0021427	0.01561297
24817_Elp2	1.35656629	0.00214506	0.0156196
1889_Mir7674	−1.2355827	0.00215491	0.01567009
20836_Chdh	1.73761131	0.002154	0.01567009
18546_Atp5h	0.91985097	0.0021583	0.01567792
20639_Zfp131	−1.3133516	0.00215985	0.01567792
24181_Ppp1r11	0.85873283	0.00216036	0.01567792
13038_Shfl	1.17150742	0.00216818	0.01572408
18136_4933428G20Rik	−1.3832477	0.00217524	0.01576462
25047_Gm32139	−2.0590735	0.00217926	0.0157831
11232_Mettl9	−0.8604552	0.00219872	0.01591332
23871_Fkbp5	−1.3914644	0.00221105	0.01599186
4245_S100a9	1.95576118	0.00221691	0.01600195
9925_Shkbp1	1.75642297	0.0022154	0.01600195
25134_Smim3	2.03345021	0.00221622	0.01600195
22913_Gm20319	−3.0758059	0.0022208	0.01601925
22195_Pmm1	1.23014785	0.00222569	0.01604375
17046_Hba-a1	2.37625502	0.00223445	0.0160746
17047_Hba-a2	2.37625502	0.00223445	0.0160746
18167_Tcap	1.05000582	0.00223192	0.0160746
4168_Ash1l	−1.3158917	0.00223835	0.01608633
13512_Idh3a	−0.8555975	0.00224057	0.01608633
24494_C3	0.90313692	0.0022394	0.01608633

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Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
11384_Rgs10	1.82189538	0.00224562	0.01611182
828_Mapkapk2	−0.7301589	0.00224805	0.01611854
1891_Prrc2b	−0.9730835	0.00228553	0.01637632
2094_Pkp4	−0.8208288	0.00228786	0.01638215
23993_Zbtb22	1.10968835	0.00229299	0.01640789
25589_Polr2g	1.1566154	0.00229612	0.01641939
5885_Eva1b	1.45020361	0.00231038	0.01649945
22568_Calcoco1	−0.8246024	0.00230928	0.01649945
6165_Emc1	1.13971804	0.00233023	0.01663011
24445_Lrg1	0.87990645	0.00233755	0.01667131
5835_Pabpc4	−0.7512251	0.0023409	0.01668415
7196_Mapk10	−2.1878265	0.00235611	0.01677029
17149_Btnl9	−2.307942	0.00235537	0.01677029
8359_Skap2	1.24763552	0.00235923	0.01677036
8742_Lsm3	1.09871584	0.00235799	0.01677036
13379_Cxcr5	1.71389421	0.00236233	0.01678128
16226_Klf16	2.39584852	0.00238205	0.01691021
2902_Fam227b	1.32753132	0.00238973	0.01692003
5888_Map7d1	−0.7054716	0.00238825	0.01692003
7513_Arpc3	0.75984633	0.00238892	0.01692003
9996_Rasgrp4	1.10200982	0.00238826	0.01692003
715_Pam	−0.9272128	0.00239602	0.01693009
2646_Ccdc73	0.9579617	0.00239592	0.01693009
4730_Ppa2	1.0357439	0.00239745	0.01693009
9359_Tfpt	1.47185607	0.002393	0.01693009
7977_Gng11	0.90487163	0.00240298	0.01695807
11958_Tnks	−1.6739002	0.00240536	0.01696368
22232_Rrp7a	0.97440823	0.00241059	0.01698942
20826_Ccdc66	−1.2283288	0.00242324	0.01706743
22737_Dnm1l	−0.9203833	0.00242641	0.01707858
2526_Ptprj	1.66565813	0.00243996	0.0171627
21312_4931440J10Rik	−2.54371	0.00244492	0.01718637
3887_Elf2	−1.1548337	0.0024476	0.01719395
25507_Arl2	1.09930658	0.00245306	0.01722105
166_Actr1b	−0.9198383	0.002474	0.0173341
7619_Gusb	1.11954128	0.00247245	0.0173341

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
21873_Fbxo32	−0.8461172	0.00247312	0.0173341
18775_Ubxn2a	−1.0219903	0.00247962	0.0173622
6005_Ptafr	2.01263712	0.00248705	0.01739154
23929_Ndufv3	0.7639968	0.00248678	0.01739154
7545_Rsrc2	−1.2189787	0.00250686	0.01749597
20423_4833422C13Rik	−1.1771034	0.00250678	0.01749597
21992_Eef1d	0.80905924	0.00250375	0.01749597
14576_Ndufa1	0.90635166	0.00251189	0.01751967
13753_Pigb	0.98320718	0.00251911	0.01755868
1470_Plxna2	−1.2883103	0.00253352	0.01763624
13535_Pstpip1	1.65033743	0.00253272	0.01763624
3650_Zgpat	−0.9599783	0.00255279	0.01775888
3746_4632415L05Rik	−2.3763816	0.00256847	0.01785642
17005_Ccdc85a	−2.0063377	0.00257333	0.01787866
6472_Samd11	1.08699777	0.00257666	0.01789023
18584_Ten1	1.67156105	0.00258152	0.01791242
16859_Zmat5	1.30781906	0.00258405	0.01791839
16666_Gli1	1.61720362	0.00259248	0.01796528
17494_Myh10	−1.1570336	0.00260147	0.01801597
9927_Blvrb	1.09645572	0.002608	0.01804959
5910_Gja4	1.46444558	0.00261433	0.01808176
21788_Rrm2b	−1.5936501	0.002621	0.01811622
6484_Krit1	−1.4230042	0.00262362	0.01812268
816_Pfkfb2	−1.0766947	0.00263001	0.01815518
2846_Ppip5k1	−1.0732201	0.00263394	0.01817062
5680_Efcab14	−1.4513908	0.00263583	0.01817203
9253_Pde3a	−0.9906861	0.00263877	0.01817689
12621_Cog8	1.32414368	0.00263992	0.01817689
13973_Trf	1.32625792	0.00264473	0.01819837
19931_Serpinb6b	−1.1860266	0.00264757	0.01820628
22849_Clcn2	1.34253742	0.00269512	0.01850956
23479_4930506C21Rik	−0.7468691	0.00269411	0.01850956
21701_Zfr	−1.0313399	0.00269735	0.01851307
9050_Plekhg6	−1.6954118	0.00270237	0.01853572
25459_Fibp	1.34821404	0.00271184	0.01858879
25403_Pold4	1.91387423	0.00271605	0.0186058

