Figure S1. Principal component analysis plot of molecular signatures of OS and control samples. The colors indicate the sample groups; red indicates BM-MSCs (controls) and blue indicates the OS samples. Shapes indicate clustering of the samples. PC1, principal component cluster 1; PC2, principal component cluster 2; OS, osteosarcoma; NA, not available; BM-MSCs, bone marrow mesenchymal stromal cells.

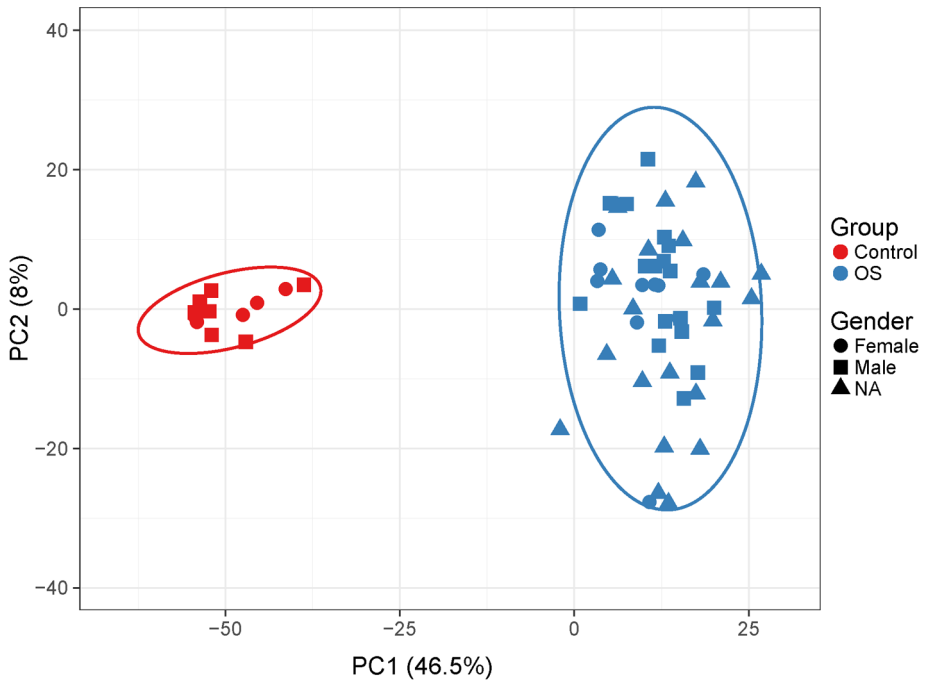
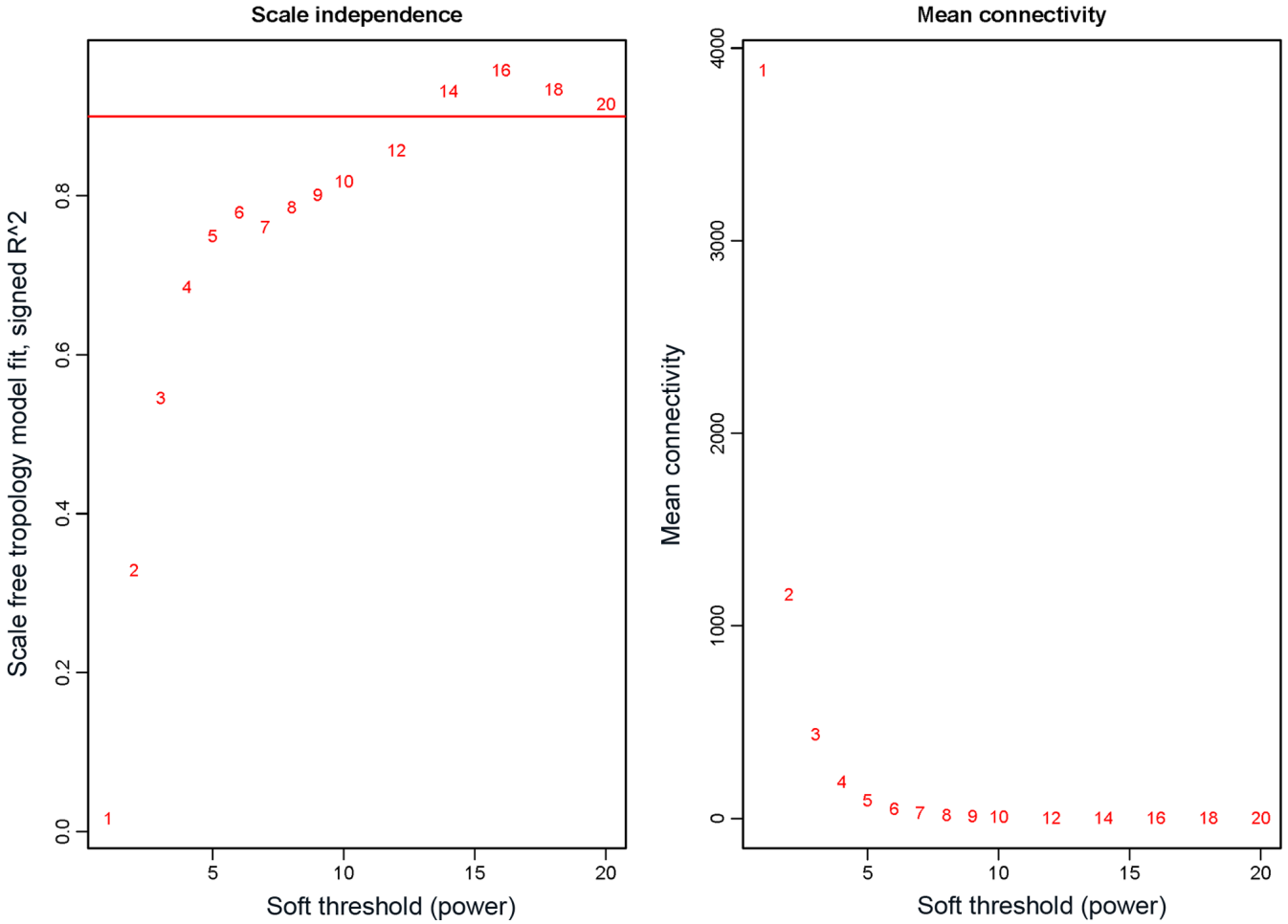
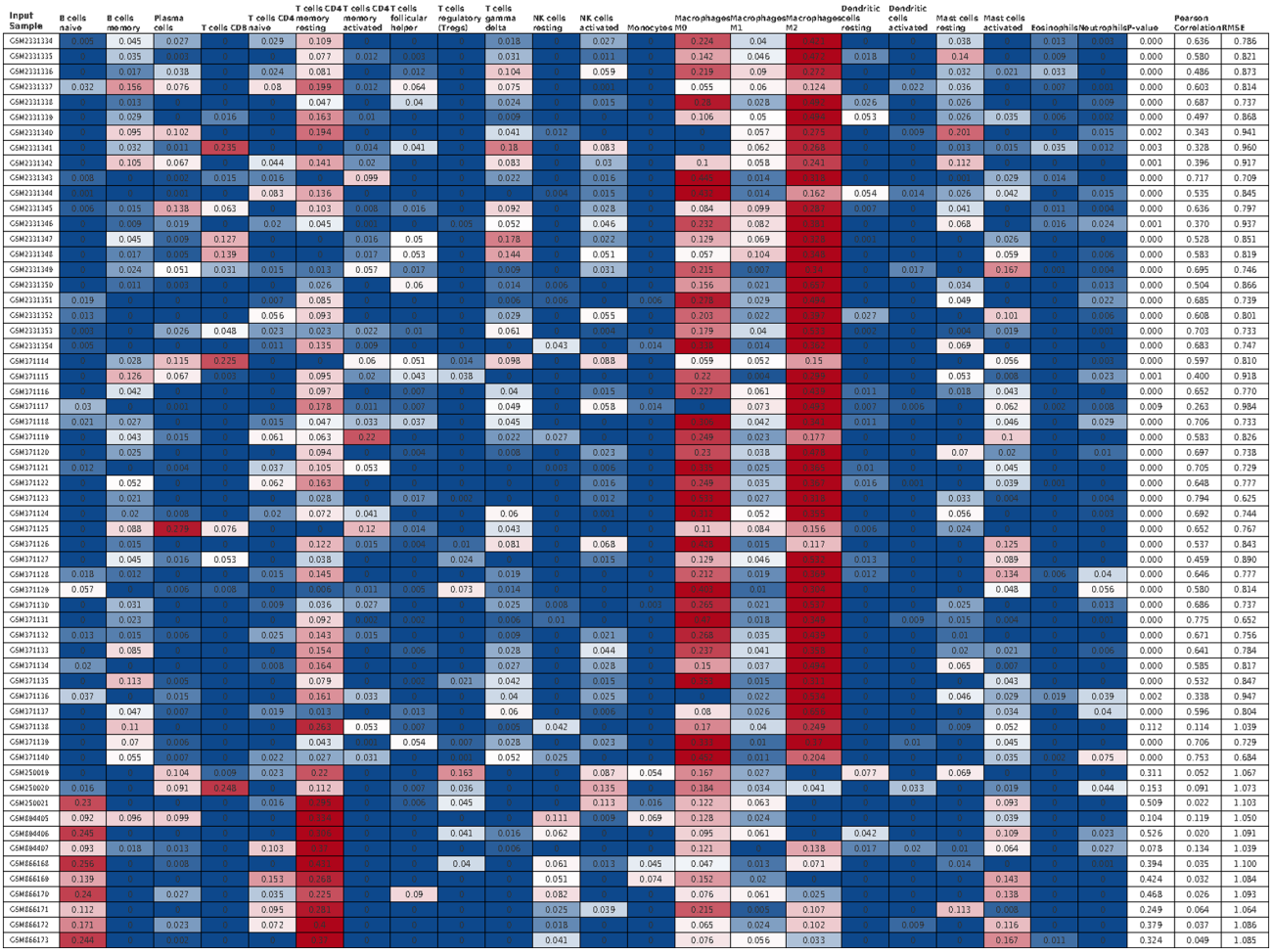


Figure S2. Analysis of network topology for various soft-thresholding powers. The left-hand panel shows the scale-free fit index (y-axis) as a function of the soft thresholding power (x-axis). The right-hand panel shows the mean connectivity (degree, y-axis) as a function of the soft-thresholding power (x-axis). Power 12 is the lowest power for the fit index reaching a high value close to 0.9 but with reasonable connectivity.





