

Table SI. Differentially expressed genes.

Gene	logFC	AveExpr	t value	P-value
VSTM2L	3.315942	6.756386	29.82869	5.67E-05
AV703555	3.610744	5.880485	29.702	5.75E-05
FAXDC2	3.526564	9.177221	26.72815	8.01E-05
LENG9	3.270676	5.683114	23.88996	0.000114
LOC101927507	-2.94917	3.515774	-23.7604	0.000116
BC028967	3.56197	4.208635	22.95804	0.000129
TMEM27	3.010875	8.053376	22.81882	0.000132
QPRT	2.56467	7.272755	22.37587	0.00014
TBC1D2	3.789191	6.823331	21.58772	0.000157
AF085835	2.602455	4.690477	21.43982	0.00016
TYROBP	2.386592	5.236329	21.41752	0.000161
TSPAN1	3.057352	7.127327	21.36574	0.000162
LOC253573	4.500209	2.911523	20.91289	0.000173
TNNC1	2.913839	6.726644	20.82942	0.000175
MGAM	2.35805	7.405973	20.68591	0.000179
ZDHHC11	-3.25279	5.412875	-20.673	0.000179
TRIM22	2.268602	8.214839	20.40775	0.000187
AA06	2.716698	5.07658	20.20202	0.000193
AV700385	3.724723	5.871881	20.18696	0.000193
AW851069	-2.2729	5.389451	-19.8536	0.000204
BC002465	2.590377	4.125253	19.57939	0.000213
AU146893	-2.63267	5.532153	-18.9452	0.000236
BC040270	-2.63771	5.540716	-18.6441	0.000248
H28731	3.816856	6.686159	18.32359	0.000262
LOC101927342	-2.07689	4.258431	-18.0208	0.000276
TMC1	2.028162	4.977353	18.01518	0.000276
KCNQ1DN	-3.49551	4.538808	-17.883	0.000282
LOC101926934	2.786453	4.106976	17.85802	0.000284
AL043897	3.449478	4.51258	17.66439	0.000293
RARRES1	1.96055	8.281127	16.95242	0.000334
FAM189A1	-2.38147	4.48506	-16.7163	0.000349
IGDCC4	2.385577	10.00068	16.66958	0.000352
KLK11	3.244328	5.290104	16.44339	0.000367
GRID1-AS1	1.858777	5.714288	16.26821	0.00038
UPK3B	2.044283	8.850582	15.96217	0.000403
SPATA18	2.143072	8.258774	15.94032	0.000405
CDKN1A	1.794641	11.9589	15.77992	0.000418
DEFB1	3.050052	5.229563	15.58506	0.000434
CORO2A	2.336442	6.833962	15.5047	0.000441
LINC00692	2.261178	3.584956	15.32805	0.000457
MIR7515HG	-1.96416	4.158171	-15.2762	0.000462
RBP4	1.68105	7.85298	15.20012	0.000469
TMEM52B	5.252074	4.272405	15.10433	0.000479
AI400672	-2.97257	4.077885	-14.8956	0.0005
BC021687	2.385626	3.89685	14.48206	0.000546
BC037923	2.310784	2.877756	14.45159	0.000549
AV693734	-1.7106	3.778555	-14.4043	0.000555
NEURL1B	1.737988	8.669084	14.40002	0.000555
PEAR1	1.787018	7.812724	14.32818	0.000564
C1orf116	2.103145	7.208074	14.23579	0.000576
N29850	2.781422	5.157215	14.23194	0.000576
VNN1	2.025217	3.805539	14.16868	0.000584
HIST1H1D	-1.99116	9.240933	-14.0998	0.000593
AL833282	2.071204	5.817136	14.03806	0.000601
LOC100127938	2.780044	5.854607	13.85468	0.000626
SLC52A1	3.201688	7.446816	13.83415	0.000629

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
BE672557	2.379638	4.535286	13.79214	0.000635
NFKBIL1	-1.56765	6.419714	-13.7209	0.000645
LOC100506858	-3.03139	6.114243	-13.7085	0.000647
BG054960	1.809012	7.172666	13.67516	0.000652
N71463	1.588891	6.062763	13.63771	0.000658
LILRB5	2.867612	4.088767	13.59862	0.000664
LINC01588	1.868439	8.555823	13.59846	0.000664
LRTM1	1.522162	6.352817	13.52458	0.000675
AK023632	2.277046	4.767131	13.50787	0.000678
AI674525	-1.50647	4.801833	-13.4669	0.000684
BG704430	3.482449	5.743421	13.4372	0.000689
FDXR	1.858406	11.33025	13.41252	0.000693
TIMP4	2.091393	9.116852	13.39702	0.000695
CT60	1.615618	7.424148	13.37105	0.000699
BF058942	1.907087	5.916963	13.2149	0.000725
C14394	2.75577	4.978498	13.21161	0.000726
NEXN-AS1	3.017202	4.530818	13.1892	0.00073
BC035670	2.684992	5.63917	13.17233	0.000733
S100P	1.593645	11.73021	13.17061	0.000733
AU158436	-1.5411	4.396648	-13.1426	0.000738
AMIGO1	2.539616	6.983491	13.05398	0.000754
AI435747	-2.33009	4.633135	-13.0455	0.000755
TM4SF20	1.842722	9.647606	13.01274	0.000761
AY143171	-1.8607	3.372549	-12.9421	0.000774
MYOG	-1.66053	5.539947	-12.8692	0.000788
PRTFDC1	1.426656	10.31332	12.73794	0.000813
BE815259	1.441375	7.750306	12.72454	0.000816
PVRL3-AS1	1.886056	3.501358	12.69305	0.000822
LOC283435	2.401103	5.977138	12.68909	0.000823
FAM155A-IT1	1.451712	3.278502	12.67624	0.000826
NUPR1	1.423892	9.778824	12.66214	0.000828
AW510778	1.544668	5.939725	12.64225	0.000832
BC043155	4.255476	1.799265	12.56311	0.000849
R78727	2.755706	3.392662	12.56209	0.000849
LINC01242	-2.81545	1.939205	-12.5614	0.000849
AK024554	2.630001	3.789147	12.5337	0.000855
ZNF687	1.913428	7.829027	12.51293	0.000859
GRHL3	2.596926	7.183403	12.50326	0.000862
CCDC129	2.499667	5.022722	12.47407	0.000868
TM4SF4	1.521316	9.611053	12.45506	0.000872
LSR	1.619477	8.871291	12.45068	0.000873
ZNF155	1.820329	6.645153	12.39739	0.000885
BF476809	1.805998	6.025206	12.36414	0.000892
MYOZ2	-1.8944	3.337917	-12.3588	0.000893
GSDMD	2.554476	6.774318	12.358	0.000893
ZNF880	1.390811	5.473289	12.30758	0.000905
AW515648	3.005659	3.997473	12.2978	0.000907
CSF2RA	1.892477	7.546396	12.25982	0.000916
AI694281	4.050861	4.992206	12.24976	0.000918
FUT9	1.877571	4.817666	12.1801	0.000934
DDB2	1.345661	11.08912	12.13942	0.000944
BDH1	2.191814	6.167344	12.12187	0.000948
LOC101927660	2.730885	3.902966	12.09616	0.000955
AI264135	-2.03077	4.817154	-12.0855	0.000957
LOC101928052	-3.3803	1.7156	-12.0718	0.000961
BC035239	-3.89076	3.304434	-12.0554	0.000965

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
C3	2.402285	8.678482	12.0492	0.000966
RAB37	1.415658	7.723512	12.04136	0.000968
RRAD	1.943176	5.759072	12.02919	0.000971
LOC101927934	2.702692	6.51871	12.00951	0.000976
AK026789	-1.34573	5.004181	-11.98	0.000984
CCR4	-1.82388	4.963711	-11.9282	0.000997
CSTA	1.99251	8.791654	11.90215	0.001004
S82075	2.893633	6.012357	11.86192	0.001014
RAB3B	1.479138	9.225656	11.83691	0.001021
AL831861	2.01035	3.785029	11.81924	0.001026
ASS1	1.390365	10.1604	11.74274	0.001046
MFGE8	1.77874	11.06481	11.72156	0.001052
CD70	1.324111	9.635068	11.68819	0.001062
LOC101928666	-2.5605	5.380323	-11.6609	0.001069
GALNTL5	-1.49844	3.739225	-11.6445	0.001074
VAMP8	1.502982	9.763767	11.62196	0.00108
C20orf85	-2.24775	2.851112	-11.6213	0.001081
PTPRZ1	3.658058	4.218343	11.61482	0.001083
DGKA	1.322323	9.192282	11.59879	0.001087
GP9	2.500937	6.404213	11.57906	0.001093
NIPAL4	2.624194	7.819239	11.42399	0.001139
TMEM255A	2.995495	5.435727	11.39469	0.001149
RBP3	-2.24485	5.036941	-11.3683	0.001157
CDKN2B	-1.89104	3.039968	-11.3337	0.001168
FAM227B	2.410824	3.578343	11.31501	0.001174
AI633559	2.121319	6.760388	11.29687	0.00118
AW976746	-1.95809	3.598524	-11.2929	0.001181
ZNF853	1.451185	6.924699	11.23398	0.0012
IGFBP7	1.427838	10.53188	11.2207	0.001204
BE220061	1.608029	5.806626	11.19405	0.001213
BC043411	1.308072	10.98775	11.1819	0.001217
OR10A4	1.329219	4.322089	11.05012	0.001263
AU156421	2.876414	5.132179	11.04854	0.001263
AI393753	2.07284	4.875436	11.03271	0.001269
SERPINH1	1.288388	11.08229	11.02747	0.001271
LOC100996667	1.241664	4.345344	10.98978	0.001284
LOC101927272	2.175413	5.19787	10.96885	0.001292
SUSD5	1.390121	7.048503	10.87517	0.001327
BE466813	2.147209	5.379457	10.86927	0.001329
LAMB3	2.511113	8.643206	10.85311	0.001335
AI052441	1.838621	3.690048	10.83756	0.001341
AI791832	1.601604	5.696824	10.8363	0.001341
AW300085	2.214769	6.380077	10.74971	0.001375
AI806045	-2.2031	4.538152	-10.7458	0.001377
TP53I3	1.249813	12.5934	10.70614	0.001392
LOC100506107	-2.62828	4.535864	-10.6738	0.001405
PTTG2	3.011008	5.627706	10.63686	0.001421
PTH	2.874757	4.176697	10.62665	0.001425
FAS	1.44509	10.16051	10.62649	0.001425
FAM129A	1.350706	8.490042	10.60989	0.001432
AL049245	1.326841	8.4554	10.60713	0.001433
MITF	1.268141	9.185728	10.59237	0.001439
C5	1.42448	10.69587	10.59077	0.00144
CSPG4P5	2.873052	5.986326	10.58416	0.001442
AA573452	2.655301	5.395644	10.51268	0.001473
MC3R	4.131579	5.337043	10.4987	0.001479