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
17116_Fndc9	−2.0870976	0.00272677	0.01866737
116_Gm13363	−1.7307823	0.00273952	0.01872567
348_Raph1	−1.0748972	0.00273949	0.01872567
7401_Srsf9	0.96302872	0.00274051	0.01872567
2907_Hdc	2.34683133	0.00274327	0.01873263
22548_Mfsd5	1.72667596	0.00274515	0.01873356
14373_Foxp3	1.0200743	0.00274972	0.01875282
19673_Dip2c	−1.326895	0.00277509	0.01890187
24036_Pbx2	1.11323552	0.00277445	0.01890187
17851_Rhot1	−0.9343834	0.00277998	0.01892322
807_Dars	−0.9643864	0.0027916	0.01895431
1886_Nup214	−0.9991521	0.00279107	0.01895431
16543_Tbc1d15	−1.282341	0.00279026	0.01895431
17597_Med11	1.72547197	0.0027886	0.01895431
23394_Dyrk1a	−1.1271549	0.00279732	0.01898117
2900_Cops2	−1.0225366	0.00280533	0.01902222
4436_Notch2	1.36075397	0.00280691	0.01902222
15323_Pfkfb1	−1.4597012	0.00281415	0.01905931
20837_Cacna1d	2.98913725	0.0028278	0.01913971
13708_Vps13c	−1.0941365	0.00283045	0.01914559
25402_Gm45928	1.99217439	0.00283631	0.01917316
13094_Prkcsh	0.76640846	0.00284713	0.01921006
20072_Iars	−1.1857355	0.002845	0.01921006
20135_Rab24	0.97621759	0.00284595	0.01921006
6094_Lypla2	1.21987072	0.00285	0.01921743
14103_Prkar2a	−1.2085289	0.00285238	0.01921758
22962_Rnf168	−1.9793606	0.00285384	0.01921758
25806_Mamdc2	1.88869661	0.00285539	0.01921758
239_Bivm	−1.9499111	0.00285991	0.01923597
17543_Tnfsfm13	0.99626268	0.00286962	0.0192772
18363_Gpatch8	−1.7269704	0.0028688	0.0192772
8683_H1f10	2.5754154	0.00287468	0.01928708
18086_Snf8	0.94271693	0.00287439	0.01928708
5500_Lrrc19	−1.9123195	0.00288218	0.01932537
25253_Smad4	−1.1168475	0.00288745	0.01934863
23398_Erg	−1.3606304	0.00289601	0.0193939

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
1139_Dcaf6	−1.0550405	0.0029029	0.01941582
13913_Zbtb38	−1.7925583	0.00290203	0.01941582
18171_Mien1	1.04389708	0.0029313	0.01958147
25691_Osbp	−0.825165	0.00293103	0.01958147
3890_Ndufc1	0.87005411	0.002935	0.01959398
12678_Pdpr	−1.7644231	0.00293991	0.01961457
15964_Ddx21	−1.050577	0.00297607	0.01984356
24874_Kdm3b	−1.2593157	0.0029817	0.01986877
2635_Hipk3	−0.9087014	0.00299406	0.0199141
24854_Nrep	1.00745365	0.00299284	0.0199141
25375_Aldh3b1	1.5135312	0.00299061	0.0199141
24100_Ddx39b	1.0016026	0.0029968	0.01992
4431_Prkab2	−1.624643	0.00301893	0.02005472
5346_Cdc26	1.41844318	0.00302391	0.02006706
22241_Ttll1	−1.0773493	0.00302452	0.02006706
14390_Slc35a2	1.69895067	0.00305532	0.02025889
12283_Lsm6	1.15913646	0.00305852	0.02026765
14672_Gpc3	2.67484776	0.00306383	0.02029034
16901_H2az2	1.21102956	0.0030786	0.02037559
11664_Stxbp2	1.55641687	0.00310022	0.02050487
18307_Vps25	0.94491357	0.00310378	0.02050487
24289_Cdc5l	−0.9963607	0.00310385	0.02050487
18088_Atp5g1	0.9548032	0.00310934	0.02052853
6366_Thap3	1.78309025	0.00311296	0.0205398
7228_Lrrc8c	−2.0713819	0.0031184	0.02056305
3346_Top1	−1.0078745	0.00312073	0.02056586
18321_Ifi35	1.33368425	0.00312638	0.02059043
20776_Comtd1	1.02035336	0.00312938	0.02059757
8155_Akr1b10	−1.0398354	0.0031346	0.02061194
9368_Pirb	1.49256555	0.00313539	0.02061194
25817_Tmem252	−0.8485959	0.00314122	0.02063763
7658_Abhd11os	1.0097571	0.00315914	0.02073006
12161_Cers1	0.99570916	0.00315807	0.02073006
4037_Golim4	−1.2377798	0.00316344	0.02073813
19061_Sos2	−1.2356602	0.00316423	0.02073813
18413_Tlk2	−0.9576708	0.00317051	0.02076664

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
21298_Kpna3	−0.9681185	0.00318717	0.02086305
22456_Aqp5	2.58900278	0.00320082	0.02093964
25480_Scyl1	1.0313276	0.00320502	0.02095438
2294_Aplnr	1.39645037	0.00321106	0.02098112
13715_Anxa2	1.12902535	0.003216	0.02100067
13039_Angptl6	1.10485426	0.00322005	0.02101434
18793_Osr1	2.11035984	0.00322386	0.02102643
7923_Flt1	−1.0117751	0.0032277	0.02103876
23690_Amdhd2	1.65383922	0.00323373	0.02106529
1642_Etl4	−1.5590091	0.00324849	0.02113826
25264_Mbd1	−1.2196381	0.00324886	0.02113826
6881_Smim20	1.05132869	0.00326579	0.02123554
24454_Plin3	−0.9619163	0.00327191	0.02126244
11746_Tfdp1	−1.5467824	0.0032767	0.02128077
17655_Ube2g1	−0.9059272	0.00328427	0.02131702
19342_Calm1	0.75553654	0.00329289	0.02136009
4931_Asph	−0.6193842	0.00330704	0.02143895
22949_0610012G03Rik	0.94655889	0.0033182	0.02149832
24583_Birc6	−1.221921	0.00332217	0.02151107
1211_Pfdn2	−0.8848151	0.00332564	0.02152061
34_Prex2	−1.9094813	0.00334376	0.02162488
21874_Klhl38	−1.50521	0.00334685	0.02163183
18715_Lrrc45	1.87191748	0.00335695	0.02168406
7483_Rpl6	0.73226421	0.0033772	0.02177563
12289_Otud4	−1.365914	0.00337435	0.02177563
23908_Ccdc167	−0.8124584	0.00337705	0.02177563
19250_Nek9	−0.7337099	0.00338634	0.02180846
21827_Sybu	−1.460896	0.00338543	0.02180846
13067_Gm16853	1.28151576	0.00339372	0.0218429
4619_Dbt	−1.3383861	0.00340662	0.02191279
996_1700025G04Rik	−0.9477774	0.00340956	0.02191863
12085_Hpf1	1.73624468	0.00341474	0.0219257
24480_Clpp	1.04980474	0.00341349	0.0219257
10270_Emc10	0.96013784	0.00344835	0.02212829
21266_Mrpl57	1.30348979	0.00346359	0.02221282
1851_Miga2	−1.1009311	0.00347292	0.02223289