Input Sample	B cells naive	B cells memory	Plasma cells	T cells CD8	T cells CD4 naive	T cells CD4 memory resting	T cells CD4 memory activated	T cells follicular helper	T cells regulatory (Tregs)	T cells gamma delta	NK cells resting	NK cells activated	Monocytes	Macrophages M0	Macrophages M1	Macrophages M2	Dendritic cells resting	Dendritic cells activated	Mast cells resting	Mast cells activated	Eosinophils	Neutrophils	P-value	Pearson Correlation	RMSE
GSM2331334	0.005	0.045	0.027	0	0.029	0.109	0	0	0	0.018	0	0.027	0	0.224	0.04	0.421	0	0	0.038	0	0.013	0.003	0.000	0.636	0.786
GSM2331335	0	0.035	0.003	0	0	0.077	0.012	0.003	0	0.031	0	0.011	0	0.142	0.046	0.472	0.018	0	0.14	0	0.009	0	0.000	0.580	0.821
GSM2331336	0	0.017	0.038	0	0.024	0.081	0	0.012	0	0.104	0	0.059	0	0.219	0.09	0.272	0	0	0.032	0.021	0.033	0	0.000	0.486	0.873
GSM2331337	0.032	0.156	0.076	0	0.08	0.199	0.012	0.064	0	0.075	0	0.001	0	0.055	0.06	0.124	0	0.022	0.036	0	0.007	0.001	0.000	0.603	0.814
GSM2331338	0	0.013	0	0	0	0.047	0	0.04	0	0.024	0	0.015	0	0.28	0.028	0.482	0.026	0	0.026	0	0	0.009	0.000	0.687	0.737
GSM2331339	0	0.029	0	0.016	0	0.163	0.01	0	0	0.009	0	0	0	0.106	0.05	0.484	0.053	0	0.026	0.035	0.006	0.002	0.000	0.497	0.868
GSM2331340	0	0.095	0.102	0	0	0.194	0	0	0	0.041	0.012	0	0	0	0.057	0.275	0	0.009	0.201	0	0	0.015	0.002	0.343	0.941
GSM2331341	0	0.032	0.013	0.235	0	0	0.014	0.041	0	0.18	0	0.083	0	0	0.062	0.268	0	0	0.013	0.015	0.035	0.012	0.003	0.328	0.960
GSM2331342	0	0.105	0.067	0	0.044	0.141	0.02	0	0	0.083	0	0.03	0	0.1	0.058	0.241	0	0	0.112	0	0	0	0.001	0.396	0.917
GSM2331343	0.008	0	0.002	0.015	0.016	0	0.099	0	0	0.022	0	0.016	0	0.446	0.014	0.316	0	0	0.001	0.029	0.014	0	0.000	0.717	0.709
GSM2331344	0.001	0	0.001	0	0.083	0.136	0	0	0	0	0.004	0.015	0	0.282	0.014	0.162	0.054	0.014	0.026	0.042	0	0.015	0.000	0.535	0.845
GSM2331345	0.006	0.015	0.138	0.063	0	0.103	0.008	0.016	0	0.092	0	0.028	0	0.084	0.099	0.287	0.007	0	0.041	0	0.011	0.004	0.000	0.636	0.797
GSM2331346	0	0.009	0.019	0	0.02	0.045	0.003	0	0.005	0.052	0	0.046	0	0.232	0.082	0.381	0	0	0.068	0	0.016	0.024	0.001	0.370	0.937
GSM2331347	0	0.045	0.009	0.127	0	0	0.016	0.05	0	0.178	0	0.022	0	0.129	0.069	0.328	0.003	0	0	0.026	0	0	0.000	0.528	0.851
GSM2331348	0	0.017	0.005	0.139	0	0	0.017	0.053	0	0.144	0	0.051	0	0.057	0.104	0.348	0	0	0	0.059	0	0.006	0.000	0.583	0.819
GSM2331349	0	0.024	0.051	0.031	0.015	0.013	0.057	0.017	0	0.009	0	0.031	0	0.215	0.007	0.34	0	0.017	0	0.167	0.002	0.004	0.000	0.695	0.746
GSM2331350	0	0.011	0.003	0	0	0.026	0	0.06	0	0.014	0.006	0	0	0.156	0.021	0.492	0	0	0.034	0	0	0.013	0.000	0.504	0.866
GSM2331351	0.019	0	0	0	0.007	0.085	0	0	0	0.006	0.006	0	0.006	0.278	0.029	0.484	0	0	0.049	0	0	0.022	0.000	0.685	0.739
GSM2331352	0.013	0	0	0	0.056	0.093	0	0	0	0.029	0	0.055	0	0.203	0.022	0.387	0.027	0	0	0.101	0	0.006	0.000	0.608	0.801
GSM2331353	0.003	0	0.026	0.048	0.023	0.023	0.022	0.01	0	0.061	0	0.004	0	0.179	0.04	0.513	0.002	0	0.004	0.019	0	0.001	0.000	0.703	0.733
GSM2331354	0.005	0	0	0	0.011	0.135	0.009	0	0	0	0.043	0	0.014	0.338	0.014	0.382	0	0	0.069	0	0	0	0.000	0.683	0.747
GSM1371114	0	0.028	0.115	0.225	0	0	0.06	0.051	0.014	0.098	0	0.088	0	0.059	0.052	0.15	0	0	0	0.056	0	0.003	0.000	0.597	0.810
GSM1371115	0	0.126	0.067	0.003	0	0.095	0.02	0.043	0.038	0	0	0	0	0.22	0.004	0.489	0	0	0.053	0.008	0	0.023	0.001	0.400	0.918
GSM1371116	0	0.042	0	0	0	0.097	0	0.007	0	0.04	0	0.015	0	0.227	0.061	0.419	0.011	0	0.018	0.043	0	0	0.000	0.652	0.770
GSM1371117	0.03	0	0.002	0	0	0.178	0.011	0.007	0	0.049	0	0.058	0.014	0	0.073	0.493	0.007	0.006	0	0.062	0.002	0.008	0.009	0.263	0.984
GSM1371118	0.021	0.027	0	0	0.015	0.047	0.033	0.037	0	0.045	0	0	0	0.086	0.042	0.393	0.011	0	0	0.046	0	0.029	0.000	0.706	0.733
GSM1371119	0	0.043	0.015	0	0.061	0.063	0.22	0	0	0.022	0.027	0	0	0.249	0.023	0.177	0	0	0	0.1	0	0	0.000	0.583	0.826
GSM1371120	0	0.025	0	0	0	0.094	0	0.004	0	0.008	0	0.023	0	0.23	0.038	0.478	0	0	0.07	0.02	0	0.01	0.000	0.697	0.738
GSM1371121	0.012	0	0.004	0	0.037	0.105	0.053	0	0	0	0.003	0.006	0	0.335	0.025	0.385	0.01	0	0	0.045	0	0	0.000	0.705	0.729
GSM1371122	0	0.052	0	0	0.062	0.163	0	0	0	0	0	0.016	0	0.249	0.035	0.367	0.016	0.003	0	0.039	0	0	0.000	0.648	0.777
GSM1371123	0	0.021	0	0	0	0.028	0	0.017	0.002	0	0	0.012	0	0.493	0.027	0.318	0	0	0.033	0.004	0	0.004	0.000	0.794	0.625
GSM1371124	0	0.02	0.008	0	0.02	0.072	0.041	0	0	0.06	0	0.001	0	0.312	0.052	0.355	0	0	0.056	0	0	0.003	0.000	0.692	0.744
GSM1371125	0	0.088	0.238	0.076	0	0	0.12	0.014	0	0.043	0	0	0	0.11	0.084	0.156	0.006	0	0.024	0	0	0	0.000	0.652	0.767
GSM1371126	0	0.015	0	0	0	0.122	0.015	0.004	0.01	0.081	0	0.068	0	0.438	0.015	0.117	0	0	0	0.125	0	0	0.000	0.537	0.843
GSM1371127	0	0.045	0.016	0.053	0	0.038	0	0	0.024	0	0	0.015	0	0.129	0.046	0.445	0.013	0	0	0.089	0	0	0.000	0.459	0.890
GSM1371128	0.018	0.012	0	0	0.015	0.145	0	0	0	0.019	0	0	0	0.212	0.019	0.369	0.012	0	0	0.134	0.006	0.04	0.000	0.646	0.777
GSM1371129	0.057	0	0.006	0.008	0	0.006	0.011	0.005	0.073	0.014	0	0	0	0.403	0.01	0.304	0	0	0	0.048	0	0.056	0.000	0.580	0.814
GSM1371130	0	0.031	0	0	0.009	0.036	0.027	0	0	0.025	0.008	0	0.003	0.265	0.021	0.537	0	0	0.025	0	0	0.013	0.000	0.686	0.737
GSM1371131	0	0.023	0	0	0	0.092	0.002	0.002	0	0.006	0.01	0	0	0.42	0.018	0.389	0	0.009	0.015	0.004	0	0.001	0.000	0.775	0.652
GSM1371132	0.013	0.015	0.006	0	0.025	0.143	0.015	0	0	0.009	0	0.021	0	0.268	0.035	0.419	0	0	0.01	0	0	0	0.000	0.671	0.756
GSM1371133	0	0.085	0	0	0	0.154	0	0.006	0	0.028	0	0.044	0	0.237	0.041	0.358	0	0	0.02	0.021	0	0.006	0.000	0.641	0.784
GSM1371134	0.02	0	0	0	0.008	0.164	0	0	0	0.027	0	0.028	0	0.15	0.037	0.494	0	0	0.065	0.007	0	0	0.000	0.585	0.817
GSM1371135	0	0.113	0.005	0	0	0.079	0	0.002	0.021	0.042	0	0.015	0	0.483	0.015	0.333	0	0	0	0.043	0	0	0.000	0.532	0.847
GSM1371136	0.037	0	0.015	0	0	0.161	0.033	0	0	0.04	0	0.025	0	0.095	0.022	0.434	0	0	0.046	0.029	0.019	0.039	0.002	0.338	0.947
GSM1371137	0	0.047	0.007	0	0.019	0.013	0	0.013	0	0.06	0	0.006	0	0.08	0.026	0.656	0	0	0	0.034	0	0.04	0.000	0.596	0.804
GSM1371138	0	0.11	0	0	0	0.263	0.053	0.007	0	0.005	0.042	0	0	0.17	0.04	0.249	0	0	0.009	0.052	0	0	0.112	0.114	1.039
GSM1371139	0	0.07	0.006	0	0	0.043	0.003	0.054	0.007	0.028	0	0.023	0	0.353	0.01	0.37	0	0.01	0	0.045	0	0	0.000	0.706	0.729
GSM1371140	0	0.055	0.007	0	0.022	0.027	0.031	0	0.001	0.052	0.025	0	0	0.453	0.011	0.204	0	0	0	0.035	0.002	0.075	0.000	0.753	0.684
GSM2500019	0	0	0.104	0.009	0.023	0.22	0	0	0.163	0	0	0.087	0.054	0.167	0.027	0	0.077	0	0.069	0	0	0	0.311	0.052	1.067
GSM2500020	0.016	0	0.091	0.248	0	0.112	0	0.007	0.036	0	0	0.135	0	0.184	0.034	0.041	0	0.033	0	0.019	0	0.044	0.153	0.091	1.073
GSM2500021	0.23	0	0	0	0.016	0.249	0	0.006	0.045	0	0	0.113	0.016	0.122	0.063	0	0	0	0	0.093	0	0	0.509	0.022	1.103
GSM804405	0.092	0.096	0.099	0	0	0.338	0	0	0	0	0.111	0.008	0.069	0.128	0.024	0	0	0	0	0.039	0	0	0.104	0.119	1.050
GSM804406	0.245	0	0	0	0	0.306	0	0	0.041	0.016	0.062	0	0	0.095	0.061	0	0.042	0	0	0.109	0	0.023	0.526	0.020	1.091
GSM804407	0.093	0.018	0.013	0	0.103	0.37	0	0	0	0.006	0	0	0	0.121	0	0.138	0.017	0.02	0.01	0.064	0	0.027	0.078	0.134	1.039
GSM866168	0.256	0	0.008	0	0	0.453	0	0	0.04	0	0.061	0.013	0.045	0.047	0.013	0.071	0	0	0.014	0	0	0.001	0.394	0.035	1.100
GSM866169	0.139	0	0	0	0.153	0.268	0	0	0	0	0.051	0	0.074	0.152	0.02	0	0	0	0	0.143	0	0	0.424	0.032	1.084
GSM866170	0.24	0	0.027	0	0.035	0.225	0	0.09	0	0	0.082	0	0	0.076	0.061	0.025	0	0	0	0.138	0	0	0.468	0.026	1.093
GSM866171	0.112	0	0	0	0.095	0.281	0	0	0	0	0.025	0.039	0	0.215	0.005	0.107	0	0	0.113	0.008	0	0	0.249	0.064	1.064
GSM866172	0.171	0	0.023	0	0.072	0.4	0	0	0	0	0.018	0	0	0.065	0.024	0.102	0	0.009	0	0.116	0	0	0.379	0.037	1.086
GSM866173	0.244	0	0.002	0	0	0.33	0	0	0	0	0.041	0	0	0.076	0.056	0.033	0	0	0	0.167	0.011	0	0.324	0.049	1.085

Figure S3. Tumor-infiltrating immune cell profiles in osteosarcoma. NK, natural killer; RMSE, root-mean-squared error.

Table SI. Characteristics of included individuals and download links.