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
GPR1	2.706085	5.596887	10.47585	0.001489
TNIP3	2.193673	5.147445	10.47495	0.001489
CT62	2.404703	5.812413	10.47489	0.001489
SESN1	1.434575	9.760967	10.46434	0.001494
R51383	-1.83937	2.432282	-10.3915	0.001526
SCEL	2.506745	5.572456	10.36453	0.001539
C12orf50	-2.5015	4.304867	-10.362	0.00154
AU158358	-1.33536	8.56331	-10.3362	0.001552
BF055302	-1.85016	2.665731	-10.2926	0.001572
BC003386	-2.42574	2.786379	-10.2858	0.001575
MT4	-1.40253	4.515781	-10.2831	0.001577
LOC100996506	1.349195	9.148909	10.27547	0.00158
IGFBP1	1.429366	7.910428	10.25366	0.001591
LBH	1.477889	12.09966	10.24367	0.001595
BI464586	3.490976	3.14684	10.22953	0.001602
FAM212A	2.143734	6.613242	10.22545	0.001604
AA018968	4.650137	3.400306	10.22156	0.001606
BC014996	1.717255	7.061987	10.18418	0.001624
THBD	1.559632	8.73587	10.16676	0.001633
AF090916	-1.37307	5.013408	-10.1554	0.001638
BC033994	1.800136	1.030035	10.14321	0.001644
AY008263	-1.90865	4.181729	-10.1203	0.001656
IFIT1	1.673532	8.363893	10.05525	0.001689
HOGA1	1.62027	8.33271	10.04875	0.001692
LOC100506790	3.097443	5.853809	10.02651	0.001704
LRR69	1.76394	5.919733	10.00908	0.001713
AA677952	-2.37873	3.75915	-9.99336	0.001721
ATP13A4-AS1	-1.77651	2.70476	-9.99093	0.001723
BLNK	3.330914	5.870774	9.948743	0.001745
LGALS3BP	1.22149	11.15467	9.936605	0.001752
BF725383	-2.5664	3.272813	-9.93362	0.001753
BQ025203	1.609563	5.326006	9.92742	0.001757
ABCA12	3.215385	5.523914	9.875493	0.001785
ERFE	1.212398	8.984747	9.866062	0.001791
RFTN1	1.214788	8.17392	9.858587	0.001795
LINC01587	-1.4601	4.636877	-9.83645	0.001807
PSMB8	2.053774	8.460787	9.828781	0.001812
CXXC4	1.478427	6.480302	9.824682	0.001814
AK093628	1.433649	5.47998	9.824299	0.001814
AW028823	-1.63657	2.278676	-9.81418	0.00182
LOC107161159	1.355157	4.410842	9.807493	0.001824
KRTAP9-3	1.580976	5.688475	9.807163	0.001824
AA704588	-2.65442	4.745997	-9.79095	0.001833
ATP6V0A4	2.485309	5.769538	9.787404	0.001835
PLA2G2A	2.087648	5.687742	9.783417	0.001838
KRT4	1.639756	8.650185	9.718112	0.001876
U38460	1.792222	5.422486	9.716867	0.001876
TMC3-AS1	1.855125	6.835887	9.706268	0.001883
SERPINF2	1.45405	7.919818	9.681729	0.001897
LOC100131864	-2.28311	5.740978	-9.64444	0.00192
AW243272	-1.92139	5.58778	-9.63672	0.001925
AI003508	1.566379	6.032212	9.619154	0.001936
BG150083	1.94747	5.981847	9.608754	0.001942
CIDECP	2.106804	7.38127	9.592102	0.001952
AW611486	1.661873	4.525368	9.589008	0.001954
CPEB2-AS1	-2.38013	2.421525	-9.58826	0.001955

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
MTTP	-1.31227	3.140362	-9.56451	0.00197
AI821602	-2.54003	6.029961	-9.54739	0.001981
SPATA45	3.699805	5.664665	9.531035	0.001991
TP53INP1	1.367773	8.349283	9.505805	0.002007
LAMP3	1.792746	6.904771	9.481443	0.002023
DCTN1-AS1	2.793027	4.463089	9.479658	0.002024
BE503692	2.167211	3.384677	9.469755	0.002031
PRLHR	1.5485	4.789429	9.414166	0.002068
LOC57399	1.239873	5.304702	9.411853	0.002069
BF059726	4.257323	4.165088	9.407813	0.002072
H23551	1.286496	5.845371	9.385033	0.002088
LOC645261	3.281617	4.556541	9.377636	0.002093
BF642798	-1.84742	5.855107	-9.35978	0.002105
BC018690	1.800428	5.99745	9.247047	0.002184
AK097122	-1.43836	2.162647	-9.22952	0.002197
AY094612	-1.24697	10.05366	-9.18504	0.00223
AF085926	1.44958	6.02864	9.177285	0.002236
AI248622	1.222576	6.457736	9.167835	0.002243
HEXA-AS1	-2.51472	3.544773	-9.12382	0.002276
LOC100133131	1.633351	2.693735	9.120033	0.002279
LOC101927523	1.452833	5.499806	9.100002	0.002294
EPS8L2	1.595463	9.388648	9.075169	0.002314
AI252081	-1.63213	0.028793	-9.07077	0.002317
BE467801	1.945949	4.727248	9.060772	0.002325
SLC38A11	1.451618	6.571936	9.009755	0.002365
INPP1	1.415543	10.77656	9.000761	0.002372
SLC12A8	2.241265	5.623334	8.990649	0.002381
AI991943	-1.44569	3.414932	-8.98594	0.002384
LINC01297	1.524038	8.817677	8.973172	0.002395
LOC157860	2.128507	5.767413	8.957586	0.002408
ACER2	1.846907	7.837684	8.947482	0.002416
DCHS2	-1.4535	4.009629	-8.88663	0.002467
CYFIP2	1.407271	9.705935	8.860863	0.002489
ZNF257	1.270014	3.145325	8.855327	0.002494
R61291	-2.59116	5.280567	-8.85209	0.002496
4-Mar	1.37569	9.14429	8.828937	0.002516
AV658581	1.60363	4.424904	8.826585	0.002518
KRT19	1.494916	8.95861	8.819183	0.002525
TRPC2	1.226029	3.353616	8.806749	0.002536
AA608964	-1.95241	1.981331	-8.80446	0.002538
FAM46A	1.270288	7.862474	8.78359	0.002556
NCF2	2.760544	6.606935	8.771618	0.002567
LINC00574	2.249775	6.791384	8.755272	0.002582
AL833240	-1.65293	2.161507	-8.75507	0.002582
H18218	-1.37826	4.490465	-8.73757	0.002598
AK021554	-2.4709	5.362755	-8.72492	0.002609
BC034574	3.864257	4.474607	8.713722	0.002619
EPYC	3.766104	4.012238	8.699229	0.002633
UFSP1	1.948698	6.443554	8.692202	0.002639
MPZ	1.903851	6.736655	8.685898	0.002645
TCF24	2.95025	4.669238	8.680835	0.00265
BF433388	2.976116	4.387734	8.671808	0.002658
PPP1R14C	2.705083	6.274473	8.65516	0.002674
PHEX-AS1	1.521231	6.686962	8.633589	0.002694
LOC100128840	1.20454	7.193791	8.627524	0.0027
LOC101927345	1.324402	11.92422	8.627025	0.0027

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
HIST1H2AL	1.870418	5.727111	8.623384	0.002704
SLC25A31	2.138143	3.63735	8.603476	0.002723
ZMAT5	1.531081	7.812069	8.602834	0.002724
NPL	1.325335	6.749062	8.596443	0.00273
LOC100131053	2.149702	5.03657	8.555217	0.00277
LOC105378732	2.754159	5.782445	8.551452	0.002774
CGREF1	1.369055	6.578849	8.540082	0.002785
AF130083	-1.83934	4.024994	-8.53568	0.00279
GADD45A	1.741579	11.28736	8.534251	0.002791
DLGAP1-AS3	-1.3365	5.046458	-8.50196	0.002823
PGLYRP1	1.437676	4.154223	8.493421	0.002832
BC035383	-2.93301	5.032841	-8.48855	0.002837
BE644953	2.468873	4.646319	8.482024	0.002844
ZNF385C	1.873698	6.25152	8.46066	0.002866
XPNPEP2	1.350052	5.956146	8.459708	0.002867
AI631201	5.641072	4.053979	8.457199	0.002869
AL713704	-3.28894	3.4322	-8.43957	0.002887
BF509725	1.391793	7.121011	8.43296	0.002894
PCSK5	1.252172	7.109181	8.408571	0.00292
PEX11G	1.432328	6.969083	8.408117	0.00292
PSCA	-1.34153	5.672834	-8.38663	0.002943
BTC	1.476511	7.004424	8.380355	0.00295
BF514993	1.829477	5.478576	8.352638	0.00298
AW406163	-1.58349	5.978268	-8.34351	0.00299
MDK	2.845765	7.6059	8.303811	0.003033
AI990790	-1.29425	3.390299	-8.27871	0.003062
NEFL	1.288297	9.804594	8.264468	0.003078
MR1	1.272655	8.186848	8.261039	0.003081
PXN-AS1	-1.42204	7.734855	-8.25924	0.003084
R60900	-2.19749	4.656336	-8.25596	0.003087
AA916935	1.7221	5.784409	8.250163	0.003094
PLCL2	1.581045	7.754485	8.229498	0.003118
CSDC2	2.408706	5.722285	8.203049	0.003148
KIAA0408	-2.54825	2.861106	-8.18204	0.003173
R37691	-2.27254	5.866774	-8.16927	0.003188
AI655311	2.042948	5.804987	8.121365	0.003245
AU146686	-1.35179	6.65807	-8.11957	0.003248
LUM	1.269266	5.423985	8.106551	0.003263
MYOT	2.573894	4.510477	8.08041	0.003296
DECR2	2.766484	8.658789	8.065819	0.003314
CRYAB	1.519523	7.796251	8.061762	0.003319
LOC727916	1.569486	6.249124	8.050478	0.003333
NPBWR2	-1.91369	4.043113	-8.0427	0.003343
AI826444	2.56328	5.120872	8.035372	0.003352
TMEM38A	2.641885	4.939314	7.999657	0.003398
LOC100507562	2.2222	5.565401	7.989264	0.003411
ANXA3	1.244769	12.01324	7.972252	0.003433
PMAIP1	1.270778	10.73303	7.971437	0.003434
AF086391	1.614882	4.235848	7.971369	0.003434
BC016356	-2.53203	3.251957	-7.93818	0.003478
ALOX15	1.653455	3.648188	7.935206	0.003482
LOX	1.227309	5.423607	7.91102	0.003514
MGARP	2.058859	7.588805	7.900964	0.003528
C4BPB	2.474838	6.763968	7.890162	0.003542
GPR45	1.732495	5.095144	7.875428	0.003563
AI074467	-1.20898	4.674414	-7.87471	0.003564