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Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
13521_Psma4	0.90504863	0.00346887	0.02223289
19738_Zscan26	−1.4915213	0.00347162	0.02223289
5411_Mpdz	−1.1030256	0.00347846	0.02225513
12385_Dhps	1.08982933	0.0034913	0.022324
1196_Sdhc	0.87433226	0.00351663	0.02245947
24612_Hnrnpll	−1.3711947	0.00351667	0.02245947
7233_Zfp644	−1.9760415	0.00352455	0.02249648
7698_Cux1	−0.9234828	0.00353602	0.02255491
14806_Mtmr1	−1.8335789	0.0035379	0.02255491
5276_Fsd1l	−1.0581515	0.00354826	0.02260756
8173_9330158H04Rik	−1.5348625	0.00356091	0.02267469
1489_Cdnf	−1.5596618	0.00357028	0.02272094
11752_Rasa3	1.12041267	0.00357729	0.02275207
10285_Nup62	−0.9620322	0.00358231	0.02277051
13510_Sh2d7	2.12045891	0.00359355	0.02282848
444_Ctdsp1	0.79703911	0.00359603	0.02283077
12356_Lyl1	1.55863519	0.003603	0.02286148
9669_Snrpd2	0.99501007	0.00361088	0.02289802
17763_Cpd	0.89507675	0.00361986	0.0229414
17780_Myo18a	−0.7424238	0.00362458	0.02295779
7730_Mospd3	1.92020395	0.00364624	0.02308139
4240_S100a4	1.49817267	0.00368275	0.02329884
24046_C4b	2.19122895	0.00370092	0.0234
12835_Dbndd1	−1.537979	0.00370449	0.02340883
18630_Syngr2	0.92868392	0.00371255	0.02344595
17350_Guk1	1.02732591	0.00372429	0.02350627
22597_Nckap1l	1.60164085	0.00372731	0.02351156
14015_Abhd14b	1.9496729	0.00373149	0.02352412
10031_Polr2i	1.16809253	0.00374717	0.02360915
3937_Rnf13	−1.1550386	0.00377016	0.02374007
20918_Ldb3	−0.7951936	0.00377299	0.02374398
25337_Tshz1	−1.2116294	0.00378008	0.02377473
25973_Blnk	2.20319202	0.00378248	0.0237759
18479_Slc16a6	−1.0703943	0.00378699	0.02379037
24008_H2-Ke6	0.79034478	0.0037905	0.02379848
12186_Mpv17l2	1.41652915	0.00379579	0.02381739

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Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
25442_Klc2	−0.9583704	0.00379794	0.02381739
25624_Fads1	1.26198592	0.0038002	0.02381771
14048_Naa80	1.50416046	0.00383431	0.02398781
19632_Rapgef5	−1.4717064	0.00383609	0.02398781
24332_Cul7	1.12046905	0.00382997	0.02398781
25366_Ppp6r3	−0.8535485	0.00383627	0.02398781
17403_Kcnj12	−1.3241145	0.00383967	0.02399514
13739_Tcf12	−1.280593	0.00384498	0.02401439
2995_Itpa	−1.0807679	0.00385236	0.02404651
14026_Tex264	1.09385633	0.00385567	0.0240532
522_Mff	−1.0238617	0.00385995	0.02406593
4744_Ube2d3	−0.7763168	0.00388743	0.02418433
5831_Ppie	1.4176984	0.00388721	0.02418433
12155_Slc25a42	1.32884726	0.00388793	0.02418433
24564_Clip4	−0.8179805	0.00388218	0.02418433
7215_Pkd2	−1.0685917	0.00392089	0.02437522
3364_Jph2	−0.6338075	0.00392871	0.02440977
9697_Relb	1.63557642	0.00397376	0.02466117
16379_Chpt1	−0.8163944	0.00397326	0.02466117
982_Odr4	−1.1718691	0.00399911	0.02472165
3292_Cnbd2	1.04303886	0.00399142	0.02472165
5735_Ccdc24	1.84984766	0.00398865	0.02472165
6037_Arid1a	−0.9950953	0.0039996	0.02472165
10130_Lsm14a	−0.8907039	0.00399139	0.02472165
20452_Ap3b1	−1.055851	0.00399747	0.02472165
20545_Cenpk	−1.9380526	0.00399469	0.02472165
7364_Acacb	−0.8241427	0.00400231	0.02472422
18536_Tmem104	1.42566816	0.00401245	0.02477261
2644_Qser1	−1.2528131	0.00403044	0.02485513
18748_Rab10	−0.7984595	0.00402819	0.02485513
55_Stau2	−1.0733034	0.00403705	0.02488167
169_Tmem131	−1.0938474	0.00405792	0.02499594
15589_Ppil4	−1.2977713	0.00406579	0.02503011
19270_Cipc	−1.2750614	0.00406914	0.02503639
6828_Gm7854	−2.373095	0.00407767	0.02506143
19383_Ddx24	−0.8753834	0.00407787	0.02506143

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
18583_Acox1	−0.685076	0.00410327	0.02520315
10393_Saa3	2.71390827	0.00411491	0.02524579
24588_Fam98a	−1.2069543	0.00411265	0.02524579
24742_Mir1b	−1.9882344	0.00411853	0.0252536
11601_Mrpl23	1.17329115	0.00412928	0.02530508
22649_Alg1	0.95912313	0.00413949	0.02535319
23692_Atp6v0c-ps2	0.96580535	0.00414928	0.02539869
25274_Dym	0.85082391	0.00416731	0.02549457
3347_Plcg1	−1.1263227	0.00418994	0.0256184
15584_A630066F11Rik	−1.7102105	0.00420956	0.02572376
2015_Crb2	1.44455553	0.00421225	0.02572555
24973_Pcdhga6	0.92069541	0.00422064	0.02576217
14321_Lztfl1	−1.4874491	0.00422824	0.02579395
21196_Psme1	0.74188134	0.0042337	0.02580471
23849_Hmga1b	−0.8325766	0.0042348	0.02580471
24057_C2	1.5778322	0.00423833	0.02581155
23078_Atp6v1a	1.25726754	0.00424621	0.02584494
9683_Ercc2	1.46769586	0.00425632	0.0258772
13085_Rab3d	1.34687548	0.00425605	0.0258772
18713_Aspscr1	1.13625528	0.00426206	0.0258885
22766_Lztr1	−1.0099072	0.004263	0.0258885
14391_Pqbp1	1.09939747	0.00426964	0.02591421
21375_Dpysl2	1.45499724	0.00428964	0.02602089
8818_Cav3	1.19303876	0.00429483	0.02603769
16708_Cnpy2	0.89398661	0.00430979	0.02611368
12478_Rspry1	−2.1670662	0.0043132	0.02611961
5444_Focad	1.10283698	0.00431681	0.02612677
22156_Syngr1	1.07364196	0.00432075	0.02613594
22714_Ntan1	−0.7742088	0.00433577	0.0261973
23163_Filip1l	−1.2084124	0.00433456	0.0261973
21735_Dap	1.08909794	0.00436207	0.02634143
531_Pid1	1.56971346	0.00436496	0.02634408
22684_Txndc11	1.0948267	0.00437105	0.02635188
23787_Jmjd8	0.89782122	0.00437115	0.02635188
10833_Phox2a	1.32574293	0.00437739	0.02636072
12843_Rhou	1.55160686	0.00437752	0.02636072