Group	GSM_No	GEO_accession	Gender	Age, years	Histotype	Response to preoperative chemotherapy	Supplementary_file
OS	GSM2331334	GSE87437	NA	16	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331334/suppl/GSM2331334_itcc0071.cel.gz
OS	GSM2331335	GSE87437	NA	17	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331335/suppl/GSM2331335_itcc0074.cel.gz
OS	GSM2331336	GSE87437	NA	15	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331336/suppl/GSM2331336_itcc0076.cel.gz
OS	GSM2331337	GSE87437	NA	14	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331337/suppl/GSM2331337_itcc0077.cel.gz
OS	GSM2331338	GSE87437	NA	12	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331338/suppl/GSM2331338_itcc0078.cel.gz
OS	GSM2331339	GSE87437	NA	15	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331339/suppl/GSM2331339_itcc0079.cel.gz
OS	GSM2331340	GSE87437	NA	9	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331340/suppl/GSM2331340_itcc0081.cel.gz
OS	GSM2331341	GSE87437	NA	9	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331341/suppl/GSM2331341_itcc0085.cel.gz
OS	GSM2331342	GSE87437	NA	14	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331342/suppl/GSM2331342_itcc0087.cel.gz
OS	GSM2331343	GSE87437	NA	13	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331343/suppl/GSM2331343_itcc0090.cel.gz
OS	GSM2331344	GSE87437	NA	8	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331344/suppl/GSM2331344_itcc0091.cel.gz
OS	GSM2331345	GSE87437	NA	5	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331345/suppl/GSM2331345_itcc0094.cel.gz
OS	GSM2331346	GSE87437	NA	20	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331346/suppl/GSM2331346_itcc0099.cel.gz
OS	GSM2331347	GSE87437	NA	22	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331347/suppl/GSM2331347_itcc0486.cel.gz
OS	GSM2331348	GSE87437	NA	19	Fibroblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331348/suppl/GSM2331348_itcc0488.cel.gz
OS	GSM2331349	GSE87437	NA	15	Telangiectatic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331349/suppl/GSM2331349_itcc0493.cel.gz
OS	GSM2331350	GSE87437	NA	18	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331350/suppl/GSM2331350_itcc0495.cel.gz
OS	GSM2331351	GSE87437	NA	14	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331351/suppl/GSM2331351_itcc0499.cel.gz
OS	GSM2331352	GSE87437	NA	11	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331352/suppl/GSM2331352_itcc0500.cel.gz

Table SI. Continued.

Group	GSM_No	GEO_accession	Gender	Age, years	Histotype	Response to preoperative chemotherapy	Supplementary_file
OS	GSM2331353	GSE87437	NA	22	Telangiectatic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331353/suppl/GSM2331353_itcc0503.cel.gz
OS	GSM2331354	GSE87437	NA	15	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM2331nnn/GSM2331354/suppl/GSM2331354_itcc0505.cel.gz
OS	GSM371114	GSE14827	Male	19	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371114/suppl/GSM371114.CEL.gz
OS	GSM371115	GSE14827	Female	9	Telangiectatic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371115/suppl/GSM371115.CEL.gz
OS	GSM371116	GSE14827	Female	13	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371116/suppl/GSM371116.CEL.gz
OS	GSM371117	GSE14827	Male	14	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371117/suppl/GSM371117.CEL.gz
OS	GSM371118	GSE14827	Male	12	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371118/suppl/GSM371118.CEL.gz
OS	GSM371119	GSE14827	Female	14	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371119/suppl/GSM371119.CEL.gz
OS	GSM371120	GSE14827	Male	13	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/SM371120/suppl/GSM371120.CEL.gz
OS	GSM371121	GSE14827	Male	19	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371121/suppl/GSM371121.CEL.gz
OS	GSM371122	GSE14827	Female	15	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371122/suppl/GSM371122.CEL.gz
OS	GSM371123	GSE14827	Female	9	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371123/suppl/GSM371123.CEL.gz
OS	GSM371124	GSE14827	Male	19	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371124/suppl/GSM371124.CEL.gz
OS	GSM371125	GSE14827	Female	19	Fibroblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371125/suppl/GSM371125.CEL.gz
OS	GSM371126	GSE14827	Male	18	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371126/suppl/GSM371126.CEL.gz
OS	GSM371127	GSE14827	Male	21	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371127/suppl/GSM371127.CEL.gz
OS	GSM371128	GSE14827	Male	18	Chondroblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371128/suppl/GSM371128.CEL.gz
OS	GSM371129	GSE14827	Male	14	Chondroblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371129/suppl/GSM371129.CEL.gz
OS	GSM371130	GSE14827	Male	8	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371130/suppl/GSM371130.CEL.gz

Table SI. Continued.

Group	GSM_No	GEO_accession	Gender	Age, years	Histotype	Response to preoperative chemotherapy	Supplementary_file
OS	GSM371131	GSE14827	Male	24	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371131/suppl/GSM371131.CEL.gz
OS	GSM371132	GSE14827	Female	8	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371132/suppl/GSM371132.CEL.gz
OS	GSM371133	GSE14827	Male	14	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371133/suppl/GSM371133.CEL.gz
OS	GSM371134	GSE14827	Female	38	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371134/suppl/GSM371134.CEL.gz
OS	GSM371135	GSE14827	Male	12	Chondroblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371135/suppl/GSM371135.CEL.gz
OS	GSM371136	GSE14827	Female	20	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371136/suppl/GSM371136.CEL.gz
OS	GSM371137	GSE14827	Male	16	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371137/suppl/GSM371137.CEL.gz
OS	GSM371138	GSE14827	Male	25	Osteoblastic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371138/suppl/GSM371138.CEL.gz
OS	GSM371139	GSE14827	Female	15	Telangiectatic	Good	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371139/suppl/GSM371139.CEL.gz
OS	GSM371140	GSE14827	Male	13	Osteoblastic	Poor	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM371nnn/GSM371140/suppl/GSM371140.CEL.gz
Control	GSM250019	GSE18043	Male	67	NA	NA	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM250nnn/GSM250019/suppl/GSM250019.CEL.gz
Control	GSM250020	GSE18043	Male	72	NA	NA	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM250nnn/GSM250020/suppl/GSM250020.CEL.gz
Control	GSM250021	GSE18043	Female	74	NA	NA	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM250nnn/GSM250021/suppl/GSM250021.CEL.gz
Control	GSM894405	GSE36474	Female	50	NA	NA	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM894nnn/GSM894405/suppl/GSM894405_HD1.CEL.gz
Control	GSM894406	GSE36474	Female	45	NA	NA	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM894nnn/GSM894406/suppl/GSM894406_HD2.CEL.gz
Control	GSM894407	GSE36474	Male	58	NA	NA	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM894nnn/GSM894407/suppl/GSM894407_HD3.CEL.gz
Control	GSM866168	GSE35331	Male	55	NA	NA	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM866nnn/GSM866168/suppl/GSM866168_HD-MSC1.CEL.gz
Control	GSM866169	GSE35331	Male	53	NA	NA	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM866nnn/GSM866169/suppl/GSM866169_HD-MSC2.CEL.gz
Control	GSM866170	GSE35331	Male	30	NA	NA	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM866nnn/GSM866170/suppl/GSM866170_HD-MSC3.CEL.gz

Table SI. Continued.

Group	GSM_No	GEO_accession	Gender	Age, years	Histotype	Response to preoperative chemotherapy	Supplementary_file
Control	GSM866171	GSE35331	Female	68	NA	NA	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM866nnn/GSM866171/suppl/GSM866171_HD-MSC4.CEL.gz
Control	GSM866172	GSE35331	Male	53	NA	NA	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM866nnn/GSM866172/suppl/GSM866172_HD-MSC5.CEL.gz
Control	GSM866173	GSE35331	Female	78	NA	NA	ftp://ftp.ncbi.nlm.nih.gov/geo/samples/GSM866nnn/GSM866173/suppl/GSM866173_HD-MSC6.CEL.gz

OS, osteosarcoma; NA, not available.

Table SII. Full list of DEGs identified in OS.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
CPE	6.01	9.77	13.95	$1.40x10^{-20}$	$8.46x10^{-17}$	36.52
MMP9	5.96	10.45	9.99	$1.95x10^{-14}$	$2.20x10^{-11}$	22.57
SPARCL1	5.93	8.60	13.18	$1.91x10^{-19}$	$8.97x10^{-16}$	33.95
S100A4	5.92	10.98	23.45	$4.21x10^{-32}$	$2.97x10^{-27}$	62.16
CA2	5.60	8.08	9.62	$8.05x10^{-14}$	$7.64x10^{-11}$	21.17
COL15A1	5.29	8.75	12.64	$1.21x10^{-18}$	$4.67x10^{-15}$	32.13
ACP5	5.19	9.01	7.89	$7.07x10^{-11}$	$2.87x10^{-08}$	14.48
C1QC	5.18	8.93	16.32	$7.49x10^{-24}$	$9.91x10^{-20}$	43.89
MMP13	5.17	8.91	6.80	$5.23x10^{-09}$	$1.22x10^{-06}$	10.24
MRC1	5.00	7.55	15.24	$2.11x10^{-22}$	$1.86x10^{-18}$	40.63
C1QA	4.93	8.47	13.62	$4.13x10^{-20}$	$2.19x10^{-16}$	35.45
TYROBP	4.92	9.02	16.60	$3.21x10^{-24}$	$5.25x10^{-20}$	44.72
IBSP	4.76	9.05	5.79	$2.69x10^{-07}$	$3.79x10^{-05}$	6.37
OMD	4.75	7.74	7.11	$1.56x10^{-09}$	$4.26x10^{-07}$	11.43
ASPN	4.65	7.80	5.86	$2.01x10^{-07}$	$2.96x10^{-05}$	6.65
C1QB	4.64	7.96	13.63	$4.04x10^{-20}$	$2.19x10^{-16}$	35.48
CD14	4.46	8.57	13.63	$4.03x10^{-20}$	$2.19x10^{-16}$	35.48
CPVL	4.41	7.28	13.00	$3.54x10^{-19}$	$1.56x10^{-15}$	33.34
PANX3	4.37	6.83	4.78	$1.15x10^{-05}$	$9.29x10^{-04}$	2.71
LAPTM5	4.32	9.50	16.59	$3.23x10^{-24}$	$5.25x10^{-20}$	44.71
APCDD1	4.28	8.10	8.41	$9.08x10^{-12}$	$4.80x10^{-09}$	16.50
ADGRF5	4.25	7.53	15.59	$7.09x10^{-23}$	$8.34x10^{-19}$	41.70
GPR34	4.24	7.10	13.96	$1.35x10^{-20}$	$8.40x10^{-17}$	36.55
DPT	4.22	8.26	8.26	$1.65x10^{-11}$	$8.03x10^{-09}$	15.91
IFI27	4.18	8.61	9.18	$4.44x10^{-13}$	$3.52x10^{-10}$	19.49
HLA-DRA	4.17	9.96	9.69	$6.23x10^{-14}$	$6.25x10^{-11}$	21.43
SPP1	4.16	7.44	13.58	$4.74x10^{-20}$	$2.45x10^{-16}$	35.32
HEY1	4.16	8.75	10.56	$2.27x10^{-15}$	$3.30x10^{-12}$	24.70
EGFL6	4.12	7.23	5.30	$1.69x10^{-06}$	$1.82x10^{-04}$	4.58
OGN	4.10	6.88	4.94	$6.56x10^{-06}$	$5.74x10^{-04}$	3.26
EVI2A	4.10	8.54	14.95	$5.24x10^{-22}$	$3.97x10^{-18}$	39.74
SLC40A1	4.07	8.26	18.43	$1.56x10^{-26}$	$4.13x10^{-22}$	49.89
PRSS35	4.06	7.37	7.09	$1.69x10^{-09}$	$4.58x10^{-07}$	11.35
CXCR4	4.03	7.85	15.45	$1.10x10^{-22}$	$1.23x10^{-18}$	41.26
CD93	4.02	8.06	16.86	$1.45x10^{-24}$	$3.08x10^{-20}$	45.48
CA3	4.02	6.61	4.79	$1.11x10^{-05}$	$9.00x10^{-04}$	2.75
MS4A7	3.96	7.33	13.29	$1.29x10^{-19}$	$6.45x10^{-16}$	34.34
HBB	3.95	8.72	7.74	$1.26x10^{-10}$	$4.73x10^{-08}$	13.91
LPL	3.90	8.14	8.98	$9.59x10^{-13}$	$6.86x10^{-10}$	18.73
RNASE6	3.87	7.11	12.54	$1.74x10^{-18}$	$6.04x10^{-15}$	31.78
GIMAP2	3.81	6.60	10.70	$1.37x10^{-15}$	$2.09x10^{-12}$	25.20
FCER1G	3.80	7.87	10.54	$2.51x10^{-15}$	$3.53x10^{-12}$	24.60
MPEG1	3.79	7.24	11.78	$2.54x10^{-17}$	$6.64x10^{-14}$	29.13
LYZ	3.78	7.19	9.30	$2.84x10^{-13}$	$2.36x10^{-10}$	19.93
MAFB	3.77	10.24	15.37	$1.40x10^{-22}$	$1.48x10^{-18}$	41.03
ANO5	3.76	7.48	5.82	$2.40x10^{-07}$	$3.44x10^{-05}$	6.48
MXRA5	3.75	10.54	9.86	$3.24x10^{-14}$	$3.45x10^{-11}$	22.07
CTSH	3.72	8.69	12.79	$7.11x10^{-19}$	$2.91x10^{-15}$	32.66
SNX10	3.68	7.24	10.02	$1.77x10^{-14}$	$2.00x10^{-11}$	22.67