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
SCARF2	1.495893	4.139842	7.861445	0.003582
LOC101928767	-1.86219	3.913861	-7.82615	0.003631
GC	-2.03795	3.807353	-7.82229	0.003636
TNFRSF13C	1.322536	4.826261	7.781423	0.003694
DEFB108B	-2.50959	4.007151	-7.76052	0.003725
LOC101927760	-1.96125	4.048249	-7.7181	0.003787
AW303454	1.687114	6.558223	7.694437	0.003822
LOC403312	2.146289	1.583734	7.67763	0.003848
AI655950	-1.20116	4.815294	-7.67002	0.003859
ISLR	2.909634	5.594932	7.665783	0.003866
BC039543	2.763943	5.001643	7.647701	0.003893
LOC101928697	-2.54031	2.795273	-7.64696	0.003894
BCL2A1	1.547412	9.88743	7.63859	0.003907
T90554	-1.40816	3.712095	-7.59467	0.003976
KLHL26	1.817467	6.76536	7.57794	0.004003
TPTE2P6	3.773535	4.804426	7.571779	0.004012
DUOXA1	-1.39834	5.861226	-7.5579	0.004035
LINC00163	1.529144	7.093884	7.535533	0.004071
TMEM221	1.855207	6.172448	7.534763	0.004072
ITGB2-AS1	2.038978	4.829736	7.521052	0.004095
N55299	-3.53772	2.810536	-7.51946	0.004097
AI161380	-2.35961	6.666066	-7.50885	0.004115
DOCK4-AS1	-1.27113	2.028315	-7.48731	0.004151
AW449644	-2.56782	4.814499	-7.44247	0.004227
BE502455	-2.43725	4.45372	-7.42765	0.004252
FAR2	1.571196	4.495623	7.421733	0.004262
AV704053	-1.30858	3.809365	-7.41298	0.004277
HBQ1	1.457307	4.559846	7.399338	0.004301
AK002066	-2.73517	5.58509	-7.38346	0.004329
ZMYND10	1.214032	5.955418	7.375841	0.004343
B3GALNT1	1.431359	4.67981	7.373435	0.004347
C15orf52	2.431048	7.366728	7.357558	0.004375
MAGEB18	3.093641	3.553754	7.347637	0.004393
ASIC4	1.298424	6.211955	7.346963	0.004394
AL109705	2.217196	4.358695	7.341389	0.004404
ENTPD3-AS1	2.874568	4.098539	7.339896	0.004407
ARC	1.560717	3.994121	7.339007	0.004409
LOC101928271	2.120223	2.103872	7.318006	0.004447
BC015237	2.534507	6.065148	7.316175	0.00445
HOOK1	1.514879	6.229846	7.288886	0.004501
LOC101928111	2.039971	5.548585	7.277946	0.004521
AI732318	-3.80176	2.934073	-7.23729	0.004598
BF589163	-1.72367	4.122989	-7.21841	0.004634
FRMD3	1.316876	7.989694	7.214792	0.004641
AU157675	-2.4618	3.078425	-7.20801	0.004654
LINC00417	2.158732	5.373622	7.193664	0.004682
AL049314	-1.90847	2.956229	-7.19219	0.004685
BC034593	1.761304	6.73454	7.170012	0.004729
BM144812	-1.91472	2.544145	-7.16716	0.004734
ITGB4	1.687027	8.332341	7.157725	0.004753
PLCZ1	-2.02001	3.728343	-7.15746	0.004754
LINC00545	-1.29348	4.649684	-7.13752	0.004794
CXorf21	2.667518	6.008347	7.132187	0.004805
H98180	4.085446	4.359726	7.130935	0.004807
IFITM10	1.572141	5.839964	7.123024	0.004823
TPSD1	-1.35147	4.62693	-7.11232	0.004845

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
BM805933	2.790972	4.893208	7.109951	0.00485
AF043586	-1.43952	4.678985	-7.0857	0.0049
AI808120	2.145959	5.39017	7.077393	0.004917
LOC101928847	1.577674	5.496549	7.071937	0.004928
AL049301	1.449271	5.575609	7.064995	0.004943
N64035	1.662561	3.805649	7.057604	0.004959
EDNRB	1.984311	4.354731	7.04798	0.004979
LOC101930578	1.474791	8.270954	7.046555	0.004982
LOC100130278	1.856149	5.90699	7.046123	0.004983
HIST1H3A	3.590255	4.313406	7.043446	0.004989
C19orf68	-1.81716	4.568275	-7.03638	0.005004
LOC105377421	2.654176	3.235653	7.024644	0.005029
ALOX12B	1.222459	4.562194	7.011407	0.005057
LINC01107	1.352397	7.488314	6.996834	0.005089
AI684971	2.297317	1.724269	6.982406	0.00512
NAALADL2	1.649279	4.040273	6.969415	0.005149
X86400	1.837077	2.550906	6.951016	0.00519
SLC23A1	1.234274	8.238284	6.944486	0.005205
CCDC88B	1.222789	7.700139	6.94434	0.005205
AI797677	-1.74426	5.37697	-6.93659	0.005222
R51605	-1.25188	5.5146	-6.93413	0.005228
BC036484	2.128396	4.379208	6.914244	0.005273
AA424811	2.729908	6.924251	6.861089	0.005396
RAET1E	2.349647	5.65834	6.843404	0.005438
IFFO1	1.467949	7.10727	6.831464	0.005467
EDN2	1.577314	7.555684	6.828885	0.005473
AW975183	1.901541	5.378606	6.79399	0.005557
CCDC28B	1.213243	5.846549	6.792195	0.005562
LCN2	1.491422	8.130379	6.789191	0.005569
TCEAL3	1.270532	9.933686	6.783641	0.005583
FIRRE	1.618487	6.282631	6.772406	0.005611
R43301	2.019649	5.577604	6.762988	0.005634
HBEGF	1.213256	7.16375	6.758678	0.005645
ARHGDIB	1.478313	7.073061	6.75695	0.005649
LOC221814	1.672335	7.206019	6.739907	0.005692
FLJ34503	-1.86935	1.276607	-6.73336	0.005708
AA772874	2.158794	6.429565	6.732199	0.005711
ATP8B5P	2.288452	3.995016	6.726561	0.005726
ZNF442	-1.79588	2.653102	-6.70579	0.005779
GBP3	1.336068	7.249166	6.676137	0.005856
PC	-1.25234	8.570118	-6.67302	0.005864
AI808327	2.644111	6.532035	6.635244	0.005964
AU144328	2.258497	5.956341	6.633309	0.005969
AF070565	3.329534	4.301294	6.627363	0.005985
LINC00973	1.229471	9.336708	6.619035	0.006008
AL833286	1.77835	4.266038	6.615214	0.006018
TMCC3	1.842393	5.740688	6.584206	0.006103
DEFB124	-1.2759	6.721972	-6.57047	0.006141
C1QTNF1-AS1	1.941938	5.683892	6.567035	0.00615
AI222295	-1.67917	5.132979	-6.56422	0.006158
LINC01023	2.539913	5.546495	6.555624	0.006182
AW590666	1.379485	1.213185	6.549056	0.006201
LINC01341	1.475499	4.1642	6.544829	0.006213
VANGL2	1.209348	8.160189	6.539321	0.006228
PDGFRA	1.304551	4.87913	6.530604	0.006253
AI652154	-1.69863	2.51709	-6.51999	0.006284

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
AW137804	-2.91444	5.541157	-6.50457	0.006328
LOC101927723	1.798409	4.511511	6.500453	0.00634
DGKB	1.639647	4.025797	6.46576	0.006442
ZFP3	1.212295	7.351605	6.460649	0.006457
LOC101928098	2.5884	5.48037	6.459935	0.006459
BE675275	-1.50956	4.9433	-6.44926	0.006491
AU158871	2.455573	5.750886	6.438515	0.006523
LOC728730	1.806382	6.07956	6.438246	0.006524
BNC1	2.351088	4.242971	6.43088	0.006546
BC012881	-1.91431	4.727711	-6.42628	0.00656
PKD2L1	2.166117	6.74516	6.400766	0.006638
LOC101928954	2.601896	6.534474	6.390472	0.00667
LOC100127886	-3.67932	2.722844	-6.38515	0.006686
AA434097	1.910742	5.021273	6.376404	0.006714
ZP1	2.219053	5.673366	6.338865	0.006832
AL713719	-2.15018	2.996642	-6.33223	0.006854
AL041381	3.549861	3.77517	6.297052	0.006968
LOC100288181	-1.50576	3.624784	-6.2938	0.006978
BF223066	3.132584	4.305962	6.292857	0.006982
ZNF674-AS1	1.21277	7.246549	6.28278	0.007015
H17981	-1.79264	4.951904	-6.28049	0.007022
BF439240	-2.4084	3.108252	-6.26944	0.007059
AW451455	-2.52453	4.80272	-6.25845	0.007096
PTPRCAP	1.88074	4.018579	6.25499	0.007108
LOC102724975	-1.79654	3.464742	-6.24781	0.007132
PCDHB18P	-1.53356	5.126369	-6.24341	0.007147
AI671540	-2.09397	3.782622	-6.24115	0.007154
AI417595	-2.98383	3.391523	-6.24025	0.007157
ADGRF2	-1.42048	4.717972	-6.23634	0.007171
R49603	1.265339	7.937432	6.231272	0.007188
SUGT1P1	1.349974	6.956812	6.220087	0.007226
MICALL2	1.274949	7.060266	6.206639	0.007273
CDNF	1.307338	5.67797	6.203019	0.007285
LOC101927653	1.247058	7.19837	6.190808	0.007328
GPC6	-1.73167	6.815989	-6.18851	0.007336
CLIC3	3.444558	6.209909	6.187718	0.007339
VN1R4	2.283736	4.968408	6.187417	0.00734
AF086074	2.6723	5.070698	6.186758	0.007342
AA252240	-1.916	4.261098	-6.18502	0.007348
AK024962	-1.96166	4.050181	-6.17121	0.007397
AF339809	1.606781	5.737236	6.157378	0.007446
MRAP2	1.333953	7.692511	6.151491	0.007467
AW292996	-3.30968	5.123163	-6.14343	0.007496
ANKRA2	1.210464	9.732872	6.121453	0.007576
CACNA2D3	-1.52875	4.119818	-6.11509	0.007599
BC041911	2.477584	2.906313	6.106209	0.007632
RPRML	-2.13277	4.863404	-6.09421	0.007677
CPTP	1.267394	7.165563	6.093315	0.00768
C1orf210	2.55764	4.259286	6.078989	0.007733
TMEM155	1.787739	5.229721	6.076925	0.007741
LINC00690	-1.41934	3.881433	-6.06778	0.007776
PID1	1.499862	5.30763	6.066943	0.007779
ACSBG1	1.573442	5.185175	6.056407	0.007819
LOC728024	3.094419	4.99491	6.047429	0.007853
PSORS1C1	-1.29494	4.953327	-6.03895	0.007886
AI253193	2.090519	6.007102	6.028132	0.007928

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
UGT2A2	2.47578	5.368544	6.023004	0.007947
FAT2	1.855385	6.126397	6.014963	0.007979
X72882	-1.32708	5.63599	-5.99229	0.008068
AA504346	-2.84854	3.014395	-5.98198	0.008109
BC031290	1.584837	7.402957	5.970921	0.008153
AU145390	4.824469	3.24756	5.958299	0.008204
WDR63	3.462636	5.433452	5.953098	0.008226
BC024311	1.939337	3.773262	5.933339	0.008306
ARHGAP36	-1.34298	5.144263	-5.90189	0.008437
FAM26D	-1.27067	6.371482	-5.87054	0.00857
AW138673	-1.85174	5.059526	-5.86855	0.008579
LINC01545	1.739552	6.111804	5.84367	0.008687
BC033846	2.204219	6.306445	5.843658	0.008687
SLC32A1	1.790762	5.590338	5.841129	0.008698
AU157313	1.814767	6.279508	5.840338	0.008701
IGF2BP2-AS1	1.560065	5.585191	5.837147	0.008715
F3	2.459754	6.642379	5.836651	0.008717
AI362687	1.224573	5.473564	5.835821	0.008721
AI492860	3.853321	2.595565	5.83379	0.00873
LOC142937	-1.66308	4.374623	-5.81607	0.008808
BI603681	-1.43096	3.108335	-5.81593	0.008809
ZNF540	1.273609	6.654225	5.772931	0.009003
ATP6V0E2-AS1	1.679468	5.53322	5.772249	0.009006
WFDC11	-1.67736	4.994103	-5.77019	0.009015
AW129128	2.724665	5.742361	5.760751	0.009059
ARHGAP26-AS1	2.238135	4.800658	5.758041	0.009071
AL707919	1.462646	6.481351	5.753824	0.009091
MAMDC2-AS1	-1.79579	5.607357	-5.75256	0.009097
ACHE	-1.47268	4.83057	-5.7488	0.009114
CCDC169-SOHLH2	1.2646	5.288965	5.743467	0.009139
AI433880	1.519941	6.232509	5.734509	0.009181
LINC00556	-1.42062	4.781631	-5.72503	0.009225
BC041381	-1.8052	4.32976	-5.71741	0.009261
AI969945	2.351263	4.310569	5.708613	0.009303
AL589610	1.871911	4.651908	5.693276	0.009377
TMEM139	1.291721	6.984345	5.676675	0.009457
AF086437	-1.59043	3.059733	-5.67292	0.009476
SLC16A11	1.376424	6.038679	5.653296	0.009572
RNF128	2.132654	5.118191	5.649654	0.00959
CHST8	1.201014	6.633498	5.647852	0.009599
AL157491	-1.20392	6.378966	-5.64438	0.009616
R39803	1.464789	2.996639	5.627203	0.009702
AA929011	1.810537	6.236334	5.614703	0.009766
DPY19L2P3	1.701295	3.142659	5.601635	0.009832
H15900	-1.72911	4.352997	-5.60086	0.009836
LOC100129198	-1.34145	5.457071	-5.58493	0.009918
LINC01585	-1.82623	4.290354	-5.58173	0.009935
BC022568	1.776542	5.589808	5.58125	0.009937
AKAP5	2.614908	5.163734	5.5806	0.009941
POMT1	1.308702	7.276921	5.580052	0.009944
AF086424	3.120731	3.914293	5.579453	0.009947
ZNF549	-2.2785	4.59992	-5.57797	0.009954
AA121271	1.684589	5.508544	5.573655	0.009977
OTX2-AS1	-1.34631	3.781761	-5.57051	0.009993
AV751094	-3.0273	3.248589	-5.56197	0.010038
LOC284263	-2.52729	4.067815	-5.55847	0.010057