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
23033_Polq	−1.9499563	0.00438858	0.02641252
3014_Rnf24	0.87668739	0.00440577	0.02646735
3842_4932438A13Rik	−1.2700893	0.00440753	0.02646735
17770_Ssh2	−0.9631409	0.00440521	0.02646735
20008_Hivep1	−1.2780975	0.00440441	0.02646735
24987_Pcdhgc5	0.91484802	0.0044114	0.02647576
22090_Kctd17	1.25903441	0.00444468	0.02664348
22378_Scaf11	−0.9397142	0.00444286	0.02664348
23038_Ndufb4	1.00882663	0.00444677	0.02664348
6487_Akap9	−1.1755669	0.00444995	0.02664768
2583_Cd82	1.2872327	0.00445886	0.02667133
7688_Upk3b	1.59442659	0.00445831	0.02667133
25538_Bad	0.9296407	0.00446329	0.026683
1376_Mia3	−0.8509175	0.00449204	0.02681014
18647_Gm11747	−1.1713943	0.00449177	0.02681014
24970_Pcdhga4	0.90984963	0.0044877	0.02681014
22941_Apod	1.94880146	0.00449932	0.02683869
24978_Pcdhga9	0.91481097	0.0045079	0.02686821
25329_Zfp236	−1.3659535	0.00450926	0.02686821
8195_Hipk2	−2.0201552	0.00452702	0.02692572
24928_Gm37013	0.91480711	0.00453143	0.02692572
24932_Gm38666	0.91480711	0.00453143	0.02692572
24933_Gm38667	0.91480711	0.00453143	0.02692572
24986_Pcdhgc4	0.91480711	0.00453143	0.02692572
3404_Dbndd2	1.21363888	0.004546	0.02699707
10636_Rps17	0.66883351	0.00455037	0.02699707
21789_Ubr5	−0.803369	0.00455097	0.02699707
668_9430060I03Rik	−1.3771006	0.00455949	0.02703272
2073_Fmnl2	−1.9787192	0.00458404	0.02714885
23356_Son	−0.7772285	0.00458413	0.02714885
23742_Mapk8ip3	−0.9082243	0.00458838	0.02715907
15720_Akap7	−1.2824471	0.0045994	0.02720931
18184_Nr1d1	0.84522337	0.00462183	0.02732696
8866_Mkrn2	1.10935235	0.0046313	0.02736794
18372_Eftud2	−0.9291274	0.00463518	0.02737579
13197_Gm26787	−0.9248237	0.00464245	0.02739488

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
14286_Gm47112	−1.1230877	0.00464605	0.02739488
24449_Dpp9	−1.0220826	0.00464553	0.02739488
667_Rnpepl1	0.91073257	0.00466109	0.02746852
2102_Marchf7	−1.4736282	0.00467302	0.02750333
11665_Retn	3.32321447	0.00466984	0.02750333
19456_Degs2	1.07559363	0.00467467	0.02750333
17347_Obscn	−0.7446761	0.00469548	0.02761065
20347_Lpcat1	1.74230074	0.00470206	0.02763422
13705_M5C1000I18Rik	1.66634891	0.00471642	0.02768836
16174_Rnf126	1.29892968	0.00471495	0.02768836
15455_Hccs	−1.0632198	0.00471927	0.02768996
5925_Azin2	2.24056686	0.00472963	0.02772054
9949_Fbl	0.94093437	0.00472868	0.02772054
12425_Nkd1	1.96507777	0.00473482	0.02773584
2258_Nckap1	−1.0127622	0.00476146	0.02787668
23172_Cldnd1	−1.2247278	0.0047701	0.02791206
24976_Pcdhga8	0.90397613	0.00477337	0.02791606
24967_Pcdhga2	0.90700957	0.0047774	0.02792442
23848_Hmga1	−0.8219628	0.00479434	0.0280082
24977_Pcdhgb5	0.91472069	0.00479704	0.02800875
13481_Arhgap20	−1.5902666	0.00483245	0.02820023
4758_H2az1	0.99958761	0.00484174	0.0282356
18654_Tbc1d16	−1.1632942	0.00484376	0.0282356
7498_Sh2b3	−0.9173505	0.00485253	0.02827135
10280_2310016G11Rik	−2.0201377	0.0048604	0.02830189
3744_Trim55	−1.0274286	0.00486857	0.02831882
4132_1700113A16Rik	0.98424059	0.00486669	0.02831882
1222_Ly9	1.74922815	0.00489232	0.02841756
7100_Parm1	−1.3564731	0.00489083	0.02841756
7410_Pxn	0.97334624	0.00489348	0.02841756
7876_Ptcd1	1.02470989	0.00491459	0.02846336
22147_D730005E14Rik	−1.5617591	0.00490489	0.02846336
22650_Eef2kmt	1.0492943	0.00491421	0.02846336
23706_Pgp	0.90021324	0.00491431	0.02846336
25075_Hsd17b4	−0.7862409	0.00491375	0.02846336
24498_Vav1	1.58594933	0.00492655	0.02851722

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
19712_Yae1d1	−1.2752975	0.0049322	0.02853456
15135_Chm	−2.0324903	0.00495735	0.0286647
10300_Bcl2l12	1.54074786	0.00496939	0.02871888
24980_Pcdhga10	0.88665615	0.00498773	0.02880936
1031_BC034090	−1.2886818	0.00500468	0.02889175
8573_Loxl3	1.01511773	0.0050191	0.02895947
17398_Dhrs7b	1.34606273	0.00502777	0.02899391
24975_Pcdhgb4	0.90318769	0.00503797	0.0290372
1626_Commd3	0.98004705	0.00504317	0.02905158
20157_B230219D22Rik	−1.1883093	0.00505482	0.02910311
8147_Chchd3	−0.7662204	0.00506494	0.02914577
24969_Pcdhgb1	0.89937392	0.005069	0.02915354
23801_D630044L22Rik	−1.0985368	0.00509892	0.02930992
9706_Bcam	0.6920614	0.00510805	0.02934673
25826_Kank1	−0.9994578	0.00512678	0.0294386
11684_Snapc2	1.58542916	0.00513251	0.0294558
20344_Ndufs6	0.97942848	0.005138	0.02947158
11348_Ccdc189	0.887651	0.00516008	0.02958145
12575_Ctcf	−1.1507013	0.00516266	0.02958145
20875_Galnt15	−1.7901677	0.00516934	0.02960398
25006_Fgf1	−0.7758866	0.0052397	0.02999094
9028_Ing4	1.07691564	0.00525741	0.0300615
17372_Cops3	−0.827734	0.00525762	0.0300615
11402_Htra1	0.7407465	0.00526158	0.03006818
2027_Arpc5l	0.84164804	0.00526554	0.03007484
21814_Oxr1	−1.0659268	0.00527089	0.03008937
12868_Egln1	−0.6901707	0.00528234	0.0301283
21426_Lgi3	2.14094441	0.00528331	0.0301283
2767_Srp14	0.82722557	0.0053028	0.03020743
8695_Abtb1	1.24107737	0.00530083	0.03020743
6849_Ncapg	−2.0594273	0.00531524	0.03024463
13069_Dnm2	0.75153938	0.00531777	0.03024463
21781_Ywhaz	0.78014535	0.00531416	0.03024463
16220_Uqcr11	0.89159997	0.00532085	0.03024618
7906_Rpl21	0.74665185	0.00533039	0.03026841
9705_Nectin2	0.93972927	0.00532906	0.03026841