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
AQP1	3.60	7.86	11.41	$9.81x10^{-17}$	$2.19x10^{-13}$	27.80
ZNF521	3.59	6.64	8.09	$3.24x10^{-11}$	$1.45x10^{-08}$	15.25
FXYD6	3.59	8.23	9.60	$8.91x10^{-14}$	$8.42x10^{-11}$	21.07
LRRN1	3.58	6.26	6.45	$2.07x10^{-08}$	$4.06x10^{-06}$	8.88
MAMDC2	3.58	7.53	7.04	$2.05x10^{-09}$	$5.46x10^{-07}$	11.16
PCDH17	3.58	7.40	14.48	$2.46x10^{-21}$	$1.79x10^{-17}$	38.22
F13A1	3.58	7.83	8.24	$1.75x10^{-11}$	$8.47x10^{-09}$	15.86
SP7	3.55	7.85	5.74	$3.27x10^{-07}$	$4.47x10^{-05}$	6.18
IGDCC4	3.54	7.21	10.33	$5.47x10^{-15}$	$6.94x10^{-12}$	23.83
MAGEA6	3.52	6.16	4.49	$3.25x10^{-05}$	$2.26x10^{-03}$	1.71
GGTA1P	3.47	7.17	11.30	$1.45x10^{-16}$	$2.93x10^{-13}$	27.41
CD163	3.46	7.10	11.74	$2.97x10^{-17}$	$7.57x10^{-14}$	28.98
ITM2A	3.42	7.42	9.17	$4.61x10^{-13}$	$3.61x10^{-10}$	19.45
FGL2	3.41	7.07	9.77	$4.61x10^{-14}$	$4.79x10^{-11}$	21.72
FAT3	3.41	6.65	7.54	$2.87x10^{-10}$	$9.48x10^{-08}$	13.10
VSIG4	3.35	7.58	10.75	$1.13x10^{-15}$	$1.76x10^{-12}$	25.39
INSC	3.35	6.77	5.67	$4.15x10^{-07}$	$5.51x10^{-05}$	5.95
CTSS	3.35	7.39	10.82	$8.58x10^{-16}$	$1.44x10^{-12}$	25.66
EFNA1	3.31	7.27	12.96	$3.97x10^{-19}$	$1.72x10^{-15}$	33.23
GIMAP6	3.25	6.40	11.33	$1.32x10^{-16}$	$2.77x10^{-13}$	27.51
VAMP8	3.24	8.12	9.39	$1.98x10^{-13}$	$1.70x10^{-10}$	20.29
CMPK2	3.17	7.14	7.64	$1.87x10^{-10}$	$6.59x10^{-08}$	13.52
KDR	3.16	7.83	15.31	$1.71x10^{-22}$	$1.65x10^{-18}$	40.84
CD24	3.15	7.85	5.75	$3.07x10^{-07}$	$4.24x10^{-05}$	6.24
GUCY1A1	3.14	6.75	11.14	$2.64x10^{-16}$	$4.99x10^{-13}$	26.82
MGP	3.10	7.36	8.45	$7.93x10^{-12}$	$4.28x10^{-09}$	16.64
TMTC2	3.09	6.84	7.66	$1.76x10^{-10}$	$6.26x10^{-08}$	13.58
HCLS1	3.07	7.50	9.50	$1.31x10^{-13}$	$1.17x10^{-10}$	20.69
MEF2C	3.07	8.26	11.78	$2.61x10^{-17}$	$6.75x10^{-14}$	29.11
A2M	3.06	7.50	24.62	$2.90x10^{-33}$	$6.13x10^{-28}$	64.69
CXCL10	3.05	7.27	5.67	$4.19x10^{-07}$	$5.56x10^{-05}$	5.94
ENPEP	3.01	5.99	7.89	$7.21x10^{-11}$	$2.92x10^{-08}$	14.46
GMFG	3.00	8.06	10.17	$1.01x10^{-14}$	$1.21x10^{-11}$	23.22
GUCY1B1	2.99	7.22	12.57	$1.56x10^{-18}$	$5.61x10^{-15}$	31.88
CADM1	2.99	7.02	11.08	$3.29x10^{-16}$	$6.01x10^{-13}$	26.61
SELENOP	2.99	6.99	14.97	$5.00x10^{-22}$	$3.92x10^{-18}$	39.78
OLFML2B	2.98	10.23	9.67	$6.62x10^{-14}$	$6.58x10^{-11}$	21.37
TM4SF18	2.97	6.04	14.04	$1.05x10^{-20}$	$6.71x10^{-17}$	36.80
TNFSF13B	2.96	6.94	7.56	$2.57x10^{-10}$	$8.62x10^{-08}$	13.21
PMAIP1	2.96	7.99	9.11	$5.80x10^{-13}$	$4.42x10^{-10}$	19.22
CSF1R	2.95	8.60	9.38	$2.03x10^{-13}$	$1.74x10^{-10}$	20.26
CCR1	2.95	7.24	9.07	$6.83x10^{-13}$	$5.09x10^{-10}$	19.06
PLVAP	2.94	7.81	11.44	$8.91x10^{-17}$	$2.01x10^{-13}$	27.90
PLBD1	2.93	7.54	8.72	$2.69x10^{-12}$	$1.69x10^{-09}$	17.71
EVI2B	2.92	7.22	8.77	$2.20x10^{-12}$	$1.41x10^{-09}$	17.90
PDGFD	2.91	7.45	7.96	$5.33x10^{-11}$	$2.27x10^{-08}$	14.76
SHTN1	2.91	7.24	8.42	$8.89x10^{-12}$	$4.71x10^{-09}$	16.53
MNDA	2.90	6.06	7.68	$1.61x10^{-10}$	$5.80x10^{-08}$	13.67
GPNMB	2.90	8.45	8.45	$7.93x10^{-12}$	$4.28x10^{-09}$	16.64

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
FTX	2.90	7.97	10.70	$1.35x10^{-15}$	$2.07x10^{-12}$	25.22
TNFSF10	2.89	6.42	6.99	$2.50x10^{-09}$	$6.46x10^{-07}$	10.96
CDH5	2.85	6.78	11.36	$1.20x10^{-16}$	$2.56x10^{-13}$	27.60
GIMAP7	2.83	6.06	6.73	$7.04x10^{-09}$	$1.60x10^{-06}$	9.94
CYYR1	2.82	6.38	10.73	$1.20x10^{-15}$	$1.85x10^{-12}$	25.33
IL10RA	2.80	6.81	8.01	$4.34x10^{-11}$	$1.88x10^{-08}$	14.96
ADAP2	2.79	7.37	11.99	$1.22x10^{-17}$	$3.31x10^{-14}$	29.86
FCGR1B	2.79	6.32	8.36	$1.10x10^{-11}$	$5.65x10^{-09}$	16.32
CD55	2.76	7.71	7.60	$2.27x10^{-10}$	$7.74x10^{-08}$	13.33
MS4A4A	2.75	6.58	9.65	$7.22x10^{-14}$	$7.02x10^{-11}$	21.28
CXCL14	2.74	6.37	5.06	$4.18x10^{-06}$	$3.93x10^{-04}$	3.69
COL24A1	2.73	6.59	5.95	$1.42x10^{-07}$	$2.19x10^{-05}$	7.00
AOC3	2.72	6.48	7.35	$5.93x10^{-10}$	$1.81x10^{-07}$	12.38
PECAM1	2.70	6.97	13.92	$1.53x10^{-20}$	$9.01x10^{-17}$	36.43
NPTX2	2.69	6.65	4.80	$1.09x10^{-05}$	$8.90x10^{-04}$	2.76
GPR183	2.68	7.01	6.72	$7.28x10^{-09}$	$1.64x10^{-06}$	9.91
RGS5	2.68	6.90	9.95	$2.31x10^{-14}$	$2.56x10^{-11}$	22.41
IFI44L	2.67	8.29	5.21	$2.39x10^{-06}$	$2.44x10^{-04}$	4.24
PTPRD	2.66	6.08	11.33	$1.34x10^{-16}$	$2.78x10^{-13}$	27.49
PTH1R	2.65	7.78	6.16	$6.53x10^{-08}$	$1.12x10^{-05}$	7.76
PDGFRL	2.64	7.30	5.23	$2.23x10^{-06}$	$2.30x10^{-04}$	4.30
HERC5	2.64	6.79	6.53	$1.50x10^{-08}$	$3.05x10^{-06}$	9.20
HLA-DMB	2.61	8.15	8.88	$1.46x10^{-12}$	$9.82x10^{-10}$	18.31
PLA2G7	2.60	6.12	7.15	$1.32x10^{-09}$	$3.66x10^{-07}$	11.59
MS4A6A	2.60	7.03	10.76	$1.08x10^{-15}$	$1.74x10^{-12}$	25.43
CTSK	2.59	11.42	5.46	$9.21x10^{-07}$	$1.09x10^{-04}$	5.17
EMCN	2.57	6.40	8.55	$5.21x10^{-12}$	$3.02x10^{-09}$	17.05
DKFZP586I1420	2.57	7.34	9.55	$1.07x10^{-13}$	$9.79x10^{-11}$	20.89
COLEC12	2.57	9.28	5.90	$1.76x10^{-07}$	$2.62x10^{-05}$	6.79
MX1	2.56	7.98	5.64	$4.72x10^{-07}$	$6.17x10^{-05}$	5.82
HLA-DPA1	2.56	8.72	6.28	$4.10x10^{-08}$	$7.41x10^{-06}$	8.21
RGS1	2.55	5.55	8.57	$4.86x10^{-12}$	$2.85x10^{-09}$	17.12
LY75	2.55	5.47	5.48	$8.84x10^{-07}$	$1.05x10^{-04}$	5.21
RASSF2	2.54	7.17	9.65	$7.23x10^{-14}$	$7.02x10^{-11}$	21.28
RRAGD	2.54	6.66	8.83	$1.78x10^{-12}$	$1.17x10^{-09}$	18.12
COL10A1	2.51	7.77	4.04	$1.54x10^{-04}$	$8.64x10^{-03}$	0.21
ADAMDEC1	2.50	5.55	4.68	$1.64x10^{-05}$	$1.27x10^{-03}$	2.37
UCP2	2.50	7.50	9.33	$2.49x10^{-13}$	$2.09x10^{-10}$	20.06
H2BFS	2.50	7.82	5.88	$1.89x10^{-07}$	$2.79x10^{-05}$	6.72
CCDC3	2.48	8.78	6.95	$2.92x10^{-09}$	$7.39x10^{-07}$	10.81
PLPPR4	2.47	6.08	5.46	$9.22x10^{-07}$	$1.09x10^{-04}$	5.17
TSPAN7	2.46	6.74	5.65	$4.57x10^{-07}$	$5.99x10^{-05}$	5.85
RSAD2	2.45	6.16	4.63	$1.97x10^{-05}$	$1.48x10^{-03}$	2.19
CCDC102B	2.44	5.50	7.31	$7.05x10^{-10}$	$2.13x10^{-07}$	12.21
SAT1	2.44	10.77	11.39	$1.05x10^{-16}$	$2.30x10^{-13}$	27.73
KCNJ2	2.44	8.02	6.56	$1.34x10^{-08}$	$2.76x10^{-06}$	9.31
REEP1	2.44	6.61	5.49	$8.30x10^{-07}$	$1.00x10^{-04}$	5.27
HEY2	2.43	6.66	7.93	$6.01x10^{-11}$	$2.49x10^{-08}$	14.64
PELI1	2.43	6.53	9.66	$7.01x10^{-14}$	$6.90x10^{-11}$	21.31