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
T79639	-2.99859	4.6889	-5.55248	0.010088
SCNN1B	-2.08954	4.569702	-5.54294	0.010139
CYTIP	1.348755	5.599854	5.538405	0.010163
FER1L5	3.12264	4.369968	5.53395	0.010187
WFDC1	-2.1849	4.51705	-5.52781	0.01022
IL1RL2	-2.86531	4.352495	-5.52499	0.010235
LINC00029	-1.62431	5.080528	-5.51335	0.010298
TNFRSF10C	1.323428	6.725724	5.508854	0.010323
PRO1082	1.489656	5.124007	5.506656	0.010335
BF515734	-1.76823	5.124759	-5.5035	0.010352
WFDC10B	-2.03114	4.65411	-5.50001	0.010371
BC021164	2.137956	6.583906	5.486245	0.010447
AW205208	1.766613	3.217905	5.484104	0.010459
SMYD1	1.522147	6.244097	5.478097	0.010493
J02963	1.536862	6.232823	5.477965	0.010493
AA837131	1.944329	5.043571	5.473672	0.010517
ZNF547	1.62024	6.153872	5.456489	0.010614
NELL2	1.657986	7.124165	5.456046	0.010616
AI792698	1.483848	4.851115	5.452091	0.010639
AFMID	1.33321	4.1327	5.443078	0.01069
SNAI3	1.359942	6.043903	5.42772	0.010778
LOC101929115	-1.34817	4.708242	-5.42487	0.010795
PPFIA2	1.428664	4.414347	5.409538	0.010884
TXK	1.91834	5.028483	5.405708	0.010906
LOC101928475	1.602149	5.708311	5.393984	0.010975
NAG18	1.898019	3.598411	5.392098	0.010986
AL137292	1.937174	4.972932	5.391521	0.01099
R39960	-1.34403	2.557345	-5.38138	0.01105
AK024800	-2.28273	5.440766	-5.37797	0.01107
AW511032	3.021407	5.214852	5.376248	0.011081
UNC13A	1.402789	5.977872	5.374646	0.01109
SERPINA6	-1.68795	5.142289	-5.37233	0.011104
CH25H	1.495708	6.46068	5.357775	0.011192
LY96	1.319007	6.273197	5.350995	0.011233
BC043227	1.548893	3.243607	5.3225	0.011408
ZNF528	2.371738	6.333575	5.313521	0.011464
BF511336	1.954356	5.851983	5.30467	0.011519
AW139789	-2.6685	5.548271	-5.29318	0.011592
SPTLC3	1.40564	4.943576	5.289596	0.011615
BF061976	-1.81529	4.366032	-5.28447	0.011647
W96140	2.20876	5.173619	5.280926	0.01167
KBTBD3	-1.26753	7.109223	-5.28022	0.011675
SCRG1	1.278351	6.510529	5.278701	0.011684
CLIC1P1	-3.78861	4.095493	-5.27345	0.011718
UMODL1-AS1	1.944935	6.075393	5.258533	0.011814
AL831888	-1.20871	5.444626	-5.25773	0.011819
NARFL	-1.23456	6.969749	-5.25747	0.011821
AW271460	-1.38665	5.858488	-5.25582	0.011832
AXDND1	1.595868	4.742457	5.25418	0.011843
LOC101929384	2.339638	4.999478	5.23869	0.011944
BF725688	-1.26889	6.127758	-5.22332	0.012046
PRSS37	-1.59946	4.985787	-5.21729	0.012086
AI740774	-2.57851	4.485158	-5.20831	0.012146
IL24	1.56704	4.975823	5.197819	0.012217
CPB1	-1.22	6.825124	-5.1905	0.012267
FAM221B	1.686502	3.652832	5.189073	0.012277

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
AZU1	2.552685	5.416313	5.186393	0.012295
AI093572	1.217138	6.45082	5.180268	0.012337
ASIC2	1.404617	6.382678	5.179938	0.012339
ZKSCAN7	2.298051	4.717495	5.165222	0.012441
BC021677	1.405943	5.486677	5.152291	0.012531
NR1I2	1.432915	6.737899	5.145878	0.012576
HIST1H1A	2.641374	4.41451	5.142245	0.012602
LINC01555	-2.42629	3.898341	-5.13652	0.012642
AK025763	1.457115	5.446545	5.135519	0.012649
LOC101928123	1.78965	5.053112	5.132344	0.012672
AF113688	-1.28431	4.686414	-5.12948	0.012692
LOC101927379	-1.25641	3.917218	-5.12111	0.012752
CDY1	-3.50884	2.087864	-5.10457	0.012871
AMELY	-2.68367	3.534291	-5.10246	0.012887
LOC101928741	-1.30056	5.052965	-5.09644	0.012931
BF588945	1.429252	5.900299	5.082182	0.013035
AL353939	1.942973	6.644441	5.069458	0.013129
LTC4S	-1.42456	2.756186	-5.05595	0.01323
GDPD3	1.982323	6.930805	5.025301	0.013463
TFAP2D	-1.85308	5.586916	-5.00973	0.013584
AW117264	-1.91001	1.920055	-5.00897	0.01359
ADRA2A	1.367772	6.221643	5.00278	0.013638
CCDC121	-1.30877	6.743665	-4.99492	0.013699
SNCG	1.760457	6.383121	4.992884	0.013715
C3orf62	2.085957	6.061821	4.986291	0.013767
LOC100268168	1.23084	7.10591	4.980982	0.01381
CEACAM8	-2.74285	3.413287	-4.98074	0.013812
R46483	-2.63231	2.3903	-4.98026	0.013815
AF085988	2.784315	5.893874	4.978785	0.013827
BF195312	2.355603	5.992855	4.97833	0.013831
TDGF1P3	-1.47595	4.278344	-4.97458	0.013861
AW872344	-1.21375	2.46725	-4.96985	0.013898
AA932692	1.920253	5.889382	4.96953	0.013901
AW629036	-1.30335	3.490819	-4.95722	0.014
ZCCHC13	2.679932	4.92569	4.953133	0.014033
AW002073	-2.13506	4.275443	-4.94482	0.014101
CREB3L3	1.417834	2.179865	4.938629	0.014151
GUCY1B2	-1.34122	3.597255	-4.93818	0.014155
LOC105374676	3.170402	5.241447	4.929035	0.01423
AI056998	-1.32893	5.719077	-4.92678	0.014249
AI653013	1.909177	4.377171	4.923267	0.014278
T90013	-2.57992	5.875994	-4.9214	0.014293
AK025190	1.366036	7.793375	4.920428	0.014301
AL137427	1.470679	1.922254	4.919488	0.014309
BMP3	1.77627	4.981335	4.918819	0.014315
GRAMD1C	3.136663	4.640061	4.914888	0.014348
LOC728093	-1.32482	8.49294	-4.9134	0.01436
IL10RB-AS1	-1.29169	3.922965	-4.9067	0.014416
LRRN1	-2.0307	2.96701	-4.8947	0.014517
AW573261	1.22786	4.785596	4.883244	0.014615
TLR10	2.383053	5.684988	4.879432	0.014647
AW590925	2.214749	5.412876	4.865616	0.014766
AI690081	1.986569	4.377821	4.862404	0.014794
CSRNP3	-1.55094	5.424992	-4.84859	0.014914
SCN1A	1.436577	5.114791	4.837983	0.015008
AK025086	-1.25793	5.85476	-4.83246	0.015057

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
AL109783	1.276345	6.053541	4.830041	0.015078
TRAV12-2	2.754613	5.631971	4.81586	0.015205
AV700086	3.081182	3.998098	4.814635	0.015216
LIMD2	2.543277	5.324584	4.814573	0.015217
BF436080	-1.7957	4.31019	-4.80984	0.015259
AA159799	2.256713	4.133469	4.804197	0.01531
ADGRB3	2.125348	4.400197	4.803143	0.01532
AA777534	3.391764	3.974431	4.80062	0.015343
NOMO3	-1.75125	4.846322	-4.79554	0.015389
BC028185	-3.33839	2.622545	-4.78035	0.015528
BG704082	-1.20978	5.493099	-4.76903	0.015633
CDY1B	1.362133	6.788342	4.768338	0.01564
SEC14L3	1.618425	5.137478	4.764668	0.015674
BC006563	-1.87077	4.103501	-4.7594	0.015723
FAM13C	2.296266	4.045512	4.757942	0.015737
CTNNA2	-1.78425	4.039601	-4.75672	0.015749
KIAA0895L	1.834198	6.078282	4.755555	0.01576
LOC400590	-3.08471	1.039814	-4.75461	0.015768
KRTAP11-1	1.576505	7.342305	4.739664	0.01591
LOC645485	1.548654	4.911185	4.739577	0.015911
H24473	2.559675	1.125597	4.731013	0.015993
MOP-1	1.905777	1.587489	4.723201	0.016068
HOXA-AS3	1.640606	5.592485	4.717391	0.016124
AI285865	1.725614	5.087763	4.704175	0.016253
FIGLA	-2.34961	3.829819	-4.69294	0.016363
PDE2A	1.465737	6.764144	4.692764	0.016365
PLEKHA6	1.341692	7.641478	4.686227	0.01643
BG288330	-1.34461	9.525943	-4.68502	0.016442
AI655447	1.583843	5.746751	4.680006	0.016492
LOC100631378	1.577707	4.804069	4.679696	0.016495
INSL5	2.245125	5.141707	4.671545	0.016576
ULBP2	1.256194	7.915251	4.660761	0.016685
WDR25	2.217309	5.327985	4.644799	0.016848
AU146886	-1.44084	4.467922	-4.64024	0.016894
AI523245	2.8233	3.520772	4.636521	0.016933
AW663580	-2.28524	4.235932	-4.62429	0.01706
SLC26A7	1.276939	5.136673	4.622976	0.017073
T89089	3.701479	2.167761	4.621509	0.017089
AA001941	2.512369	4.852522	4.604299	0.017269
AW004885	-1.70908	4.484742	-4.60187	0.017295
BE327079	-2.33044	3.199755	-4.59802	0.017336
SUN3	1.826666	3.168501	4.588082	0.017442
ZNF793-AS1	-1.53863	3.952918	-4.57854	0.017545
MYH13	1.513666	5.638854	4.571051	0.017626
BU740192	1.328328	2.680655	4.560505	0.017741
LOC101929974	1.481928	1.773271	4.560297	0.017743
ARL14	1.703143	5.61222	4.555721	0.017793
AA833813	-1.39265	4.749295	-4.54297	0.017934
AV649718	1.940802	3.751431	4.536248	0.018009
AI791152	2.568982	4.917779	4.535271	0.01802
L33988	-1.48612	5.695863	-4.53422	0.018032
LOC101927085	1.443436	5.772993	4.486428	0.018577
TOP1P2	-1.63686	4.372274	-4.48513	0.018592
DBIL5P2	-2.25892	5.116857	-4.48388	0.018606
LOC554207	2.749936	5.236518	4.483401	0.018612
PPM1E	1.489798	6.05051	4.479728	0.018655