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
18825_E2f6	−0.8690255	0.00534862	0.03035587
24968_Pcdhga3	0.89363545	0.00536362	0.03042496
15250_Rnf128	1.29497853	0.00536821	0.03043496
25776_Prune2	−0.8964834	0.00537359	0.03044942
2201_Atp5g3	0.72888865	0.0053898	0.03051024
6964_Slain2	−0.732132	0.00539284	0.03051024
17099_Adra1b	1.122088	0.00539047	0.03051024
1083_Klhl20	−1.7054305	0.00540187	0.03054529
25339_Zfp407	−1.8844383	0.00541277	0.03059085
8938_Atp6v1e1	0.85487502	0.00542055	0.03061869
5838_Macf1	−0.9025784	0.00545924	0.03082108
2949_Zc3h6	−0.8241633	0.00548251	0.03093621
692_Dtymk	1.454794	0.00550272	0.03102042
23783_Antkmt	1.33441789	0.0055032	0.03102042
13680_Zfp609	−1.3993639	0.00553285	0.03117119
12177_Lrrc25	1.62250715	0.0055474	0.03121639
25621_Rab3il1	1.29546556	0.00554399	0.03121639
25721_Zfp91	−0.8974692	0.00554958	0.03121639
25313_Txnl4a	0.84266251	0.00557069	0.03131873
852_Tmcc2	−1.0401052	0.0055759	0.03133168
22627_Vasn	1.55170054	0.00558578	0.03137077
7153_Paqr3	−1.4840635	0.00559271	0.03139329
1944_Mapkap1	−0.9591949	0.00561375	0.03146214
9297_Sspn	−0.7276947	0.00561194	0.03146214
9929_Sertad1	1.47853751	0.00560935	0.03146214
19306_3200001D21Rik	−2.0530725	0.00562009	0.03148126
136_Gm26788	−1.9157792	0.0056255	0.03149518
10736_Pcf11	−1.2757726	0.00563361	0.03152416
8830_Ogg1	0.95527742	0.00567747	0.0317411
10383_Kcnj11	−0.636046	0.00568049	0.0317411
13592_Rec114	1.18107132	0.00568123	0.0317411
10087_Lgi4	1.82035029	0.00570143	0.03183744
9317_Ccdc91	−1.1851608	0.00571673	0.03190481
12278_Ednra	−1.2021998	0.00571943	0.03190481
1676_Mrpl41	0.92320804	0.00573144	0.03195521
4508_Capza1	−1.4493073	0.00578414	0.03222816

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
19605_Nudt14	1.82616081	0.00578639	0.03222816
11906_Hook3	−1.3001578	0.00582088	0.03239104
25496_Mrpl49	0.99738131	0.00582165	0.03239104
6793_Mrfap1	0.64721692	0.00582936	0.03241714
15871_Nus1	−0.8593725	0.00586261	0.0325852
234_Tpp2	−1.0499009	0.00587598	0.03264264
7450_Tbx3os1	−2.4827825	0.00592227	0.03283198
8526_Rnf181	0.92798637	0.0059201	0.03283198
12222_Mvb12a	1.14153983	0.00591605	0.03283198
12646_Pkd1l3	−0.9630152	0.00591722	0.03283198
17953_Med13	−1.032639	0.00592955	0.03285539
21160_Acin1	−0.768408	0.0059353	0.03287029
9049_Tnfrsf1a	0.79982068	0.00593916	0.03287477
13667_Clpx	−0.8122215	0.00596237	0.03298626
18724_Slc16a3	1.21600035	0.00602483	0.03331468
25531_Prdx5	0.60815552	0.00605053	0.03343957
10753_Ndufc2	0.86818436	0.00605385	0.03344074
23348_Il10rb	0.92545531	0.00606768	0.03349996
7433_Rfc5	1.10089361	0.00610419	0.03363244
11304_Doc2a	0.97626914	0.00609938	0.03363244
14333_4930526I15Rik	−0.8738086	0.00609689	0.03363244
21455_Esd	0.84219816	0.00610172	0.03363244
7398_Coq5	−0.8936611	0.00614165	0.03368856
8443_Lancl2	−1.7460995	0.00612008	0.03368856
9051_Cd9	1.17099361	0.00612965	0.03368856
9151_Ybx3	−0.6201056	0.00612852	0.03368856
11474_Nkx6-2	0.82973746	0.00614009	0.03368856
16978_Zrsr1	−1.0380339	0.00612962	0.03368856
22178_St13	−0.8500944	0.00613865	0.03368856
23691_Atp6v0c	0.92281333	0.00614256	0.03368856
24130_Tubb5	0.75707609	0.00614185	0.03368856
24150_H2-T9	1.15932554	0.00615698	0.03375042
24972_Pcdhga5	0.88727883	0.00616367	0.03376986
4411_Rbm8a	0.83774996	0.00618825	0.03387908
15900_Ranbp2	−0.7902831	0.0061899	0.03387908
24717_Arhgap12	−1.2188514	0.00619785	0.03390535

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
12404_Lonp2	−0.9249556	0.00621266	0.03396905
10286_Il4i1b	−0.941302	0.00623201	0.03405755
4235_S100a13	0.98193582	0.00624049	0.03406925
6508_Gm5106	−1.6105053	0.00623921	0.03406925
1677_Pnpla7	0.99574845	0.00624501	0.03407664
11377_Cox6a2	0.79406927	0.00625233	0.0340993
1720_Edf1	0.69123836	0.00627586	0.03421027
7020_Tecrl	−1.4882557	0.00631529	0.03439319
7356_Coro1c	0.80468578	0.00631619	0.03439319
8208_Ndufb2	1.13331777	0.00632164	0.03439319
24966_Pcdhga1	0.87226979	0.00632221	0.03439319
22621_Adcy9	−1.3348126	0.00633075	0.03442223
9685_Klc3	0.87894177	0.00635088	0.03449682
12767_Irf8	1.53520235	0.00635044	0.03449682
21327_Gata4	0.92150723	0.00635924	0.03452482
20441_Homer1	−1.3264616	0.00637592	0.03459791
24528_Rab12	−0.7503614	0.00638725	0.03464189
20888_3425401B19Rik	−0.8715568	0.0063935	0.03465832
2800_Oip5os1	−0.9348431	0.00639995	0.03467005
19175_Erh	0.97241683	0.00640211	0.03467005
6684_Ost4	1.10151746	0.00641816	0.03473947
4516_Inka2	−1.216916	0.00643172	0.03479535
9599_Inafm1	1.31902081	0.00644056	0.03482563
6567_Fbxl13	−1.9251575	0.00644419	0.03482779
4120_Rrnad1	0.82642812	0.00646009	0.03489617
17980_Supt4a	1.1739713	0.006485	0.03501316
25452_D330050I16Rik	−1.1508739	0.00649263	0.03503675
18988_Egln3	−1.0045799	0.00652273	0.0351815
4509_St7l	−1.463966	0.00653694	0.03524049
7656_Wbscr25	3.69145524	0.00658255	0.03545085
16694_Ptges3	−0.7817604	0.00657976	0.03545085
11945_Ubxn8	0.90937281	0.00659222	0.03548513
1062_Cop1	−0.7591173	0.00661723	0.03556636
5497_Plaa	−0.8221449	0.00661666	0.03556636
13620_Tle3	1.21778557	0.00661354	0.03556636
864_Plekha6	−0.9022168	0.00664085	0.03566815