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
GIMAP4	2.43	7.06	8.78	$2.10x10^{-12}$	$1.36x10^{-09}$	17.95
PODXL	2.43	8.09	9.71	$5.89x10^{-14}$	$5.97x10^{-11}$	21.48
SUCNR1	2.43	6.19	5.68	$4.02x10^{-07}$	$5.37x10^{-05}$	5.98
CD36	2.42	6.02	7.72	$1.40x10^{-10}$	$5.18x10^{-08}$	13.81
FAM129A	2.42	7.92	5.96	$1.38x10^{-07}$	$2.13x10^{-05}$	7.02
CCL8	2.41	6.29	5.09	$3.76x10^{-06}$	$3.61x10^{-04}$	3.80
TCIM	2.41	4.77	6.62	$1.08x10^{-08}$	$2.33x10^{-06}$	9.52
LOC100996740	2.41	7.43	8.09	$3.15x10^{-11}$	$1.42x10^{-08}$	15.28
CLEC4A	2.40	6.30	6.98	$2.55x10^{-09}$	$6.58x10^{-07}$	10.94
BLNK	2.38	5.57	7.95	$5.66x10^{-11}$	$2.36x10^{-08}$	14.70
LRRN3	2.38	7.46	5.83	$2.29x10^{-07}$	$3.31x10^{-05}$	6.53
GZMA	2.36	5.63	4.08	$1.36x10^{-04}$	$7.74x10^{-03}$	0.34
BMP2	2.36	6.84	5.47	$8.90x10^{-07}$	$1.06x10^{-04}$	5.20
CRISPLD1	2.36	8.22	4.31	$6.05x10^{-05}$	$3.87x10^{-03}$	1.11
CLK1	2.35	8.16	10.24	$7.78x10^{-15}$	$9.53x10^{-12}$	23.48
ISG15	2.35	9.61	6.20	$5.44x10^{-08}$	$9.55x10^{-06}$	7.94
GPM6B	2.34	6.80	7.42	$4.51x10^{-10}$	$1.42x10^{-07}$	12.65
DTX4	2.33	7.67	6.20	$5.47x10^{-08}$	$9.60x10^{-06}$	7.93
FPR3	2.32	6.12	10.04	$1.64x10^{-14}$	$1.88x10^{-11}$	22.74
APOC1	2.31	8.82	7.52	$3.11x10^{-10}$	$1.02x10^{-07}$	13.02
LYN	2.30	7.48	9.21	$4.02x10^{-13}$	$3.23x10^{-10}$	19.58
CTSC	2.28	8.21	8.12	$2.90x10^{-11}$	$1.32x10^{-08}$	15.36
ARHGDIB	2.28	8.19	12.46	$2.31x10^{-18}$	$7.52x10^{-15}$	31.50
COL18A1	2.28	7.09	7.72	$1.39x10^{-10}$	$5.17x10^{-08}$	13.81
EPB41L3	2.28	5.72	7.42	$4.53x10^{-10}$	$1.42x10^{-07}$	12.64
GHR	2.28	7.39	6.24	$4.75x10^{-08}$	$8.47x10^{-06}$	8.07
CCDC152	2.28	9.88	9.83	$3.65x10^{-14}$	$3.84x10^{-11}$	21.96
PLTP	2.26	8.13	6.25	$4.58x10^{-08}$	$8.23x10^{-06}$	8.10
ZNF302	2.26	7.42	8.90	$1.35x10^{-12}$	$9.27x10^{-10}$	18.39
RCAN2	2.25	8.25	5.21	$2.40x10^{-06}$	$2.45x10^{-04}$	4.23
SHOX2	2.24	6.70	9.66	$7.04x10^{-14}$	$6.90x10^{-11}$	21.31
PTPRC	2.24	5.35	9.58	$9.68x10^{-14}$	$9.07x10^{-11}$	20.99
HIST1H1C	2.24	8.18	4.84	$9.15x10^{-06}$	$7.69x10^{-04}$	2.93
NPNT	2.22	5.79	9.83	$3.69x10^{-14}$	$3.87x10^{-11}$	21.94
LINC00597	2.22	5.68	6.49	$1.78x10^{-08}$	$3.54x10^{-06}$	9.03
MTUS1	2.22	6.13	9.01	$8.53x10^{-13}$	$6.14x10^{-10}$	18.84
HCK	2.22	6.31	7.95	$5.61x10^{-11}$	$2.36x10^{-08}$	14.71
ABHD3	2.21	7.62	10.78	$1.01x10^{-15}$	$1.65x10^{-12}$	25.50
THEMIS2	2.21	6.41	8.86	$1.58x10^{-12}$	$1.06x10^{-09}$	18.23
C5AR1	2.21	6.68	7.03	$2.12x10^{-09}$	$5.60x10^{-07}$	11.13
IFIT1	2.20	8.28	4.59	$2.32x10^{-05}$	$1.69x10^{-03}$	2.04
RGS2	2.19	9.41	5.17	$2.82x10^{-06}$	$2.81x10^{-04}$	4.08
CKB	2.19	8.61	4.41	$4.36x10^{-05}$	$2.92x10^{-03}$	1.42
NCF2	2.18	5.75	7.49	$3.51x10^{-10}$	$1.13x10^{-07}$	12.90
CCDC18-AS1	2.18	8.21	8.69	$3.09x10^{-12}$	$1.91x10^{-09}$	17.57
C1orf162	2.18	6.94	7.08	$1.73x10^{-09}$	$4.66x10^{-07}$	11.33
GOLGA8N	2.18	8.64	8.62	$3.99x10^{-12}$	$2.39x10^{-09}$	17.32
CLEC2B	2.16	6.59	8.55	$5.32x10^{-12}$	$3.07x10^{-09}$	17.03
IFITM1	2.15	10.03	5.77	$2.90x10^{-07}$	$4.05x10^{-05}$	6.30

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
DDX60	2.15	7.05	6.92	$3.22x10^{-09}$	$8.00x10^{-07}$	10.71
HLA-DMA	2.15	8.36	6.08	$8.59x10^{-08}$	$1.43x10^{-05}$	7.49
SERPINF1	2.13	10.78	6.09	$8.32x10^{-08}$	$1.39x10^{-05}$	7.52
TAF1D	2.13	7.18	8.33	$1.23x10^{-11}$	$6.25x10^{-09}$	16.20
EDNRA	2.13	7.78	5.57	$6.26x10^{-07}$	$7.81x10^{-05}$	5.54
ALDH1A1	2.13	5.23	5.58	$6.03x10^{-07}$	$7.59x10^{-05}$	5.58
LRRC1	2.12	6.60	8.81	$1.88x10^{-12}$	$1.22x10^{-09}$	18.06
SMOC2	2.11	6.30	6.24	$4.73x10^{-08}$	$8.46x10^{-06}$	8.07
NPL	2.11	6.41	9.26	$3.34x10^{-13}$	$2.74x10^{-10}$	19.77
ST8SIA4	2.11	5.40	9.23	$3.73x10^{-13}$	$3.03x10^{-10}$	19.66
LINC01094	2.10	5.58	9.15	$5.10x10^{-13}$	$3.97x10^{-10}$	19.35
MEGF10	2.10	6.27	6.05	$9.92x10^{-08}$	$1.61x10^{-05}$	7.35
PIK3AP1	2.08	5.74	10.35	$5.06x10^{-15}$	$6.54x10^{-12}$	23.91
FMR1	2.08	8.61	10.12	$1.22x10^{-14}$	$1.43x10^{-11}$	23.04
HILPDA	2.08	8.58	6.00	$1.18x10^{-07}$	$1.87x10^{-05}$	7.18
CLIC2	2.08	5.07	6.55	$1.43x10^{-08}$	$2.91x10^{-06}$	9.25
TRMT13	2.07	6.68	8.29	$1.46x10^{-11}$	$7.24x10^{-09}$	16.04
PPEF1	2.06	6.34	4.79	$1.12x10^{-05}$	$9.07x10^{-04}$	2.74
ALOX5AP	2.05	6.98	6.57	$1.27x10^{-08}$	$2.65x10^{-06}$	9.36
HIST1H2AC	2.05	8.88	4.60	$2.23x10^{-05}$	$1.64x10^{-03}$	2.07
AIF1	2.04	7.72	10.29	$6.36x10^{-15}$	$8.01x10^{-12}$	23.68
CSF2RB	2.04	6.21	5.08	$3.93x10^{-06}$	$3.73x10^{-04}$	3.75
RCSD1	2.03	5.72	6.15	$6.78x10^{-08}$	$1.16x10^{-05}$	7.72
ARHGEF6	2.02	8.92	12.35	$3.43x10^{-18}$	$1.05x10^{-14}$	31.11
RGCC	2.02	5.24	15.31	$1.71x10^{-22}$	$1.65x10^{-18}$	40.83
LY86	2.01	7.26	8.39	$1.00x10^{-11}$	$5.21x10^{-09}$	16.41
AIM2	2.01	6.65	3.99	$1.80x10^{-04}$	$9.80x10^{-03}$	0.07
SLC7A7	2.01	8.22	8.98	$9.77x10^{-13}$	$6.94x10^{-10}$	18.71
ZNF267	1.99	7.08	8.79	$2.08x10^{-12}$	$1.35x10^{-09}$	17.96
SLC22A15	1.98	6.43	4.92	$6.92x10^{-06}$	$6.03x10^{-04}$	3.20
C3AR1	1.98	7.97	9.20	$4.18x10^{-13}$	$3.34x10^{-10}$	19.55
GSAP	1.98	6.55	5.68	$4.03x10^{-07}$	$5.38x10^{-05}$	5.97
CASP1	1.97	6.74	6.81	$4.99x10^{-09}$	$1.18x10^{-06}$	10.28
LUM	1.97	10.58	5.92	$1.65x10^{-07}$	$2.49x10^{-05}$	6.85
APOLD1	1.96	8.13	7.19	$1.15x10^{-09}$	$3.27x10^{-07}$	11.73
IFI44	1.96	7.55	6.48	$1.83x10^{-08}$	$3.62x10^{-06}$	9.01
THBD	1.96	6.26	7.69	$1.58x10^{-10}$	$5.73x10^{-08}$	13.69
RTN1	1.96	5.43	7.00	$2.39x10^{-09}$	$6.20x10^{-07}$	11.01
ANKRD46	1.93	8.09	7.02	$2.21x10^{-09}$	$5.81x10^{-07}$	11.08
N4BP2	1.93	6.80	7.67	$1.69x10^{-10}$	$6.03x10^{-08}$	13.62
ROMO1	1.93	8.89	8.03	$4.09x10^{-11}$	$1.79x10^{-08}$	15.02
GPRASP1	1.93	6.20	6.06	$9.32x10^{-08}$	$1.53x10^{-05}$	7.41
PDK3	1.92	6.80	8.82	$1.79x10^{-12}$	$1.18x10^{-09}$	18.11
CALCRL	1.92	5.60	8.29	$1.47x10^{-11}$	$7.28x10^{-09}$	16.03
ELMO1	1.91	5.67	8.13	$2.73x10^{-11}$	$1.25x10^{-08}$	15.42
LRP4	1.91	7.46	4.57	$2.45x10^{-05}$	$1.78x10^{-03}$	1.98
LCP1	1.91	7.84	6.01	$1.16x10^{-07}$	$1.85x10^{-05}$	7.19
TMEM205	1.90	8.36	10.51	$2.77x10^{-15}$	$3.80x10^{-12}$	24.50
MITF	1.90	6.00	12.29	$4.21x10^{-18}$	$1.24x10^{-14}$	30.91