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
KLRC4-KLRK1	-1.31284	5.822372	-4.47331	0.01873
ZFP42	1.49406	5.447202	4.470799	0.018759
LOC440173	1.958086	4.770576	4.463411	0.018846
LOC101928225	-2.9395	3.419817	-4.4561	0.018933
R3HDML	-1.78267	6.237152	-4.45511	0.018945
MAGI2-AS2	1.698489	5.287023	4.452607	0.018975
CCDC167	-1.2705	9.230164	-4.44631	0.01905
FGF6	1.675796	7.272686	4.442745	0.019093
AV651668	2.069569	3.566734	4.432228	0.01922
RGS13	2.984789	2.223357	4.43113	0.019234
ITGAD	-1.95069	6.487099	-4.42953	0.019253
LINC00276	-1.7179	1.414434	-4.42441	0.019315
AL832894	1.861539	6.524641	4.42198	0.019345
W22152	1.396655	6.751207	4.407269	0.019526
DENND2A	1.457492	5.089141	4.405486	0.019548
DGKI	1.8573	5.29571	4.397362	0.019649
AF116621	-1.68005	6.589029	-4.37851	0.019886
BF223214	2.749778	3.607057	4.375112	0.01993
FABP2	2.155144	5.425296	4.36744	0.020027
AU146874	1.604977	4.919991	4.36626	0.020042
AW205775	1.392756	4.379024	4.360036	0.020122
AV738999	2.349963	5.148639	4.338689	0.020399
BC021902	-1.7465	4.867287	-4.33634	0.02043
RRN3P3	1.927492	5.929095	4.329462	0.020521
LOC101927752	-1.33062	7.527589	-4.32653	0.020559
CCL8	1.997	6.071172	4.322334	0.020615
AA626334	-2.28514	3.20913	-4.31984	0.020648
AI612095	1.426524	4.679246	4.319355	0.020655
ZNF624	-1.31927	6.822555	-4.31914	0.020657
AU147518	-2.4543	5.369342	-4.31397	0.020726
AU147125	1.342156	5.262879	4.301999	0.020887
BF732649	-1.21363	2.951032	-4.28259	0.021151
H63394	-2.06404	5.370694	-4.28258	0.021151
SOAT2	-1.70329	5.246385	-4.28037	0.021182
BC040916	1.720321	3.046229	4.276577	0.021234
SLC30A10	1.432702	5.175506	4.266671	0.021371
AU146468	1.257448	4.906065	4.257968	0.021492
AK021739	-1.84581	5.157548	-4.25085	0.021592
AI962352	-1.25307	3.638809	-4.24842	0.021627
F2	-1.38458	5.601696	-4.24524	0.021672
ENPP6	3.776847	3.093465	4.24511	0.021673
LOC102724718	2.567288	4.441497	4.244486	0.021682
AW445012	1.475648	4.005838	4.243799	0.021692
U05589	-1.68857	3.970159	-4.23961	0.021751
LOC100509457	-1.22876	4.446738	-4.23857	0.021766
AA831943	2.441994	5.335244	4.235449	0.021811
GPR3	1.299979	6.140825	4.228899	0.021904
AI492298	2.540718	3.144304	4.212307	0.022144
DACT1	-2.47318	3.532475	-4.21222	0.022145
KCNQ4	1.359261	5.153078	4.209841	0.02218
IQCF6	-1.31541	2.986551	-4.20592	0.022237
AA701259	-1.48959	5.656431	-4.19985	0.022326
LOC102723684	2.633454	4.410212	4.197235	0.022364
PDCD4-AS1	1.351455	6.966271	4.194702	0.022402
AK022362	-1.26676	4.417615	-4.19411	0.02241
ZNF32-AS3	1.32489	4.10894	4.187569	0.022507

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
CRISP2	-2.07103	3.603353	-4.18641	0.022524
AW451696	-1.68858	4.591631	-4.15634	0.022977
BF510392	-2.58295	4.672172	-4.15161	0.023049
BC037824	2.170032	5.169256	4.13823	0.023255
SEMG1	1.741037	2.714356	4.131482	0.02336
SUSD3	-1.25691	4.544242	-4.12905	0.023398
AA828246	-2.6239	4.13731	-4.12792	0.023415
MDGA2	1.778289	4.554186	4.11444	0.023627
ITPR1-AS1	2.290167	2.475619	4.110371	0.023691
IL36RN	-1.255	5.993883	-4.1077	0.023734
ACTL8	2.051174	5.967103	4.104998	0.023777
AI734054	1.935376	4.871925	4.104601	0.023783
CCL2	1.460483	7.662398	4.096304	0.023916
ACOT6	-1.34803	3.542303	-4.09001	0.024017
BF194816	-2.24285	4.730088	-4.08867	0.024038
LOC101929148	-1.54297	4.121086	-4.08788	0.024051
BF681305	-3.41211	2.736653	-4.08597	0.024082
LOC101929988	2.215203	6.207275	4.083876	0.024116
BC042964	2.477191	1.453052	4.083806	0.024117
BC019583	1.730403	4.201192	4.081233	0.024159
AF113675	-1.39484	6.103693	-4.07919	0.024192
LOC105371352	1.670621	4.364086	4.078796	0.024199
AI217900	1.245957	5.812219	4.078285	0.024207
LOC339874	2.212943	6.189589	4.064745	0.024429
LINC01492	2.393727	3.561639	4.055183	0.024587
GCKR	1.378458	5.744422	4.039014	0.024857
AI936450	3.510735	3.703385	4.038813	0.024861
HAS1	1.220179	5.342159	4.032302	0.024971
BG054792	-1.84762	4.621685	-4.02889	0.025029
AI017888	1.389058	5.559	4.024979	0.025095
BC034639	-2.26054	3.141064	-4.00944	0.025362
CYP2C8	-1.84507	4.376472	-3.99834	0.025555
C1orf158	1.334191	5.35285	3.991138	0.025681
SELL	1.326248	6.533814	3.989303	0.025713
BC022423	1.484087	5.337951	3.988971	0.025719
IFITM3	2.439846	7.78373	3.980142	0.025875
MAGEA11	-1.55189	3.265616	-3.9784	0.025906
H55978	-1.52077	3.517485	-3.9626	0.026188
AI990286	1.990432	6.616459	3.948667	0.02644
NBEAP1	1.264688	3.630628	3.929013	0.026802
LINC00691	2.455252	4.126095	3.925262	0.026871
DLL1	-1.38181	4.799131	-3.92025	0.026965
AI459554	-2.03203	4.486769	-3.91023	0.027153
CCL27	-1.2492	5.297361	-3.90552	0.027242
H68862	-1.27268	5.61382	-3.89653	0.027412
FMO9P	1.982209	3.012336	3.894921	0.027443
LOC102724611	-2.14531	2.900811	-3.89117	0.027515
SPATA1	1.263137	3.337475	3.886265	0.027609
AK094642	-1.44446	3.287371	-3.88287	0.027675
BF508641	3.664204	4.500038	3.871799	0.027889
LOC100130232	1.32383	3.931195	3.867596	0.027971
AK024132	-1.44367	4.31358	-3.86645	0.027994
AA999783	-1.49547	4.065099	-3.85592	0.028201
AF086350	3.07399	4.755185	3.852205	0.028275
AI082004	-1.27168	8.834594	-3.85193	0.02828
LINC01364	-1.27272	5.462386	-3.85096	0.028299

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
AK023895	-1.35945	5.03695	-3.84808	0.028356
LOC150051	1.335284	6.520855	3.83591	0.0286
MIR6875	1.404793	5.861213	3.835124	0.028616
CDA	2.227189	7.235481	3.8319	0.028681
BC015194	-1.46141	2.896917	-3.83188	0.028681
GRIA2	-1.2339	3.191037	-3.83058	0.028708
FAM46C	1.267822	6.203953	3.826846	0.028783
RAD21L1	3.460946	2.834131	3.818658	0.02895
AI991554	1.26215	6.19342	3.818091	0.028962
LRRC3B	1.308498	4.899016	3.813628	0.029053
MYL2	-1.4777	5.144022	-3.81015	0.029125
LOC101060391	-1.8478	2.99356	-3.80815	0.029166
AI243098	1.287613	6.150357	3.807211	0.029185
LY6G6E	-1.32135	4.525584	-3.80036	0.029327
C18590	-2.20241	4.250102	-3.79933	0.029349
U55186	-3.18373	2.193913	-3.79149	0.029512
GNRHR2	1.242944	5.896745	3.786352	0.02962
NSAP11	1.44649	3.551762	3.783534	0.029679
AI393041	2.025459	5.716301	3.774583	0.029869
RASGEF1B	-1.58577	4.506837	-3.76931	0.029981
LOC100506071	-2.0844	5.043311	-3.76894	0.029989
LOC101927482	2.160111	2.496327	3.768381	0.030001
AI436561	1.542148	4.712697	3.75037	0.03039
LINC01019	2.217209	4.105401	3.745163	0.030503
T77543	2.358192	4.078715	3.744573	0.030516
AA829860	-1.75463	5.683461	-3.74323	0.030545
SAA2	2.77679	4.615312	3.741965	0.030573
BF510545	2.544068	5.297128	3.735564	0.030714
BF830560	-1.8518	5.375167	-3.73378	0.030753
RNF112	-1.68423	5.813811	-3.72317	0.030988
AFP	1.265576	7.061191	3.720191	0.031055
AK024604	-1.25756	6.630837	-3.7095	0.031294
OTX2	1.77791	4.614179	3.706818	0.031355
AL137634	1.720606	6.61664	3.706296	0.031367
BE840636	-1.63005	2.605848	-3.68952	0.031749
TSIX	1.636506	6.120896	3.687274	0.031801
CHL1-AS2	1.352787	6.238475	3.684045	0.031875
TLR8-AS1	1.295495	6.057395	3.682934	0.031901
LOC157273	1.868991	4.387014	3.681719	0.031929
OR10A3	1.583747	5.286373	3.681711	0.031929
ZNF703	1.250777	7.660064	3.677925	0.032017
C17orf64	2.887086	4.902283	3.671572	0.032165
W86659	-2.41205	3.82485	-3.67103	0.032178
BF511307	1.727269	4.445466	3.669613	0.032211
AL080215	-2.25941	5.068442	-3.66082	0.032417
PRTN3	2.044031	5.398202	3.659462	0.032449
AW341473	-1.50924	3.371089	-3.65288	0.032605
EVI5L	1.470442	5.087902	3.652674	0.03261
C8orf46	1.943151	5.526814	3.65101	0.03265
R34775	-1.40077	5.452511	-3.6468	0.03275
ATP6V1B1	1.916697	4.797624	3.643316	0.032833
AL050039	-1.65936	4.640317	-3.6433	0.032834
PYGM	2.046224	6.081492	3.638448	0.03295
DNAH11	1.529991	4.986885	3.638137	0.032958
AW771958	-1.25044	6.704987	-3.63176	0.033112
BC037818	1.370611	5.252511	3.629747	0.033161