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
22890_Adipoq	4.44655243	0.0066428	0.03566815
17036_Cpeb4	−1.2495016	0.0066576	0.03572979
15907_P4ha1	−0.8522399	0.00666481	0.03575066
1822_Rapgef1	−0.8438861	0.00668818	0.03585809
18766_Gm3625	−1.8662316	0.00669305	0.03586634
13373_Trappc4	1.08327438	0.00671488	0.0359654
21531_Dis3	−1.7167473	0.00671884	0.03596869
7015_Igfbp7	0.75828635	0.00675568	0.03613898
11136_Sbf2	−1.0620489	0.00675737	0.03613898
10852_Rhog	1.10627492	0.00677713	0.03622667
4876_Cryz	−1.3047012	0.00681001	0.03636977
13690_Fbxl22	0.82178542	0.00681405	0.03636977
22057_1110038F14Rik	1.42381169	0.00681264	0.03636977
23514_Acat3	0.83690502	0.00682654	0.03641839
10277_Napsa	2.19721152	0.00686298	0.03659464
2844_Trp53bp1	−0.717604	0.00689751	0.03674683
10606_Arpin	−1.5148811	0.00689836	0.03674683
3913_Exosc8	1.19924324	0.00690232	0.03674974
20028_Atxn1	−1.0168103	0.0069188	0.03681925
12494_Kifc3	−0.7908282	0.0069235	0.03682606
18488_Abca9	−1.6782796	0.00692725	0.03682777
15634_Abracl	1.34491596	0.00697598	0.03706853
16192_Tmem259	0.72357016	0.00698681	0.03710774
6003_Atpif1	0.57939311	0.00700169	0.03716838
22052_Zfp251	−1.3492337	0.00701996	0.037247
6224_Efhd2	0.94890517	0.00702561	0.0372586
7113_Art3	−0.7103112	0.00704414	0.03733844
8_Atp6v1h	1.00277141	0.0070679	0.0374275
18198_Smarce1	−0.7287597	0.00706637	0.0374275
21416_Pdlim2	1.46091232	0.00710245	0.03759194
5368_Atp6v1g1	0.65228841	0.00713122	0.03772568
14743_Fgf13	−1.1419057	0.00713542	0.03772931
21374_Adra1a	−1.6718313	0.00714524	0.03776266
16285_Dohh	1.05958377	0.00715798	0.03779285
22673_Clec16a	−1.0112105	0.00715565	0.03779285
13157_Ets1	−1.0518694	0.00718292	0.03790592

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
23804_Rab11fip3	−1.1019775	0.00719099	0.03792989
12379_Trir	0.63444929	0.00721813	0.03803578
20537_Srek1	−1.2325383	0.00721619	0.03803578
11365_Vkorc1	1.56262218	0.00723455	0.03808495
16672_Shmt2	0.86025135	0.0072318	0.03808495
5296_Pakap	−0.9383029	0.00725369	0.03816703
26074_4833438C02Rik	−1.3274294	0.00726592	0.03821271
10024_Zfp260	−1.1048679	0.00730814	0.03839718
16272_Mrpl54	0.77675648	0.00730661	0.03839718
1388_C130074G19Rik	1.08138317	0.00735935	0.03862852
17264_Fnip1	−1.2329951	0.00735726	0.03862852
16219_Mbd3	0.6233649	0.00736527	0.03864074
16191_Grin3b	0.87154048	0.0073753	0.03867445
18753_Asxl2	−1.5388625	0.00738726	0.03871831
11633_Dhcr7	1.72267661	0.0073947	0.03873842
13985_Acad11	−0.8704043	0.00740274	0.03876167
7620_Asl	1.25877752	0.00741258	0.03876726
8682_Hmces	1.95688343	0.00741462	0.03876726
25373_Tcirg1	1.38010549	0.0074117	0.03876726
4470_Atp1a1	−0.6712665	0.00742368	0.03879576
24974_Pcdhga7	0.85716135	0.00743146	0.03881755
24346_Ubr2	−0.874796	0.00745135	0.03890254
18717_Dcxr	1.46257886	0.00748462	0.03905732
13685_Snx22	0.9763801	0.00750553	0.03914744
3893_Setd7	−1.0746262	0.00752008	0.0392043
9972_Pak4	1.44432987	0.00753324	0.03925385
9056_Kcna5	−1.3569613	0.0075448	0.03925707
10005_Spint2	1.29938396	0.0075428	0.03925707
25649_Tmem132a	1.70556772	0.007538	0.03925707
8533_Capg	1.78197073	0.00755514	0.03928509
20882_Ogdhl	−0.9453326	0.0075648	0.03928509
25774_Vps13a	−1.4045943	0.00756191	0.03928509
26147_Tcf7l2	1.25279812	0.00756422	0.03928509
2532_Ndufs3	0.68593103	0.00757899	0.0393208
12790_Zc3h18	−0.9837036	0.007577	0.0393208
22390_Hdac7	0.93764217	0.00758967	0.03935725

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
1327_Tfb2m	−1.2500676	0.0076392	0.03957591
24591_Crim1	−1.1019136	0.00763754	0.03957591
24009_Slc39a7	0.66886177	0.00765272	0.03962685
18028_Nme2	0.67027993	0.00767449	0.03972049
7005_Srp72	−1.0581725	0.00767899	0.03972466
22722_Myh11	−1.1393586	0.00768458	0.03973442
7657_Abhd11	1.00550343	0.00769415	0.03976153
10137_Cebpa	1.28395258	0.00769721	0.03976153
195_Rpl31	0.65073053	0.00770507	0.03978303
8168_1810058I24Rik	0.84116124	0.00773011	0.03989316
3273_Procr	1.71571696	0.00774119	0.03991203
9555_Ube2m	0.68946303	0.00773874	0.03991203
2275_Med19	0.89358659	0.00778115	0.04009885
24040_Egfl8	1.02934672	0.00780837	0.0402006
25461_Efemp2	1.39621561	0.00780573	0.0402006
25370_Kmt5b	−1.1802553	0.00783792	0.04033341
10776_Thap12	−0.9094246	0.00784252	0.04033776
1237_Pea15a	0.80436619	0.00785586	0.04037226
1722_Phpt1	1.01119466	0.00785673	0.04037226
10847_Art5	1.67592573	0.00786069	0.04037333
8848_Tatdn2	−0.9973495	0.00787424	0.04042362
9856_Arhgef1	0.88194084	0.00789883	0.04051115
24880_Ctnna1	−0.6519894	0.00789552	0.04051115
19697_Arid4b	−1.6771464	0.0079287	0.04064497
15554_Erdr1	0.99566059	0.00794401	0.04070409
17913_Wfdc17	1.72682095	0.00795034	0.04071709
5901_Ncdn	1.29182175	0.00796115	0.04075304
14091_Usp19	−0.7443933	0.00796949	0.04077634
9076_Tspan9	−0.9323338	0.00797817	0.04078816
12258_Tmem38a	−0.8077309	0.00797939	0.04078816
3976_Slc33a1	−1.5631182	0.00806278	0.04119489
1838_Pkn3	1.23181113	0.00808079	0.04123585
7370_Mmab	−0.985767	0.00807614	0.04123585
18831_Atp6v1c2	1.68128369	0.0080823	0.04123585
23051_Adprh	0.92343322	0.00809315	0.04127161
3299_Myl9	1.07028932	0.00810835	0.0413295