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
TNFRSF11A	1.90	5.72	4.95	$6.25x10^{-06}$	$5.51x10^{-04}$	3.30
SYTL2	1.90	8.04	7.71	$1.44x10^{-10}$	$5.34x10^{-08}$	13.77
FGF13	1.89	5.50	4.35	$5.24x10^{-05}$	$3.43x10^{-03}$	1.25
FAM213A	1.89	7.00	7.14	$1.38x10^{-09}$	$3.80x10^{-07}$	11.55
FCGR2B	1.89	5.45	5.47	$9.03x10^{-07}$	$1.07x10^{-04}$	5.19
RAB38	1.88	6.66	5.20	$2.50x10^{-06}$	$2.53x10^{-04}$	4.19
PDZD2	1.88	5.57	7.43	$4.29x10^{-10}$	$1.36x10^{-07}$	12.70
PABPN1	1.87	7.45	7.80	$9.91x10^{-11}$	$3.86x10^{-08}$	14.15
SELL	1.87	5.06	4.50	$3.12x10^{-05}$	$2.18x10^{-03}$	1.75
TMEM176A	1.86	7.55	5.47	$8.97x10^{-07}$	$1.06x10^{-04}$	5.19
GUCY1A2	1.86	5.56	7.80	$1.01x10^{-10}$	$3.89x10^{-08}$	14.13
NOTCH2NL	1.86	11.12	9.02	$8.33x10^{-13}$	$6.02x10^{-10}$	18.86
PMS2P5	1.86	5.41	7.74	$1.28x10^{-10}$	$4.76x10^{-08}$	13.90
LY96	1.85	8.69	6.19	$5.63x10^{-08}$	$9.83x10^{-06}$	7.90
RNASE1	1.85	6.24	13.14	$2.15x10^{-19}$	$9.90x10^{-16}$	33.83
CD86	1.85	5.88	8.68	$3.20x10^{-12}$	$1.97x10^{-09}$	17.54
SMAD1	1.85	7.68	8.70	$2.88x10^{-12}$	$1.80x10^{-09}$	17.64
HIST1H2BC	1.85	6.02	4.30	$6.39x10^{-05}$	$4.05x10^{-03}$	1.06
STON1	1.85	8.29	6.35	$3.05x10^{-08}$	$5.74x10^{-06}$	8.50
APLNR	1.84	7.24	6.88	$3.83x10^{-09}$	$9.32x10^{-07}$	10.54
ROBO1	1.83	9.57	8.63	$3.83x10^{-12}$	$2.31x10^{-09}$	17.36
STON2	1.83	5.25	7.12	$1.50x10^{-09}$	$4.12x10^{-07}$	11.47
LINC00623	1.83	8.88	8.69	$3.07x10^{-12}$	$1.91x10^{-09}$	17.58
HLA-DQB1	1.83	6.24	6.97	$2.73x10^{-09}$	$6.99x10^{-07}$	10.88
ATP6V0D2	1.82	5.88	4.31	$6.04x10^{-05}$	$3.86x10^{-03}$	1.11
PTPN13	1.82	7.02	7.03	$2.12x10^{-09}$	$5.60x10^{-07}$	11.12
PI15	1.82	5.65	5.24	$2.16x10^{-06}$	$2.24x10^{-04}$	4.34
ESAM	1.82	6.63	9.50	$1.30x10^{-13}$	$1.17x10^{-10}$	20.70
NNT-AS1	1.81	6.92	6.86	$4.16x10^{-09}$	$1.01x10^{-06}$	10.46
PLEKHG1	1.81	5.32	6.79	$5.38x10^{-09}$	$1.26x10^{-06}$	10.21
CD74	1.81	7.52	8.18	$2.21x10^{-11}$	$1.05x10^{-08}$	15.62
PARP12	1.81	7.25	6.76	$6.18x10^{-09}$	$1.42x10^{-06}$	10.07
MGST2	1.81	8.07	10.76	$1.10x10^{-15}$	$1.75x10^{-12}$	25.42
DDIT4	1.81	9.94	4.83	$9.71x10^{-06}$	$8.08x10^{-04}$	2.88
SYK	1.80	5.97	8.30	$1.41x10^{-11}$	$7.01x10^{-09}$	16.07
BAZ1A	1.80	7.96	9.49	$1.34x10^{-13}$	$1.18x10^{-10}$	20.67
RBP7	1.80	6.37	5.22	$2.32x10^{-06}$	$2.39x10^{-04}$	4.26
SLA	1.80	7.27	8.52	$5.98x10^{-12}$	$3.37x10^{-09}$	16.92
SNHG19	1.79	8.60	5.67	$4.30x10^{-07}$	$5.70x10^{-05}$	5.91
RLF	1.79	8.03	11.13	$2.73x10^{-16}$	$5.07x10^{-13}$	26.79
PPT1	1.79	11.01	12.03	$1.06x10^{-17}$	$2.95x10^{-14}$	29.99
TRPS1	1.79	7.67	8.55	$5.22x10^{-12}$	$3.02x10^{-09}$	17.05
C8orf59	1.79	7.88	7.92	$6.19x10^{-11}$	$2.53x10^{-08}$	14.61
C16orf54	1.78	4.32	4.29	$6.43x10^{-05}$	$4.07x10^{-03}$	1.05
IFIT3	1.78	7.97	4.63	$1.98x10^{-05}$	$1.48x10^{-03}$	2.19
HLA-DPB1	1.77	7.24	7.53	$2.99x10^{-10}$	$9.84x10^{-08}$	13.06
FCGR2A	1.77	5.26	11.71	$3.30x10^{-17}$	$8.33x10^{-14}$	28.87
EDNRB	1.77	5.99	6.33	$3.32x10^{-08}$	$6.17x10^{-06}$	8.42
SOX7	1.77	4.88	8.14	$2.61x10^{-11}$	$1.20x10^{-08}$	15.46

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
GCH1	1.77	6.25	4.26	$7.36x10^{-05}$	$4.56x10^{-03}$	0.92
SLC27A3	1.76	7.15	7.54	$2.79x10^{-10}$	$9.24x10^{-08}$	13.13
ZNF43	1.76	7.24	8.21	$1.98x10^{-11}$	$9.51x10^{-09}$	15.73
RUBCNL	1.76	5.84	5.63	$4.94x10^{-07}$	$6.42x10^{-05}$	5.77
ENPP2	1.75	9.77	4.80	$1.06x10^{-05}$	$8.69x10^{-04}$	2.79
COL3A1	1.74	10.81	5.81	$2.48x10^{-07}$	$3.53x10^{-05}$	6.45
COL21A1	1.74	7.34	4.92	$7.08x10^{-06}$	$6.14x10^{-04}$	3.18
MYLIP	1.73	7.06	9.41	$1.84x10^{-13}$	$1.59x10^{-10}$	20.36
CRIP1	1.73	8.80	4.09	$1.27x10^{-04}$	$7.34x10^{-03}$	0.40
WWP1	1.73	8.81	6.69	$8.07x10^{-09}$	$1.80x10^{-06}$	9.81
GBP2	1.73	6.95	4.93	$6.82x10^{-06}$	$5.94x10^{-04}$	3.22
AKAP10	1.73	6.59	8.35	$1.16x10^{-11}$	$5.93x10^{-09}$	16.26
ANKRD36B	1.73	7.10	5.49	$8.29x10^{-07}$	$1.00x10^{-04}$	5.27
LINC02256	1.73	6.57	10.51	$2.74x10^{-15}$	$3.79x10^{-12}$	24.51
HIST1H2BD	1.72	7.95	5.43	$1.04x10^{-06}$	$1.20x10^{-04}$	5.05
SOD2	1.72	6.70	5.29	$1.74x10^{-06}$	$1.87x10^{-04}$	4.54
NEURL1B	1.72	7.86	6.55	$1.40x10^{-08}$	$2.86x10^{-06}$	9.27
ENTPD1	1.71	6.06	6.37	$2.88x10^{-08}$	$5.45x10^{-06}$	8.56
LOC100289333	1.71	7.73	9.03	$8.04x10^{-13}$	$5.85x10^{-10}$	18.90
COX6C	1.71	11.77	12.35	$3.38x10^{-18}$	$1.05x10^{-14}$	31.12
LGMN	1.71	9.88	8.30	$1.40x10^{-11}$	$6.99x10^{-09}$	16.08
TNN	1.70	6.40	4.28	$6.73x10^{-05}$	$4.23x10^{-03}$	1.01
TLR2	1.70	6.99	7.68	$1.63x10^{-10}$	$5.86x10^{-08}$	13.65
IFI6	1.70	8.25	4.52	$2.89x10^{-05}$	$2.05x10^{-03}$	1.82
SAMHD1	1.70	7.25	7.09	$1.68x10^{-09}$	$4.54x10^{-07}$	11.36
HENMT1	1.70	7.84	7.24	$9.23x10^{-10}$	$2.70x10^{-07}$	11.94
LINC02475	1.70	5.77	4.31	$6.15x10^{-05}$	$3.92x10^{-03}$	1.09
OFD1	1.69	6.66	8.30	$1.40x10^{-11}$	$6.99x10^{-09}$	16.08
RERG	1.68	6.27	5.21	$2.41x10^{-06}$	$2.46x10^{-04}$	4.23
FNIP2	1.68	7.51	7.19	$1.13x10^{-09}$	$3.22x10^{-07}$	11.75
PM20D2	1.68	6.24	8.72	$2.69x10^{-12}$	$1.69x10^{-09}$	17.71
TMCC3	1.68	5.49	7.81	$9.87x10^{-11}$	$3.85x10^{-08}$	14.15
POGZ	1.68	7.97	11.37	$1.16x10^{-16}$	$2.50x10^{-13}$	27.64
MTF2	1.67	7.31	9.02	$8.26x10^{-13}$	$5.99x10^{-10}$	18.87
BST2	1.67	6.87	3.99	$1.80x10^{-04}$	$9.84x10^{-03}$	0.06
LSM7	1.66	9.86	6.57	$1.31x10^{-08}$	$2.72x10^{-06}$	9.33
TMEM150C	1.65	6.06	5.41	$1.11x10^{-06}$	$1.27x10^{-04}$	4.98
ZNF273	1.65	5.04	7.95	$5.59x10^{-11}$	$2.36x10^{-08}$	14.71
DCHS1	1.65	6.56	7.07	$1.82x10^{-09}$	$4.86x10^{-07}$	11.28
TLR1	1.65	4.94	7.39	$5.05x10^{-10}$	$1.56x10^{-07}$	12.54
CD83	1.65	7.41	7.69	$1.58x10^{-10}$	$5.73x10^{-08}$	13.69
ANGPT2	1.65	5.85	5.69	$3.87x10^{-07}$	$5.21x10^{-05}$	6.01
CCL4	1.65	6.85	5.00	$5.15x10^{-06}$	$4.69x10^{-04}$	3.49
TRAC	1.65	6.50	4.53	$2.79x10^{-05}$	$1.99x10^{-03}$	1.85
TM6SF1	1.64	5.44	7.61	$2.17x10^{-10}$	$7.49x10^{-08}$	13.37
HSPA6	1.64	6.56	5.08	$3.88x10^{-06}$	$3.70x10^{-04}$	3.77
ZNF12	1.64	8.22	7.68	$1.61x10^{-10}$	$5.80x10^{-08}$	13.66
ANKRD10-IT1	1.64	7.93	6.39	$2.63x10^{-08}$	$5.04x10^{-06}$	8.65
GPR65	1.63	6.25	5.74	$3.22x10^{-07}$	$4.42x10^{-05}$	6.19