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
AK025239	1.427155	4.810941	3.616346	0.033488
BF510937	-2.11024	4.446521	-3.61534	0.033513
EPHA5-AS1	-1.58867	4.221397	-3.60955	0.033655
TRHDE	-2.15619	2.949324	-3.6073	0.033711
KCNA2	1.393486	4.990768	3.593621	0.034052
AL833742	-1.56688	2.572483	-3.59109	0.034116
LOC105378419	1.710055	5.250008	3.588527	0.03418
AA741565	-1.51317	3.686854	-3.57628	0.034491
CD69	1.449685	3.152555	3.575317	0.034515
USP20	1.243814	6.49003	3.574088	0.034547
GOLT1A	2.701925	5.089368	3.565658	0.034763
RIPPLY1	1.209013	5.13071	3.562899	0.034834
LOC102723692	1.948704	6.5568	3.561329	0.034875
ADGRF1	1.271117	3.796614	3.560647	0.034892
BC036605	-3.06097	4.062145	-3.56014	0.034905
AL137331	1.290189	4.703694	3.558974	0.034936
AA948608	-1.44529	4.399714	-3.55518	0.035034
AV700050	1.829765	6.44091	3.54839	0.035211
ERC2	-2.56666	3.440883	-3.54258	0.035364
CALHM2	1.587179	7.478005	3.542245	0.035373
RUSC2	1.603183	7.510667	3.541212	0.0354
BC040984	2.835474	4.776762	3.532691	0.035625
LOC157562	1.331589	6.14761	3.52613	0.0358
AL833493	2.022862	5.6212	3.514747	0.036106
AL049342	2.276849	4.302293	3.495749	0.036624
HIST1H3C	-1.27015	4.221688	-3.49102	0.036754
BC039482	-1.87718	3.275063	-3.49096	0.036756
CCDC60	-1.41254	7.336565	-3.49057	0.036766
BC041921	2.458286	4.533287	3.489448	0.036798
BC041822	-2.44696	3.919665	-3.48856	0.036822
OR5I1	2.402099	6.126719	3.477697	0.037124
REEP2	1.319008	7.349855	3.458004	0.037681
AK022473	-1.22874	6.108083	-3.45659	0.037721
AK026032	-1.71319	3.74884	-3.44872	0.037946
RACGAP1P	-1.25626	4.935453	-3.44821	0.037961
C2CD4A	1.48845	3.650426	3.446158	0.03802
LOC100133039	1.234057	6.686054	3.434299	0.038364
R41431	-1.72953	3.932518	-3.43412	0.038369
AW183655	-2.20998	5.806564	-3.42713	0.038574
BC037945	-1.97235	4.065622	-3.42632	0.038597
BE468087	1.474555	3.554635	3.425998	0.038607
AF334590	-1.83056	3.533737	-3.42562	0.038618
FAM167A-AS1	1.456418	3.941184	3.423122	0.038691
AK021584	-1.60586	5.551204	-3.42134	0.038744
BQ711690	-2.80565	2.931116	-3.42128	0.038746
AK074310	1.664448	4.882043	3.418543	0.038827
BE972639	-2.38065	4.574546	-3.41842	0.03883
AW204766	3.82547	2.745886	3.410613	0.039062
BE674276	1.378498	4.360926	3.402833	0.039295
AA411712	1.398703	5.398113	3.399849	0.039385
BC012388	1.390793	4.056863	3.399041	0.039409
BC015673	1.859133	4.570077	3.394432	0.039549
AF085978	-1.26704	4.304876	-3.3898	0.039689
AK024098	-1.45666	5.120182	-3.38297	0.039898
LOC283861	-1.24394	5.757457	-3.37507	0.040141
BC031022	-2.69316	3.71839	-3.37378	0.04018

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
TMEM176A	1.388092	7.406231	3.372114	0.040232
R80390	-1.92297	5.718059	-3.37099	0.040267
TULP1	2.512825	4.605365	3.352308	0.040851
LOC100507568	1.436893	5.124025	3.349346	0.040944
PRINS	1.388135	7.540417	3.347324	0.041008
LOC100506603	-2.10601	5.977306	-3.34683	0.041024
C7orf57	-2.45112	0.796189	-3.34195	0.041179
AL133627	1.493098	5.571374	3.340813	0.041215
AA016292	-2.19021	3.047109	-3.34011	0.041238
SLC24A4	1.392324	4.614052	3.337142	0.041332
RASAL3	1.620386	5.956579	3.333163	0.04146
ZFP69B	-1.38327	6.363894	-3.32807	0.041624
S81973	-1.68825	3.115291	-3.32756	0.041641
LOC100996385	1.399802	6.329953	3.326678	0.041669
R52692	-1.57087	3.235144	-3.3253	0.041714
AL389956	-1.31937	4.964679	-3.31921	0.041912
AK097242	-1.69902	3.745857	-3.30649	0.042328
MMP10	2.098776	4.630815	3.30388	0.042415
LOC653160	1.448563	6.34787	3.299248	0.042568
LOC100506235	-1.6406	4.440487	-3.29251	0.042793
AW166847	1.738106	5.166175	3.288258	0.042935
AL832806	-1.3517	6.210341	-3.28743	0.042963
BC043438	-2.34522	3.614456	-3.28341	0.043098
AW629429	1.316414	6.034315	3.280097	0.04321
AL833074	-1.74216	4.525415	-3.27769	0.043292
AL832898	1.996425	4.219957	3.275784	0.043356
CRYGA	1.483517	4.401133	3.274519	0.043399
BG772703	1.269466	6.392	3.270335	0.043542
BE348304	1.445534	4.385669	3.26946	0.043572
AI393727	1.581294	4.844412	3.267874	0.043626
SSTR5	1.793281	4.287976	3.265754	0.043699
ATOH1	1.874247	5.794254	3.261806	0.043835
PLA1A	1.908834	5.935437	3.249407	0.044264
NKG7	-1.39985	2.428851	-3.24812	0.044309
C12orf42	1.468353	5.379793	3.246017	0.044383
AI654853	1.555452	4.765563	3.237827	0.044671
TMEM25	1.678431	5.494375	3.234571	0.044786
AI360054	-1.31958	5.997015	-3.23097	0.044913
NKAPP1	-1.52128	5.692086	-3.22593	0.045093
RBAKDN	-2.27449	4.705047	-3.22162	0.045247
AF116673	2.20291	5.551123	3.221152	0.045264
FLG-AS1	1.265574	6.35909	3.221152	0.045264
ANKRD45	1.676343	4.428598	3.218536	0.045358
AF085837	2.952165	4.520356	3.216781	0.045421
AI081227	-1.65986	4.420509	-3.21289	0.045561
AA620926	-1.7683	4.167427	-3.21219	0.045586
ACADL	1.399242	5.079537	3.211254	0.04562
TEX13B	-1.85058	5.897408	-3.20913	0.045697
AW205919	2.249276	7.246588	3.2081	0.045735
AI307430	-1.60314	2.154695	-3.20808	0.045735
DKFZP434A062	1.316164	5.516105	3.207892	0.045742
BC020857	-2.76793	1.731749	-3.20609	0.045808
IDNK	1.455012	7.539003	3.205073	0.045845
MYO18B	1.211913	5.929416	3.204872	0.045852
MIR4755	-2.49318	5.335067	-3.19632	0.046165
R06363	1.450966	4.091804	3.189234	0.046426

Table SI. Continued.

Gene	logFC	AveExpr	t value	P-value
LOC102723809	2.229473	4.341995	3.188448	0.046456
L3MBTL4	1.285139	6.101623	3.186099	0.046543
IL34	1.208178	7.10189	3.180357	0.046756
BC026219	1.437169	6.470212	3.177426	0.046866
TAAR1	1.666678	4.559054	3.164204	0.047364
RGMB-AS1	1.698766	4.83371	3.1615	0.047467
KANK3	1.426388	4.302781	3.15634	0.047664
AI825825	1.232494	5.853663	3.155014	0.047715
AL713663	-1.51233	6.360635	-3.14383	0.048145
BC042015	-1.72731	2.660759	-3.14066	0.048269
SLC35G3	1.659853	3.005873	3.140352	0.04828
TRHDE-AS1	-1.69758	4.565239	-3.13746	0.048393
LOC101927869	1.252308	5.30868	3.134905	0.048493
BC007115	-3.69708	2.664224	-3.13143	0.048629
HIST3H3	-1.78952	3.981327	-3.12984	0.048691
FGF19	-1.80356	5.097564	-3.12726	0.048793
AW134523	-1.29713	5.7104	-3.11982	0.049087
FN3K	-2.04739	4.37935	-3.11606	0.049236
GZMM	3.314151	5.052193	3.115972	0.04924
SYT14	-1.57499	2.730599	-3.10723	0.049589
LOC729652	-2.03373	2.311684	-3.10684	0.049605
AA830640	1.37203	5.911695	3.101694	0.049812
AK026816	-1.866	5.968699	-3.10102	0.04984

Table SII. Biological functions enrichment.