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
584_Gigyf2	−1.164288	0.00813671	0.04145442
22377_Arid2	−1.2293748	0.00815599	0.04153299
21198_Psme2	0.75969935	0.00817236	0.04159666
8812_Edem1	1.38074907	0.00821044	0.04177073
21121_Zfp219	0.86677183	0.00821515	0.0417749
11570_Ap2a2	0.81567556	0.00822028	0.04178124
5974_Sdc3	0.72114013	0.00823425	0.04182022
6380_Rnf207	0.96325867	0.00823573	0.04182022
19001_Srp54b	−0.9541974	0.00824464	0.04184572
8743_Slc6a6	−0.8473892	0.00826024	0.04185047
9308_Ppfibp1	−1.0034282	0.00826517	0.04185047
12149_Rfxank	0.96056906	0.00826072	0.04185047
17557_Tmem256	1.4042213	0.00826892	0.04185047
20208_Isca1	−0.6650851	0.00826189	0.04185047
25410_A930001C03Rik	−1.0107925	0.00826309	0.04185047
8256_Zyx	0.78873357	0.00829834	0.04195445
13966_Anapc13	0.70815596	0.00829549	0.04195445
14402_Rbm3	0.73910923	0.00830117	0.04195445
22099_Mfng	1.91813749	0.00831254	0.0419922
17960_Ptrh2	1.21339221	0.00834982	0.04215126
25399_Ppp1ca	0.68285731	0.00835187	0.04215126
21126_Rpgrip1	1.00751394	0.00835963	0.04217064
17786_Dhrs13os	0.74333954	0.00836646	0.0421853
6681_Mapre3	0.92989062	0.00838223	0.04224503
11368_Prss8	1.5407219	0.00839479	0.04228852
24292_Aars2	−1.0681423	0.00840366	0.04231337
4573_Psma5	0.79132221	0.00843756	0.04246417
8192_Luc7l2	−0.7717581	0.00844242	0.04246877
6443_Dvl1	−1.096792	0.00847126	0.042574
13746_Nedd4	−0.6283077	0.00846782	0.042574
18149_Rpl23	0.72643096	0.00847843	0.04259015
22631_Cdip1	0.78580334	0.0085005	0.04268106
23838_Uqcc2	0.81193754	0.00852014	0.04275973
8787_Ppp4r2	−1.0543707	0.00856468	0.0429632
11289_Il27	1.65405962	0.00857995	0.04301975
24624_Map4k3	−1.2879535	0.00865612	0.04338145

(*Cont'd...*)

Table S2. (*Continued*)

Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
1967_Ttll11	−1.4773793	0.00867541	0.04344658
19674_Zmynd11	−0.8307189	0.0086772	0.04344658
17556_Nlgn2	1.35997951	0.00871651	0.0436231
3903_Lhfp	−0.9213962	0.00872271	0.04363385
632_Lrrfip1	−0.7367593	0.00872958	0.0436479
16247_Lsm7	1.1599717	0.00874043	0.04368183
3252_Chmp4b	0.54785307	0.00875017	0.04371021
21146_Oxa1l	0.71613235	0.00876737	0.0437758
18527_Cd300c2	1.63505504	0.00877533	0.04379522
23366_Smim11	0.91698448	0.00878095	0.04380292
14246_Scn5a	−0.6858802	0.0087868	0.04381178
13852_Nt5e	−1.4555347	0.00880349	0.04387465
3019_Prn	−0.9819393	0.00883986	0.04403551
23170_Cpox	−1.1847702	0.00886124	0.04412158
1776_Surf1	−0.80416	0.00887992	0.0441685
9553_Trim28	0.95797273	0.00888277	0.0441685
24979_Pcdhgb6	0.8387049	0.00888298	0.0441685
7530_Setd1b	−1.590754	0.00888819	0.04417398
19064_Dmac2l	−1.4133493	0.00890014	0.04421294
17995_Cuedc1	0.73313151	0.00891396	0.04424071
20189_2210016F16Rik	1.10227845	0.00891239	0.04424071
5843_Ndufs5-ps	0.74963129	0.00893363	0.04429743
19358_Gm20036	−1.8887755	0.00893123	0.04429743
17289_Fam114a2	−1.0918294	0.00893925	0.0443049
6016_Wasf2	−1.4265185	0.00896736	0.04442374
11999_Asah1	−0.932287	0.00900378	0.04456311
18465_Prkca	−1.0618238	0.00899975	0.04456311
24971_Pcdhgb2	0.84190892	0.00902801	0.04466248
4546_Slc16a4	−1.5545994	0.00904506	0.04472626
14192_Fbxl2	0.88179428	0.00905278	0.04474387
9366_Tsen34	0.80943692	0.00906207	0.04474865
24147_H2-T24	−1.7198884	0.00906015	0.04474865
15836_Mtres1	0.90777419	0.00911787	0.04500355
16167_Tpgs1	1.38614371	0.00914327	0.04510817
21729_Otulinl	1.60658835	0.00915233	0.0451322
22785_Dgcr6	1.12876402	0.00917136	0.04520086

(*Cont'd...*)

Table S2. (*Continued*)

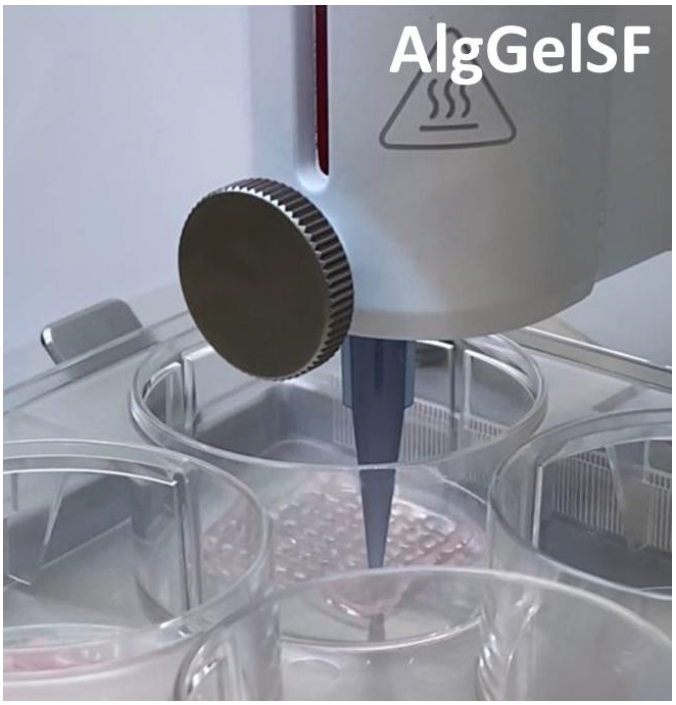
Gene ID	Log_2 fold change	*p*-value	*p*-adjusted
26148_Habp2	0.87344346	0.00917466	0.04520086
14643_9530027J09Rik	−0.8575078	0.00923821	0.04549312
16200_Cbarp	0.84952275	0.00927268	0.04564196
6055_Grrp1	1.24441109	0.00930644	0.04578717
15661_Bclaf1	−1.0320276	0.00932859	0.04585418
17552_G630025P09Rik	1.72104925	0.00932812	0.04585418
16665_Arhgap9	1.5256985	0.00936443	0.04600933
14158_Ccdc12	0.73269341	0.00936927	0.0460121
3365_Oser1	−1.3494672	0.0093972	0.04610714
23997_Pfdn6	0.89697488	0.00939635	0.04610714
21205_Mdp1	0.75045069	0.00943335	0.04626342
6168_Aldh4a1	−0.8297817	0.00945136	0.04633064
1777_Surf2	0.97107054	0.00946311	0.04634976
12698_Terf2ip	−1.1086469	0.00946389	0.04634976
8999_C1s1	1.13778794	0.00951592	0.04654103
19242_Dlst	−0.5460964	0.00951355	0.04654103
22833_Dvl3	−1.090852	0.00950969	0.04654103
17811_Pigs	1.20886292	0.00954174	0.04664611
6584_Kmt2e	−0.7512322	0.00957145	0.04677007
3435_Mmp9	1.92529292	0.00958621	0.04679968
16663_Ddit3	0.77086662	0.00958485	0.04679968
1505_Gm13199	−1.0975799	0.00960046	0.04681971
8773_Arl6ip5	0.77483531	0.00960773	0.04681971
22109_Nol12	0.9849994	0.00960151	0.04681971
25367_Lrp5	−0.9019969	0.00960662	0.04681971
13945_Nme9	−1.2337176	0.00961868	0.04685187
10815_Rab6a	−0.893241	0.0096624	0.04704353
14910_Pls3	−0.7746431	0.00967734	0.04707363
22851_Thpo	−2.1163421	0.00967574	0.04707363
9047_Ltbr	1.03524226	0.00972312	0.04727496
16711_Ankrd52	−0.9652418	0.00976413	0.04745288
1846_Lrrc8a	−0.9856038	0.00980071	0.04760912
11125_Tmem9b	1.0938558	0.00980882	0.04762703
23978_Myo1f	1.42362838	0.00983977	0.04775572
16024_Cisd1	0.83641421	0.00989009	0.04797831
22689_Gspt1	−0.7732356	0.00990331	0.04799914