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
MZT2B	1.63	7.28	7.40	$4.89x10^{-10}$	$1.52x10^{-07}$	12.57
OLFML2A	1.63	8.12	5.85	$2.14x10^{-07}$	$3.12x10^{-05}$	6.59
FGFR3	1.63	5.91	4.37	$5.01x10^{-05}$	$3.30x10^{-03}$	1.29
CPA3	1.62	5.70	4.00	$1.77x10^{-04}$	$9.69x10^{-03}$	0.08
ATP2B1-AS1	1.61	7.19	6.00	$1.19x10^{-07}$	$1.89x10^{-05}$	7.17
CADPS2	1.61	6.93	5.89	$1.79x10^{-07}$	$2.66x10^{-05}$	6.77
HLA-DQA1	1.61	5.30	4.43	$4.08x10^{-05}$	$2.76x10^{-03}$	1.49
SLC29A1	1.61	7.01	4.59	$2.32x10^{-05}$	$1.69x10^{-03}$	2.04
BTN3A2	1.61	7.49	6.89	$3.74x10^{-09}$	$9.13x10^{-07}$	10.57
PCDH7	1.60	5.67	5.50	$8.16x10^{-07}$	$9.87x10^{-05}$	5.29
SLC44A3	1.60	5.22	6.24	$4.68x10^{-08}$	$8.38x10^{-06}$	8.08
RAB31	1.60	11.05	9.27	$3.20x10^{-13}$	$2.64x10^{-10}$	19.81
S1PR1	1.60	7.74	7.15	$1.31x10^{-09}$	$3.63x10^{-07}$	11.60
COX1	1.59	13.91	9.12	$5.74x10^{-13}$	$4.41x10^{-10}$	19.23
PSMD6-AS2	1.59	7.36	5.94	$1.52x10^{-07}$	$2.32x10^{-05}$	6.93
GCA	1.59	6.06	5.72	$3.52x10^{-07}$	$4.78x10^{-05}$	6.11
PLEK	1.59	6.86	5.98	$1.31x10^{-07}$	$2.04x10^{-05}$	7.08
CHD1	1.58	7.96	9.25	$3.36x10^{-13}$	$2.75x10^{-10}$	19.76
SAMSN1	1.58	4.99	6.61	$1.12x10^{-08}$	$2.39x10^{-06}$	9.49
TDO2	1.58	5.04	5.19	$2.55x10^{-06}$	$2.58x10^{-04}$	4.17
SIGLEC1	1.58	6.25	5.03	$4.65x10^{-06}$	$4.30x10^{-04}$	3.59
PTBP2	1.58	6.64	6.99	$2.44x10^{-09}$	$6.32x10^{-07}$	10.99
CDC7	1.57	7.48	4.84	$9.30x10^{-06}$	$7.79x10^{-04}$	2.92
SLAMF8	1.57	5.63	5.49	$8.38x10^{-07}$	$1.01x10^{-04}$	5.26
RNF144A	1.56	5.73	11.44	$8.93x10^{-17}$	$2.01x10^{-13}$	27.89
DANCR	1.56	9.16	5.81	$2.43x10^{-07}$	$3.48x10^{-05}$	6.47
MYO5C	1.56	6.02	6.84	$4.42x10^{-09}$	$1.06x10^{-06}$	10.40
CDKN3	1.56	8.38	4.13	$1.13x10^{-04}$	$6.62x10^{-03}$	0.51
KLHL8	1.56	7.09	9.18	$4.49x10^{-13}$	$3.54x10^{-10}$	19.48
SHPRH	1.56	6.36	6.70	$7.74x10^{-09}$	$1.73x10^{-06}$	9.85
MATN2	1.55	6.54	8.89	$1.38x10^{-12}$	$9.33x10^{-10}$	18.37
LPAR4	1.54	5.44	4.90	$7.36x10^{-06}$	$6.36x10^{-04}$	3.14
TFEC	1.54	4.57	6.81	$5.11x10^{-09}$	$1.20x10^{-06}$	10.26
MGAT4A	1.54	5.08	9.68	$6.55x10^{-14}$	$6.54x10^{-11}$	21.38
ZSWIM6	1.53	9.11	9.16	$4.80x10^{-13}$	$3.75x10^{-10}$	19.41
MBOAT1	1.53	5.88	6.08	$8.86x10^{-08}$	$1.46x10^{-05}$	7.46
SLCO2B1	1.53	6.18	8.39	$1.00x10^{-11}$	$5.22x10^{-09}$	16.41
HIST1H2AE	1.53	4.83	4.27	$6.96x10^{-05}$	$4.36x10^{-03}$	0.98
ZNF266	1.53	8.28	7.77	$1.14x10^{-10}$	$4.37x10^{-08}$	14.01
PLXNC1	1.53	5.44	8.69	$3.03x10^{-12}$	$1.89x10^{-09}$	17.59
LEF1	1.53	5.55	11.93	$1.49x10^{-17}$	$3.93x10^{-14}$	29.66
RNF13	1.53	9.17	8.93	$1.18x10^{-12}$	$8.22x10^{-10}$	18.52
GPX3	1.53	7.79	4.17	$9.83x10^{-05}$	$5.87x10^{-03}$	0.64
LCORL	1.53	6.45	7.88	$7.31x10^{-11}$	$2.94x10^{-08}$	14.45
THSD7A	1.53	5.31	6.67	$8.69x10^{-09}$	$1.92x10^{-06}$	9.74
TPRG1	1.53	5.03	5.55	$6.68x10^{-07}$	$8.24x10^{-05}$	5.48
TMEM51	1.53	6.53	7.51	$3.18x10^{-10}$	$1.04x10^{-07}$	12.99
FABP5	1.52	10.46	6.16	$6.52x10^{-08}$	$1.12x10^{-05}$	7.76
RPL11	1.52	12.71	7.88	$7.26x10^{-11}$	$2.94x10^{-08}$	14.45

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
PLXDC1	1.52	6.28	6.61	$1.10x10^{-08}$	$2.36x10^{-06}$	9.50
SIPA1L2	1.52	6.09	10.15	$1.10x10^{-14}$	$1.29x10^{-11}$	23.14
LYSMD2	1.52	7.94	7.10	$1.61x10^{-09}$	$4.38x10^{-07}$	11.40
ITGB3BP	1.52	8.93	5.42	$1.09x10^{-06}$	$1.25x10^{-04}$	5.01
OAS1	1.52	5.85	4.34	$5.49x10^{-05}$	$3.56x10^{-03}$	1.20
ABCA5	1.52	5.63	6.60	$1.16x10^{-08}$	$2.46x10^{-06}$	9.45
MCTP1	1.52	5.15	6.95	$2.89x10^{-09}$	$7.32x10^{-07}$	10.82
APOE	1.51	6.57	6.33	$3.30x10^{-08}$	$6.15x10^{-06}$	8.42
KHDC4	1.51	7.70	6.31	$3.53x10^{-08}$	$6.49x10^{-06}$	8.36
DTX3L	1.51	8.90	7.68	$1.61x10^{-10}$	$5.80x10^{-08}$	13.67
CTNNB1	1.51	8.28	9.09	$6.26x10^{-13}$	$4.74x10^{-10}$	19.15
DMXL2	1.51	7.00	8.44	$7.96x10^{-12}$	$4.29x10^{-09}$	16.63
PRPF38B	1.51	7.31	7.45	$4.02x10^{-10}$	$1.28x10^{-07}$	12.76
HSPBAP1	1.50	6.22	6.82	$4.89x10^{-09}$	$1.16x10^{-06}$	10.30
SDC2	1.50	10.13	5.68	$4.04x10^{-07}$	$5.39x10^{-05}$	5.97
DLX5	1.50	7.33	4.15	$1.05x10^{-04}$	$6.20x10^{-03}$	0.58
MSANTD2	1.50	7.61	6.87	$3.93x10^{-09}$	$9.55x10^{-07}$	10.52
MTERF3	1.49	8.69	6.09	$8.41x10^{-08}$	$1.40x10^{-05}$	7.51
DNM3OS	1.49	7.29	4.45	$3.69x10^{-05}$	$2.53x10^{-03}$	1.58
KANSL1	1.49	7.88	8.96	$1.05x10^{-12}$	$7.44x10^{-10}$	18.63
GIMAP8	1.49	4.97	9.59	$9.02x10^{-14}$	$8.49x10^{-11}$	21.06
FERMT3	1.49	6.82	5.49	$8.49x10^{-07}$	$1.02x10^{-04}$	5.25
STAG2	1.48	9.67	7.80	$1.01x10^{-10}$	$3.89x10^{-08}$	14.13
DPY19L2	1.48	5.13	4.44	$3.91x10^{-05}$	$2.65x10^{-03}$	1.53
GLUL	1.48	8.04	6.56	$1.33x10^{-08}$	$2.74x10^{-06}$	9.32
IFIT2	1.48	6.63	4.57	$2.46x10^{-05}$	$1.78x10^{-03}$	1.98
KLHL2	1.48	8.28	7.41	$4.77x10^{-10}$	$1.49x10^{-07}$	12.59
CXADR	1.48	5.00	4.67	$1.69x10^{-05}$	$1.30x10^{-03}$	2.34
CHN2	1.47	5.44	6.19	$5.63x10^{-08}$	$9.83x10^{-06}$	7.90
DDX55	1.47	6.21	7.43	$4.44x10^{-10}$	$1.40x10^{-07}$	12.66
PRKDC	1.47	7.04	8.15	$2.58x10^{-11}$	$1.19x10^{-08}$	15.47
FRG1BP	1.47	5.53	6.79	$5.41x10^{-09}$	$1.26x10^{-06}$	10.20
RAPGEF4	1.46	4.27	6.59	$1.20x10^{-08}$	$2.53x10^{-06}$	9.42
RUNX2	1.46	7.14	7.61	$2.17x10^{-10}$	$7.49x10^{-08}$	13.37
ZNF136	1.45	6.94	7.11	$1.56x10^{-09}$	$4.25x10^{-07}$	11.43
IFI16	1.45	9.67	6.32	$3.49x10^{-08}$	$6.45x10^{-06}$	8.37
STEAP4	1.45	5.14	4.53	$2.80x10^{-05}$	$2.00x10^{-03}$	1.85
MRPS28	1.45	8.67	6.53	$1.51x10^{-08}$	$3.06x10^{-06}$	9.20
ITGB2	1.45	6.69	6.48	$1.87x10^{-08}$	$3.70x10^{-06}$	8.98
H1F0	1.45	9.46	6.00	$1.21x10^{-07}$	$1.91x10^{-05}$	7.16
HIST1H2BH	1.45	6.27	4.45	$3.80x10^{-05}$	$2.59x10^{-03}$	1.56
TMEM251	1.45	8.19	6.55	$1.42x10^{-08}$	$2.91x10^{-06}$	9.25
ECSCR	1.45	6.43	5.76	$3.04x10^{-07}$	$4.21x10^{-05}$	6.25
XAF1	1.44	6.64	5.06	$4.10x10^{-06}$	$3.86x10^{-04}$	3.71
TMEM65	1.44	7.25	7.19	$1.14x10^{-09}$	$3.26x10^{-07}$	11.73
NOL8	1.44	8.05	6.58	$1.22x10^{-08}$	$2.56x10^{-06}$	9.40
CD84	1.44	5.66	6.88	$3.86x10^{-09}$	$9.39x10^{-07}$	10.54
GOLGA4	1.44	8.29	8.50	$6.45x10^{-12}$	$3.57x10^{-09}$	16.84
CORO1A	1.43	6.44	4.21	$8.46x10^{-05}$	$5.14x10^{-03}$	0.79

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
MAF	1.43	5.58	8.52	$5.86x10^{-12}$	$3.34x10^{-09}$	16.94
RAI2	1.43	5.90	4.02	$1.62x10^{-04}$	$8.98x10^{-03}$	0.17
IRF7	1.43	7.04	5.29	$1.77x10^{-06}$	$1.90x10^{-04}$	4.53
NCF4	1.43	5.91	5.39	$1.23x10^{-06}$	$1.39x10^{-04}$	4.88
NCKAP1L	1.43	6.19	6.22	$5.11x10^{-08}$	$9.06x10^{-06}$	8.00
FAM96A	1.43	10.20	11.52	$6.65x10^{-17}$	$1.56x10^{-13}$	28.18
FLT1	1.43	5.77	11.16	$2.49x10^{-16}$	$4.80x10^{-13}$	26.88
FAM217B	1.43	7.31	5.86	$2.06x10^{-07}$	$3.02x10^{-05}$	6.63
GPBP1L1	1.43	7.54	10.27	$6.79x10^{-15}$	$8.51x10^{-12}$	23.62
GIMAP1	1.43	5.09	5.93	$1.55x10^{-07}$	$2.36x10^{-05}$	6.91
NAMPT	1.42	7.43	5.48	$8.66x10^{-07}$	$1.03x10^{-04}$	5.23
RALGDS	1.42	7.43	7.68	$1.59x10^{-10}$	$5.78x10^{-08}$	13.68
ACKR3	1.42	5.61	7.10	$1.58x10^{-09}$	$4.30x10^{-07}$	11.42
HMGN3	1.42	10.92	7.42	$4.47x10^{-10}$	$1.41x10^{-07}$	12.66
TSPAN11	1.42	6.81	4.44	$3.83x10^{-05}$	$2.61x10^{-03}$	1.55
LSP1	1.42	7.32	4.45	$3.68x10^{-05}$	$2.53x10^{-03}$	1.59
TMEM176B	1.42	6.00	6.04	$1.04x10^{-07}$	$1.67x10^{-05}$	7.30
FNTB	1.41	4.82	7.81	$9.79x10^{-11}$	$3.82x10^{-08}$	14.16
ATP6V0B	1.41	10.32	7.21	$1.02x10^{-09}$	$2.97x10^{-07}$	11.84
PARM1	1.41	5.83	4.68	$1.66x10^{-05}$	$1.28x10^{-03}$	2.36
HSD17B11	1.41	8.90	7.24	$9.09x10^{-10}$	$2.67x10^{-07}$	11.96
PTPN6	1.41	6.43	5.10	$3.61x10^{-06}$	$3.49x10^{-04}$	3.84
NSUN6	1.41	5.77	7.07	$1.79x10^{-09}$	$4.80x10^{-07}$	11.29
IRF8	1.41	7.41	4.37	$4.96x10^{-05}$	$3.28x10^{-03}$	1.30
CSRP2	1.40	9.80	4.99	$5.41x10^{-06}$	$4.88x10^{-04}$	3.44
GPR160	1.40	5.28	6.98	$2.58x10^{-09}$	$6.66x10^{-07}$	10.93
CD37	1.40	4.93	4.29	$6.54x10^{-05}$	$4.13x10^{-03}$	1.04
ACADM	1.40	9.30	7.18	$1.16x10^{-09}$	$3.29x10^{-07}$	11.72
SRSF11	1.40	7.57	8.30	$1.41x10^{-11}$	$7.01x10^{-09}$	16.07
LINC01355	1.40	5.56	6.58	$1.26x10^{-08}$	$2.62x10^{-06}$	9.38
A2M-AS1	1.40	4.98	8.89	$1.38x10^{-12}$	$9.33x10^{-10}$	18.37
S100A10	1.39	9.44	4.80	$1.06x10^{-05}$	$8.67x10^{-04}$	2.79
CNTN4	1.39	4.88	4.80	$1.07x10^{-05}$	$8.74x10^{-04}$	2.78
RPL29	1.39	12.25	6.49	$1.77x10^{-08}$	$3.53x10^{-06}$	9.04
PAG1	1.39	5.91	4.61	$2.15x10^{-05}$	$1.59x10^{-03}$	2.11
BCL11A	1.39	6.19	4.56	$2.51x10^{-05}$	$1.81x10^{-03}$	1.96
PIK3R1	1.39	7.69	5.13	$3.24x10^{-06}$	$3.16x10^{-04}$	3.94
FCGBP	1.39	6.56	4.23	$7.99x10^{-05}$	$4.90x10^{-03}$	0.84
EBLN2	1.39	6.96	7.70	$1.49x10^{-10}$	$5.47x10^{-08}$	13.74
FZD3	1.38	5.35	5.05	$4.37x10^{-06}$	$4.08x10^{-04}$	3.65
CHD8	1.38	7.53	10.15	$1.08x10^{-14}$	$1.28x10^{-11}$	23.16
MERTK	1.38	5.31	9.71	$5.86x10^{-14}$	$5.97x10^{-11}$	21.49
CD53	1.38	5.68	8.72	$2.67x10^{-12}$	$1.69x10^{-09}$	17.71
RASL12	1.38	6.55	5.17	$2.80x10^{-06}$	$2.80x10^{-04}$	4.08
STXBP6	1.37	5.22	4.52	$2.97x10^{-05}$	$2.10x10^{-03}$	1.79
NFKBIE	1.37	6.62	5.99	$1.23x10^{-07}$	$1.93x10^{-05}$	7.14
MMRN2	1.37	5.20	8.77	$2.20x10^{-12}$	$1.41x10^{-09}$	17.91
EYA1	1.37	5.54	4.96	$6.10x10^{-06}$	$5.40x10^{-04}$	3.33
CKS2	1.36	10.59	4.01	$1.67x10^{-04}$	$9.22x10^{-03}$	0.14