Term	Count	%	P-value	Genes
GO:0005615~extracellular space	77	9.11	0.0000003	FGF6, S100A8, IGFBP7, EDN2, BTC, ANPEP, SAA2, ERFE, CDNF, SERPINA6, SCRG1, GPC6, FAP, CEACAM8, KLK11, LOX, INA, SEMG1, LY96, ACTA2, CRISP2, SPINT1, MFGE8, IL24, MMP10, UCN2, THBD, SERPINF1, SERPINF2, F3, F2, ULBP2, PLA2G2A, WFDC1, CSTA, CA2, EPYC, GC, RBP4, ACHE, CCL2, C3, PRTN3, CPQ, RBP3, LUM, CXCL3, C5, GSDMD, CCL8, CD70, TIMP4, IL34, SERPINH1, CCL27, AZU1, IL17A, LGALS3BP, PRSS2, PTH, MSLN, DEFB1, PCSK5, BMP3, KLK8, PODXL, FBN1, HSPG2, C4BPB, ECM2, IL36RN, LCN2, AFP, SULF2, HBEGF, IGFBP1, CPBI
GO:0005576~extracellular region	87	10.30	0.0000005	FGF6, FGF19, INSL5, ADGRF1, S100A8, IGFBP7, EDN2, ARSI, NELL2, BTC, PGLYRP1, CGREF1, RAET1E, ART5, ERFE, DMKN, PLA1A, LOX, CSF2RA, PRSS37, MATN3, WFDC10B, ZPI1, SEMG1, SCUBE2, CRISP2, COLEC10, SPINT1, DLL1, MFGE8, IL24, TPSD1, TMEM25, GZMM, WFDC11, MMP10, CBLN1, UCN2, SERPINF1, SERPINF2, F2, PLA2G2A, PLA2G2D, GC, RBP4, DEFB108B, ENPP6, ACHE, CCL2, DEFB124, C3, C6, RBP3, LUM, CXCL3, C5, OAS1, TMEM155, IL34, MDK, CCL27, AZU1, ISLR, IL17A, LAMB3, LGALS3BP, BCHE, PRSS2, PTH, PYCARD, CDA, MR1, DEFB1, NMU, BMP3, FBN1, HSPG2, C4BPB, NID2, R3HDM1, LCN2, TULP1, HIST1H3A, VSTM2L, HIST1H3C, HBEGF, IGFBP1
GO:0006954~inflammatory response	29	3.43	0.0000278	NMI, CCL2, S100A8, C3, CXCL3, C5, GSDMD, CCL8, IL34, AZU1, IL17A, PYCARD, MGLL, VNN1, FAS, TNIP3, BLNK, TLR10, LY96, IL1RL2, EPHX2, IL24, IFI16, TNFRSF10C, ALOX15, CCR4, AOX1, NAIP, PLA2G2D
GO:0005886~plasma membrane	169	20.00	0.0000613	TSPAN1, S100A8, C6ORF25, BTC, AQP5, RRAD, GRIN3A, IL31RA, GP9, ATP2B2, ANK1, SLC2A3, GPR45, ZNF185, FAP, VNN1, ERAP2, MCOLN1, FAS, ADGRB3, ARC, CLRN1, DUOXA1, EFNB2, MDGA2, VANGL2, TRPA1, DLL1, C1ORF210, TMEM25, PKD2L1, SSTR5, KRT19, THBD, VAMP8, HAS1, CD34, CCR4, F3, F2, FER1L5, MGAM, PLA2G2A, AKAP5, PDGFRA, C2CD4A, PSCA, MST1R, SLC30A10, EPS8L2, EMP1, NEURL1, CAV3, ENPP6, ACHE, LY6G6F, SCN1A, SLC2A11, PRLHR, KCNA2, IFITM3, GSDMD, ITGB4, CD70, NOSTRIN, MRAP2, PTPRCAP, SLC32A1, ITGB7, MSLN, OPN1MW3, ADRA2A, IFITM10, BLNK, TYROBP, TLR10, TESC, IL1RL2, PODXL, KIR2DS2, TNFRSF13C, BFSP2, UPK3B, SLAMF7, CACNA2D3, TULP1, LAMP3, KLRC4-KLRK1, SYT14, ADRA1B, TM4SF20, ITGAD, DIO1, PRX, IGDCC4, OR10A3, LIMA1, ADGRF1, OR10A4, PCDHB18P, DUOX2, LSR, EDNRB, VNIR4, KCNQ4, SLC23A1, RAET1E, FRMD6, SLC24A4, GPC6, CEACAM8, MGLL, TAAR1, FAM129A, CSF2RA, ATP8B4, OR511, ZP1, CPTP, LY96, NPBWR2, PCDH9, SPINT1, RFTN1, ALOX15, TNFRSF10C, TDGF1P3, IL20RB, SLC26A7, MDM2, GUCY1B2, SUSD3, CA2, GPR17, GRASP, DCHS2, RAB3B, C3, PRTN3, GPRC5A, DGKA, UNC79, DGKB, RASGRP2, FAT2, INPP5D, MC3R, MR1, SCNN1B, GNRHR2, ABCA12, MICALL2, MPZ, SELL, HSPG2, ASIC2, C4BPB, DGKI, ANXA3, XPNPEP2, RGS13, KCNN4, GRIA2, PDE2A, SULF2, FCGR2C, HBEGF, TAPBP, ATP6V0A4
GO:0045087~innate immune response	29	3.43	0.0002419	DEFB108B, S100A8, DEFB124, C6, GSDMD, PGLYRP1, IL34, APOBEC3C, PYCARD, VNN1, MR1, DEFB1, SH2D1B, TYROBP, TEC, TLR10, NCF2, LY96, IL1RL2, KIR2DS2, C4BPB, IFI16, IL36RN, GZMM, LCN2, TRIM31, KLRC4-KLRK1, NAIP, MST1R

Table SII. Continued.

Term	Count	%	P-value	Genes
GO:0005509~calcium ion binding	41	4.85	0.0003599	PLCZ1, S100A3, DCHS2, S100A8, PCDBHB18P, MYL2, TNNC1, DUOX2, NELL2, MYL9, DGKA, ATP2B2, CGREF1, DGKB, SLC24A4, CD69, PRSS2, FAT2, RASGRP2, S100A2, MATN3, TESC, S100P, SCUBE2, FBNI, HSPG2, PCDH9, DLL1, NID2, PKD2L1, ANXA3, MMP10, CLGN, THBD, SULF2, F2, HPCA, SYT14, PLA2G2A, C2CD4A, PLA2G2D
GO:0006629~lipid metabolic process	14	1.66	0.0014174	PLCZ1, ENPP6, RBP3, SLC16A11, GDDP3, MTP, PLCL2, PNPLA7, FAR2, CH25H, MGLL, PLA1A, RDH16, PC
GO:0005887~integral component of plasma membrane	65	7.69	0.0017201	CALHM2, SLC52A1, TSPAN1, SLC16A11, AQP5, ANPEP, GJA5, GP9, ATP2B2, EDNRB, SLC23A1, SLC24A4, SLC2A3, GPC6, CEACAM8, MCOLN1, FAS, CSF2RA, EFNB2, TRPA1, NPBWR2, DLL1, SSTR5, TNFRSF10C, THBD, HAS1, SLC26A7, CD34, CCR4, CSPG4P5, PDGFRA, MST1R, GPR17, PRLHR, KCNA2, SLC39A12, CD70, GPR1, GPRC5A, GPR3, C2ORF83, CD69, ADRA2A, MC3R, SCNN1B, GAL3ST1, GNRHR2, TYROBP, FAM26D, TLR10, MPZ, TRHDE, PTPRZ1, SELL, ASIC4, IL1RL2, PODXL, ASIC2, KIR2DS2, REEP2, GRIA2, ADRA1B, KLRC4-KLRK1, HBEGF, NKG7
GO:0042246~tissue regeneration	5	0.59	0.0025893	CPQ, TXK, IGFBP1, TM4SF4, TEC
GO:0042771~intrinsic apoptotic signaling pathway in response to DNA damage by p53 class mediator	6	0.71	0.0026256	CDKN1A, NUPR1, CDIP1, PYCARD, IFI16, PMAIP1
GO:0031225~anchored component of membrane	11	1.30	0.0028401	ENPP6, ACHE, TNFRSF10C, GPC6, CEACAM8, MSLN, MDGA2, DPEP3, VNN1, PSCA, XPNPEP2
GO:0009611~response to wounding	8	0.95	0.0035628	KLK8, ACHE, CCL2, SULF2, F2, ITGB4, MDK, NMNAT1
GO:0008236~serine-type peptidase activity	8	0.95	0.0036075	GZMM, IMMP2L, PRTN3, FAP, RBP3, PRSS2, KLK11, TPSD1
GO:0030018~Z disc	11	1.30	0.0038844	CAV3, SCN1A, KRT19, MYO18B, ANK1, CRYAB, FHOD3, MYOZ2, MYOT, SYNPO, MYL9
GO:0008217~regulation of blood pressure	8	0.95	0.0042487	EDNRB, TRHDE, CD34, ACTA2, EPHX2, DLL1, ERAP2, MC3R
GO:0060326~cell chemotaxis	8	0.95	0.0042487	AZU1, CCL2, SAA2, C5, PDGFRA, CCL8, HBEGF, CCL27
GO:0005536~glucose binding	4	0.47	0.0042732	GCK, SLC2A3, HKDC1, HK2
GO:0007155~cell adhesion	26	3.08	0.0056967	ACHE, CCL2, CYP1B1, IGFBP7, ITGB4, GP9, ISLR, KIAA1462, LGALS3BP, LAMB3, CGREF1, FAP, ITGB7, MSLN, SELL, PODXL, EFNB2, MFGE8, SLAMF7, NID2, CTNNA2, CD34, HAS1, SUSD5, ITGAD, TGFB11
GO:0048246~macrophage chemotaxis	4	0.47	0.0070228	AZU1, EDNRB, CCL2, EDN2
GO:0002526~acute inflammatory response	4	0.47	0.0070228	S100A8, NUPR1, VNN1, DEFB1
GO:0005261~cation channel activity	5	0.59	0.0073374	FAM26D, CALHM2, TMEM38A, MCOLN1, PKD2L1
GO:0009615~response to virus	10	1.18	0.0079544	LCN2, IFIT2, IFIT1, ACTA2, IFITM3, DUOX2, CCL8, OAS1, MST1R, TRIM22
GO:0001678~cellular glucose homeostasis	4	0.47	0.0087315	GCKR, GCK, HKDC1, HK2

Table SII. Continued.

Term	Count	%	P-value	Genes
GO:0016021~integral component of membrane	188	22.25	0.0091002	C15ORF48, RARRES1, PEAR1, C6ORF25, LRTM1, NELL2, BTC, GRIN3A, IL31RA, ATP2B2, SLC2A3, GPR45, FAP, TMEM52B, CH25H, B3GALNT1, VNN1, ERAP2, MCOLN1, CREB3L3, FAS, ADGRB3, CLRN1, SLC12A8, GOLT1A, FAXDC2, SPTLC3, DUOXAI, MDGA2, VANGL2, TRPA1, C1ORF210, DLL1, TMEM25, PKD2L1, TMEM27, PNPLA7, SSTR5, LOC653160, SLC25A31, LILRB5, VAMP8, CCR4, CD34, HAS1, F3, TMEM139, FERIL5, MGAM, MSTIR, SLC30A10, EMP1, FAM163A, CAV3, LY6G6E, ACHE, LY6G6F, SCN1A, GAL3ST4, SLC2A11, PRLHR, CYP1B1, IFITM3, C3ORF18, CCDC167, CD70, SLC38A11, MRAP2, PTPRCAP, TMCC3, SYNDIG1L, SLC32A1, CD69, BCHE, ITGB7, FAM189A1, OPN1MW3, FAM162B, IFITM10, GAL3ST1, TYROBP, TMEM221, TLR10, NOMO3, ACER2, PODXL, KIR2DS2, TNFRSF13C, UPK3B, SLAMF7, REEP2, LAMP3, CLGN, SYT14, KLRC4-KLRK1, TM4SF20, SLC35G3, DIO1, NKG7, ALG12, ADGRF2, IGDCC4, OR10A3, ADGRF1, OR10A4, PCDHB18P, GREB1, SLC16A11, DUOX2, ANPEP, LTC4S, LSR, GJA5, FRMD3, C2ORF141, FAR2, EDNRB, IMM2L, VNIIR4, KCNQ4, RAET1E, GALNTL5, POMT1, GALNTL6, TAAR1, PPP1R14C, ATP8B4, NIPAL4, OR5I1, CEACAM21, ZP1, WBSCR17, TMEM255A, NPBWR2, TMEM38A, PCDH9, SPINT1, TNFRSF10C, ZDHHC11, IL20RB, SLC26A7, CHST8, SUSD3, GPR17, GRAMD1C, TM4SF4, DCHS2, FUT9, COX7B2, TMEM257, SEC14L3, GPR1, NAALADL2, GPRC5A, SCARF2, GPR3, C2ORF82, UNC79, RNF128, FAT2, UGT2A2, MIR1, SCNN1B, PCSK5, GNRHR2, ABCA12, SOAT2, PTPRZ1, SELL, TMC2, HOGA1, SUN3, TMC1, GDDP3, RNF112, RPRML, KCNN4, GRIA2, FCGR2C, LRRC3B, LRRN1, SPATA31A5, EVI5L, RDH16, TAPBPL, ATP6V0A4, TMEM176A GCK, HKDC1, HK2 GCK, HKDC1, HK2 GCK, HKDC1, HK2 GCK, HKDC1, HK2
GO:0008865~fructokinase activity	3	0.36	0.0093396	
GO:0004340~glucokinase activity	3	0.36	0.0093396	
GO:0019158~mannokinase activity	3	0.36	0.0093396	
GO:0004396~hexokinase activity	3	0.36	0.0093396	
GO:0007219~Notch signaling pathway	10	1.18	0.0105069	ATOH1, KRT19, RIPPLY1, SUSD5, DLL1, TIMP4, NEURL1B, MESP1, MDK, NEURL1
GO:0070062~extracellular exosome	109	12.90	0.0114397	SNCG, TSPAN1, RARRES1, S100A8, RUSC2, PGLYRP1, AQP5, ALDH1L2, ATP2B2, SLC2A3, TMEM52B, PLA1A, VNN1, FAS, HIST3H3, SEMG1, CRYAB, MFG8, SCEL, TMEM27, KRT19, SERPINF1, SERPINF2, VAMP8, F3, F2, MGAM, PLA2G2A, PSCA, CSTA, EPS8L2, GC, RBP4, ENPP6, GAL3ST4, ASS1, IFITM3, ITGB4, CD70, FAM212A, ATP6V1B1, SERPINH1, LGALS3BP, ITGB7, RASAL3, DEFB1, ARHGDIB, BMP3, S100P, UFSP1, PODXL, EPHX2, UPK3B, MUC7, REEP2, PSMB8, LCN2, C1ORF116, HIST1H3A, CYFIP2, HIST1H3C, MYH13, QPRT, GREB1, IGFBP7, DUOX2, ANPEP, LSR, TP53I3, SLC23A1, SAA2, SERPINA6, DMKN, CEACAM8, KLK11, FAM129A, ACTA2, TMEM38A, SPINT1, RFTN1, CLIC3, NAIP, CA2, PPFIA2, RAB3B, PRTN3, C3, C6, CPQ, LUM, C5, SEC14L3, GPRC5A, AZU1, ISLR, FAT2, SCNN1B, TRHDE, HOGA1, FBNI, HSPG2, NID2, GDDP3, ANXA3, XPNPEP2, PYGM, AOX1, ATP6V0A4, HIST1H2AL
GO:0048786~presynaptic active zone	5	0.59	0.0120193	SLC32A1, PPFIA2, ERC2, DGKI, UNC13A
GO:0070588~calcium ion transmembrane transport	10	1.18	0.0129569	ATP2B2, PDE2A, SLC24A4, TMC2, TRPA1, MCOLN1, TMC1, GRIN3A, CACNA2D3, PKD2L1

Table SII. Continued.