(*Cont'd...*)

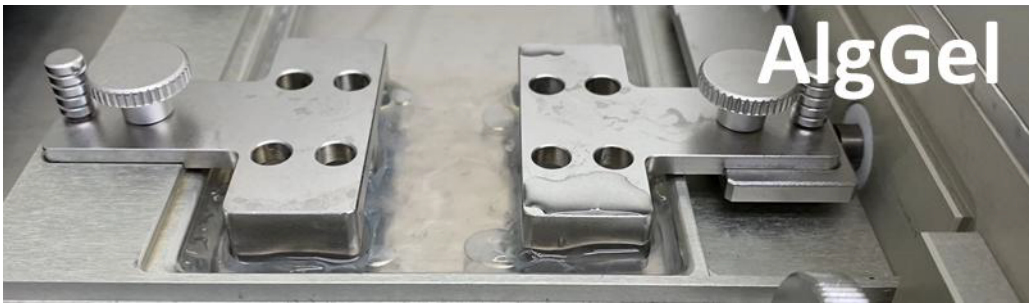
Table S2. (*Continued*)

25919_Ppp1r3c	−0.9057749	0.00990299	0.04799914
3015_Smox	1.14579149	0.00992421	0.04807876
22971_Tnk2os	−1.5957861	0.0099707	0.04828225
10641_Mir1839	−0.8019691	0.00997982	0.04830468
19096_Ccdc175	0.85337306	0.00998484	0.04830723
20821_Appl1	−0.8524377	0.00999107	0.04831564
19113_Prkch	−1.145172	0.01000993	0.04838509
13976_Cdv3	−0.8372942	0.01002558	0.04843897
6775_Cpz	1.80460745	0.01003725	0.04847356
21142_Dad1	1.27988083	0.0100453	0.04849068
6731_Spon2	1.38629479	0.01007378	0.04860635
4337_Zfp687	1.12372394	0.0100822	0.04862515
10632_Zfp592	1.06146118	0.0101101	0.04873783
2853_Serinc4	−0.6931061	0.01013881	0.04885435
1843_Spout1	0.83213128	0.01015295	0.04890058
16361_Nt5dc3	−1.2125264	0.01017102	0.04894374
24298_Slc29a1	0.99256511	0.01016764	0.04894374
21954_Them6	1.35027734	0.01020174	0.04906963
7468_Cfap73	1.5908626	0.01020963	0.04908565
11245_Ndufab1	0.8266124	0.01025815	0.04929685
23239_Hspa13	−1.3872572	0.0102718	0.04934042
20637_Nim1k	−1.9272421	0.01029991	0.04945338
18005_Scpep1	0.90758143	0.01032994	0.0495754
5842_Ndufs5	0.74185731	0.01036477	0.04972038
11329_Zfp771	1.25202582	0.01040379	0.04988532
6298_Miip	1.43173526	0.01042028	0.04989764
12597_Dpep2	1.57595999	0.01041161	0.04989764
17971_Ppm1e	−1.839784	0.01041671	0.04989764
18442_Tex2	−0.8763612	0.0104335	0.04993871
2264_Zc3h15	−0.6479708	0.01044718	0.04998197

Supplementary videos



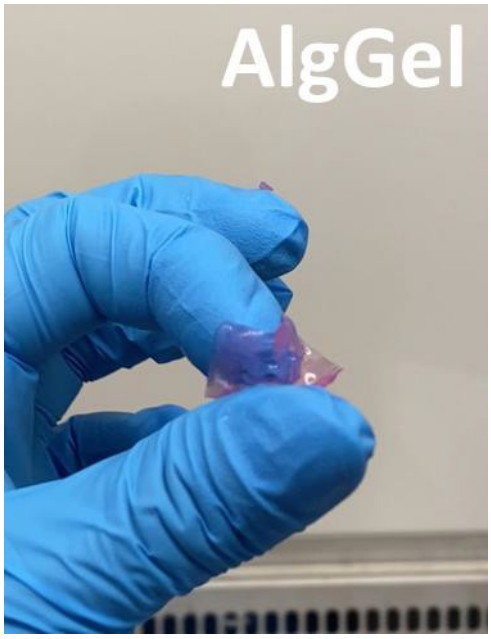
Video S1. 3D printing of AlgGelSF patches. The image is representative of **Video S1**, showing the printing process of AlgGelSF patch.
Abbreviations: Alg: Alginate; Gel: Gelatin; SF: Silk fibroin.



Video S2. Fatigue testing of printed AlgGel patches. The image is a representative illustration of the AlgGel patch behavior, under cyclic loading using Taihoya instrument. The test was performed for 24 h by setting the instrument to 20% dynamic stretch and 60 bpm (which mimics conditions of a healthy human heart).
Abbreviations: Alg: Alginate; Gel: Gelatin.

Video S3. Fatigue testing of printed AlgGelSF patches. The image is a representative illustration of the AlgGelSF patch behavior, under cyclic loading using Taihoya instrument. The test was performed for 24 h by setting the instrument to 20% dynamic stretch and 60 bpm (which mimics conditions of a healthy human heart).
Abbreviations: Alg: Alginate; Gel: Gelatin; SF: Silk fibroin.

Video S4. 3D-printed patches transplantation. The image is representative of **Video S4**, showing the transplantation process of AlgGelSF patch onto the mouse MI site.
Abbreviations: Alg: Alginate; Gel: Gelatin; MI: Myocardial infarction; SF: Silk fibroin.



Video S5. 3D-printed AlgGel patches' handling ability. The image is a representative illustration of the handling properties of the printed AlgGel patch, when it is squeezed between the fingers until it reaches the point of breakage.
Abbreviations: Alg: Alginate; Gel: Gelatin.

Video S6. 3D-printed AlgGelSF patches' handling ability. The image is a representative illustration of the handling properties of the printed AlgGelSF patch, when it is squeezed between the fingers (in this case it does not break).
Abbreviations: Alg: Alginate; Gel: Gelatin; SF: Silk fibroin.