Term	Count	%	P-value	Genes
GO:2000379~positive regulation of reactive oxygen species metabolic process	5	0.59	0.0139395	PIDI, CDKN1A, DUOXAI1, F2, GADD45A
GO:0010951~negative regulation of endopeptidase activity	10	1.18	0.0143301	SERPINF1, C3, SERPINF2, SERPINA6, C5, SPINT1, WFDC1, TIMP4, CSTA, SERPINHI
GO:0002020~protease binding	9	1.07	0.0145956	LCN2, SERPINF2, SELL, F3, FAP, PYCARD, TIMP4, CD70, CSTA
GO:0010466~negative regulation of peptidase activity	4	0.47	0.0152097	WFDC10B, PTTG2, CSTA, R3HDM1
GO:0030193~regulation of blood coagulation	4	0.47	0.0152097	LBH, F2, ASIC2, FAM46A
GO:0004252~serine-type endopeptidase activity	16	1.89	0.0157953	KLK8, C3, PRTN3, COLEC10, TPSDI, GZMM, AZU1, MMP2L, MMP10, F3, FAP, PRSS2, F2, KLK11, PCSK5, PRSS37
GO:0009636~response to toxic substance	8	0.95	0.0176623	CDKN1A, SLC23A1, CYP1B1, NUPR1, EPHX2, MDM2, FAS, NEFL
GO:0043204~perikaryon	9	1.07	0.0179499	AMIGO1, CCL2, ASS1, CRYAB, KCNA2, HPCA, NAIP, SYNPO, NEURL1
GO:2000427~positive regulation of apoptotic cell clearance	3	0.36	0.0187264	CCL2, C3, MFGE8
GO:0030198~extracellular matrix organization	13	1.54	0.0216608	MATN3, LUM, FBN1, HSPG2, ITGB4, SPINT1, NID2, ECM2, LAMB3, ITGB7, POMT1, ITGAD, LOX
GO:0008284~positive regulation of cell proliferation	24	2.84	0.0228901	FGF6, CAV3, FGF19, PRTN3, ACER2, EDN2, BTC, EFN2, DLL1, IL24, IL34, PRAMEF10, IL3IRA, EDNRB, ZNF703, ATF3, PRAMEF2, F2, BNC1, ADRA2A, PDGFRA, HBEGF, MDM2, MST1R
GO:0005262~calcium channel activity	7	0.83	0.0230030	PDE2A, SLC24A4, TRPA1, MCOLN1, GRIN3A, CACNA2D3, PKD2L1
GO:0030101~natural killer cell activation	4	0.47	0.0237847	ULBP2, KLRC4-KLRK1, KIR2DS2, SLAMF7
GO:0042923~neuropeptide binding	4	0.47	0.0239247	SSTR5, NPBWR2, MC3R, GPR1
GO:0010544~negative regulation of platelet activation	3	0.36	0.0244530	THBD, F2, PDGFRA
GO:0006955~immune response	22	2.60	0.0262525	TLR10, CCL2, C3, CXCL3, IFITM3, PGLYRP1, KIR2DS2, CCL8, OAS1, CD70, IL24, TRIM22, CCL27, TNFRSF10C, IL17A, CCR4, FCGR2C, CEACAM8, ITGAD, MR1, FAS, DEFB1
GO:0001725~stress fiber	6	0.71	0.0262604	MICALL2, LIMA1, VANGL2, MST1R, SYNPO, MYL9
GO:0071222~cellular response to lipopolysaccharide	9	1.07	0.0264422	LCN2, EDNRB, CCL2, ASS1, PYCARD, KLRC4-KLRK1, IL24, NFKBIL1, TNIP3
GO:0019835~cytolysis	4	0.47	0.0271148	GZMM, C6, C5, GSDMD
GO:0035725~sodium ion transmembrane transport	7	0.83	0.0273596	SLC23A1, SCN1A, SLC24A4, ASIC4, ASIC2, SCNN1B, PKD2L1
GO:0043171~peptide catabolic process	4	0.47	0.0306800	TRHDE, CPQ, ERAP2, ANPEP
GO:0008201~heparin binding	11	1.30	0.0307041	AZU1, CCL2, SELL, C6ORF25, FBN1, CCL8, HBEGF, ECM2, EPYC, MDK, PLA2G2D
GO:0010831~positive regulation of myotube differentiation	3	0.36	0.0307922	CAV3, MYOG, SMYD1
GO:0097186~amelogenesis	3	0.36	0.0307922	SLC24A4, ENAM, ITGB4
GO:0030017~sarcomere	5	0.59	0.0326464	MYO18B, MYL2, ANKRD2, TIMP4, MYOZ2
GO:0030199~collagen fibril organization	5	0.59	0.0335638	CYP1B1, SERPINF2, LUM, LOX, SERPINHI
GO:0070006~metalloaminopeptidase activity	4	0.47	0.0346764	TRHDE, ERAP2, ANPEP, XPNPEP2

Table SII. Continued.

Term	Count	%	P-value	Genes
GO:0031490~chromatin DNA binding	6	0.71	0.0358406	ATOH1, PRDM14, HIST1H1D, HIST1H1A, GRHL3, MYOG
GO:0009897~external side of plasma membrane	13	1.54	0.0360588	SELL, TNFRSF13C, TMCI, ANPEP, MFGE8, IL31RA, IL17A, CD34, CD69, CCR4, KLRC4-KLRK1, FAS, SCNN1B
GO:0051607~defense response to virus	11	1.30	0.0362852	AZU1, IFIT2, IFIT1, IFITM3, PYCARD, OAS1, IFI16, PMAIP1, TRIM22, GBP3, APOBEC3C
GO:0045071~negative regulation of viral genome replication	5	0.59	0.0363969	IFIT1, IFITM3, OAS1, IFI16, APOBEC3C
GO:0005623~cell	8	0.95	0.0370507	LCN2, GCK, ERFE, HKDC1, NELL2, HK2, CCL8, MT4
GO:0051918~negative regulation of fibrinolysis	3	0.36	0.0376998	THBD, SERPINF2, F2
GO:0051156~glucose 6-phosphate metabolic process	3	0.36	0.0376998	GCK, HKDC1, HK2
GO:0042060~wound healing	7	0.83	0.0403035	ALOX15, S100A8, VANGL2, PDGFRA, GRHL3, LOX, IL24
GO:0042593~glucose homeostasis	8	0.95	0.0403475	CAV3, RBP4, SSTR5, GCK, FBN1, ADRA2A, ADRA1B, OAS1
GO:0008307~structural constituent of muscle	5	0.59	0.0427596	KRT19, MYL2, ANKRD2, MYOT, MYL9
GO:0019369~arachidonic acid metabolic process	4	0.47	0.0427673	ALOX15, CYP11B1, ALOX12B, MGLL
GO:0005856~cytoskeleton	19	2.25	0.0438858	CMAHP, S100A8, MYL2, ANKRA2, NOSTRIN, WIP1, ACTL8, FRMD3, FRMD6, ANK1, RNF128, FHOD3, AKAP5, ERC2, INPP5D, TGFB3, FAM83H, TEC, ARHGDI1B
GO:0006508~proteolysis	24	2.84	0.0445203	KLK8, TRHDE, UFSP1, PRTN3, C3, CPQ, RBP3, COLEC10, ANPEP, TPSD1, NRIP2, TMEM27, XPNPEP2, GZMM, AZU1, MMP10, FAP, PRSS2, F2, DPEP3, KLK11, ERAP2, CPB1, PRSS37
GO:0097202~activation of cysteine-type endopeptidase activity	3	0.36	0.0451339	PYCARD, CYFIP2, IFI16
GO:0006497~protein lipidation	3	0.36	0.0451339	ALOX12B, WIP1, MTTP
GO:0004143~diacylglycerol kinase activity	3	0.36	0.0453184	DGKA, DGKB, DGKI
GO:0051965~positive regulation of synapse assembly	6	0.71	0.0453964	AMIGO1, CBLN1, LRTM1, LRRN1, ASIC2, ADGRB3
GO:0031012~extracellular matrix	16	1.89	0.0455898	ZPI, PRTN3, LUM, IGFBP7, FBN1, HSPG2, MFGE8, NID2, MMP10, LGALS3BP, SERPINF1, F3, PRSS2, AMELY, TGFB3, CSTA
GO:0042383~sarcolemma	7	0.83	0.0498193	CAV3, FGF6, KRT19, ANK1, TRIM72, MYOT, CCDC78

Table SIII. Pathway enrichment.

Term	Count	%	P-value	Genes
hsa04115:p53 signaling pathway	9	1.07	0.00073	CCNE2, CDKN1A, TP53I3, DDB2, MDM2, FAS, PMAIP1, SESN1, GADD45A
hsa04610:Complement and coagulation cascades	8	0.95	0.00403	THBD, C3, SERPINF2, F3, C6, C5, F2, C4BPB
hsa00524:Butirosin and neomycin biosynthesis	3	0.36	0.00817	GCK, HKDC1, HK2
hsa00590:Arachidonic acid metabolism	7	0.83	0.00883	ALOX15, CYP2C8, PLA2G2A, EPHX2, ALOX12B, LTC4S, PLA2G2D
hsa00500:Starch and sucrose metabolism	5	0.59	0.01542	PYGM, GCK, HKDC1, MGAM, HK2
hsa01100:Metabolic pathways	47	5.56	0.04075	INPP1, PLCZ1, PYCRL, FUT9, ASS1, COX7B2, HK2, ANPEP, LTC4S, ATP6V1B1, ACSBG1, AFMID, DGKA, DGKB, GALNTL5, B3GALNT1, GALNTL6, UGT2A2, ALOX12B, CDA, MGLL, BDH1, GAL3ST1, FAXDC2, SPTLC3, WBSCR17, HKDC1, CYP2C8, ACER2, HOGA1, EPHX2, DGKI, ACADL, IDNK, ALOX15, PYGM, GCK, MGAM, AOX1, PLA2G2A, QPRT, RDH16, ATP6V0A4, PLA2G2D, ALG12, PC, NMNAT1