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
TTC32	1.36	6.64	5.38	$1.26x10^{-06}$	$1.41x10^{-04}$	4.86
SDHAF3	1.36	7.03	6.00	$1.21x10^{-07}$	$1.92x10^{-05}$	7.15
ATP6V1G1	1.36	8.75	8.28	$1.49x10^{-11}$	$7.36x10^{-09}$	16.01
TBC1D8	1.36	6.85	6.80	$5.24x10^{-09}$	$1.23x10^{-06}$	10.23
ZNF700	1.36	6.32	5.28	$1.86x10^{-06}$	$1.97x10^{-04}$	4.48
TREM2	1.36	6.99	6.22	$5.12x10^{-08}$	$9.06x10^{-06}$	7.99
ZNF559	1.35	7.74	6.46	$2.03x10^{-08}$	$3.99x10^{-06}$	8.90
MXI1	1.35	9.23	5.47	$8.99x10^{-07}$	$1.07x10^{-04}$	5.19
PDK4	1.35	4.87	5.99	$1.26x10^{-07}$	$1.98x10^{-05}$	7.11
PTGFRN	1.35	7.76	4.41	$4.26x10^{-05}$	$2.87x10^{-03}$	1.45
PLEKHA5	1.35	6.53	12.48	$2.14x10^{-18}$	$7.15x10^{-15}$	31.57
ST6GALNAC3	1.35	4.83	5.11	$3.40x10^{-06}$	$3.30x10^{-04}$	3.89
LPCAT1	1.35	8.70	6.91	$3.35x10^{-09}$	$8.28x10^{-07}$	10.68
MAP3K1	1.34	5.72	8.89	$1.37x10^{-12}$	$9.33x10^{-10}$	18.37
ANAPC16	1.34	8.65	7.17	$1.20x10^{-09}$	$3.38x10^{-07}$	11.69
HPSE	1.34	5.30	6.19	$5.62x10^{-08}$	$9.83x10^{-06}$	7.90
CHST6	1.34	6.01	5.22	$2.33x10^{-06}$	$2.39x10^{-04}$	4.26
UBE2QL1	1.34	6.12	4.25	$7.60x10^{-05}$	$4.70x10^{-03}$	0.89
TAPT1-AS1	1.34	5.13	5.66	$4.39x10^{-07}$	$5.79x10^{-05}$	5.89
CLEC5A	1.34	4.51	4.73	$1.40x10^{-05}$	$1.10x10^{-03}$	2.52
PCDHB14	1.34	5.38	4.23	$7.93x10^{-05}$	$4.87x10^{-03}$	0.85
CLEC14A	1.34	6.66	7.86	$7.97x10^{-11}$	$3.18x10^{-08}$	14.36
P2RY8	1.33	5.49	5.53	$7.09x10^{-07}$	$8.72x10^{-05}$	5.42
ABCA1	1.33	6.27	7.49	$3.45x10^{-10}$	$1.12x10^{-07}$	12.92
RPS6KA3	1.33	8.23	8.31	$1.35x10^{-11}$	$6.80x10^{-09}$	16.11
TMEM38B	1.33	6.95	5.33	$1.54x10^{-06}$	$1.68x10^{-04}$	4.67
EPHA3	1.33	5.18	5.02	$4.85x10^{-06}$	$4.46x10^{-04}$	3.55
HPGDS	1.33	5.49	4.93	$6.68x10^{-06}$	$5.84x10^{-04}$	3.24
HHEX	1.33	5.61	6.93	$3.12x10^{-09}$	$7.80x10^{-07}$	10.75
COL1A2	1.33	12.97	6.40	$2.55x10^{-08}$	$4.91x10^{-06}$	8.68
TPRKB	1.32	8.86	5.02	$4.84x10^{-06}$	$4.46x10^{-04}$	3.55
SNORD89	1.32	6.22	6.94	$2.99x10^{-09}$	$7.56x10^{-07}$	10.79
PFDN5	1.32	11.31	7.81	$9.66x10^{-11}$	$3.78x10^{-08}$	14.17
TBX15	1.32	6.51	6.05	$9.91x10^{-08}$	$1.61x10^{-05}$	7.35
EBAG9	1.32	8.01	6.46	$2.02x10^{-08}$	$3.98x10^{-06}$	8.91
PAN2	1.32	6.56	5.27	$1.91x10^{-06}$	$2.02x10^{-04}$	4.45
WNK3	1.32	5.34	5.49	$8.37x10^{-07}$	$1.01x10^{-04}$	5.26
IQGAP2	1.31	4.91	8.29	$1.47x10^{-11}$	$7.28x10^{-09}$	16.03
RASEF	1.31	5.73	6.48	$1.84x10^{-08}$	$3.65x10^{-06}$	9.00
LOC101927451	1.31	5.61	6.16	$6.36x10^{-08}$	$1.10x10^{-05}$	7.78
RNF125	1.31	4.56	5.60	$5.56x10^{-07}$	$7.10x10^{-05}$	5.66
ZNF721	1.31	9.03	8.89	$1.38x10^{-12}$	$9.33x10^{-10}$	18.37
PTPRO	1.31	6.57	10.44	$3.64x10^{-15}$	$4.88x10^{-12}$	24.23
RAMP3	1.31	6.60	5.12	$3.31x10^{-06}$	$3.23x10^{-04}$	3.92
RPS27	1.30	9.73	7.16	$1.29x10^{-09}$	$3.59x10^{-07}$	11.62
MTERF2	1.30	6.20	6.46	$1.99x10^{-08}$	$3.91x10^{-06}$	8.92
LINC01003	1.30	6.01	4.48	$3.38x10^{-05}$	$2.34x10^{-03}$	1.67
SASH3	1.30	6.16	4.87	$8.38x10^{-06}$	$7.12x10^{-04}$	3.02
FYB1	1.30	5.37	5.48	$8.62x10^{-07}$	$1.03x10^{-04}$	5.23

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
ABCB4	1.30	5.13	5.85	$2.13x10^{-07}$	$3.11x10^{-05}$	6.60
DENND1B	1.30	5.55	9.11	$5.82x10^{-13}$	$4.42x10^{-10}$	19.22
LOC389765	1.29	4.80	4.96	$5.99x10^{-06}$	$5.32x10^{-04}$	3.34
KIAA1551	1.29	5.98	6.28	$4.01x10^{-08}$	$7.28x10^{-06}$	8.23
MCM3	1.29	8.79	5.15	$2.96x10^{-06}$	$2.92x10^{-04}$	4.03
WSB1	1.29	7.49	6.32	$3.50x10^{-08}$	$6.46x10^{-06}$	8.37
ATP5ME	1.29	10.37	5.76	$3.04x10^{-07}$	$4.21x10^{-05}$	6.25
MPPED2	1.29	4.82	4.97	$5.79x10^{-06}$	$5.17x10^{-04}$	3.38
LST1	1.29	6.67	6.83	$4.65x10^{-09}$	$1.11x10^{-06}$	10.35
C12orf57	1.29	10.71	5.04	$4.55x10^{-06}$	$4.22x10^{-04}$	3.61
PDIK1L	1.29	6.85	5.17	$2.80x10^{-06}$	$2.80x10^{-04}$	4.08
IFNGR1	1.29	7.96	7.85	$8.40x10^{-11}$	$3.33x10^{-08}$	14.31
LOC100996756	1.29	5.52	5.08	$3.90x10^{-06}$	$3.71x10^{-04}$	3.76
RGL1	1.29	9.32	6.01	$1.16x10^{-07}$	$1.85x10^{-05}$	7.19
KLHL15	1.29	7.21	4.46	$3.66x10^{-05}$	$2.51x10^{-03}$	1.59
PLCL2	1.29	5.55	10.34	$5.22x10^{-15}$	$6.70x10^{-12}$	23.88
LIPA	1.28	10.28	6.48	$1.84x10^{-08}$	$3.64x10^{-06}$	9.00
RNPC3	1.28	6.18	8.64	$3.72x10^{-12}$	$2.26x10^{-09}$	17.39
JAG2	1.28	6.91	6.58	$1.26x10^{-08}$	$2.62x10^{-06}$	9.37
HIST1H2BE	1.28	6.84	4.31	$6.20x10^{-05}$	$3.95x10^{-03}$	1.09
PSAP	1.28	11.28	5.99	$1.24x10^{-07}$	$1.94x10^{-05}$	7.13
LINC01560	1.28	4.94	5.05	$4.32x10^{-06}$	$4.03x10^{-04}$	3.66
NRARP	1.27	6.49	9.25	$3.42x10^{-13}$	$2.79x10^{-10}$	19.74
KYNU	1.27	5.43	5.49	$8.47x10^{-07}$	$1.02x10^{-04}$	5.25
ITPR1	1.27	5.78	5.15	$2.99x10^{-06}$	$2.95x10^{-04}$	4.02
C1orf112	1.27	5.69	4.85	$8.96x10^{-06}$	$7.55x10^{-04}$	2.95
ZBTB8A	1.27	8.56	4.43	$4.03x10^{-05}$	$2.73x10^{-03}$	1.50
NIPBL	1.27	7.50	8.48	$6.87x10^{-12}$	$3.76x10^{-09}$	16.78
TIE1	1.27	4.69	10.93	$5.85x10^{-16}$	$1.02x10^{-12}$	26.04
VWF	1.27	6.53	6.45	$2.11x10^{-08}$	$4.11x10^{-06}$	8.87
LGALSL	1.27	6.71	7.59	$2.34x10^{-10}$	$7.94x10^{-08}$	13.30
ND2	1.27	13.14	6.45	$2.03x10^{-08}$	$4.00x10^{-06}$	8.90
DLEU2	1.27	5.16	9.07	$6.87x10^{-13}$	$5.10x10^{-10}$	19.06
LAIR1	1.27	6.55	6.51	$1.66x10^{-08}$	$3.33x10^{-06}$	9.10
GRK3	1.27	6.22	6.60	$1.14x10^{-08}$	$2.42x10^{-06}$	9.47
FRMD4B	1.27	4.49	13.02	$3.25x10^{-19}$	$1.47x10^{-15}$	33.43
KIAA0040	1.26	6.33	5.09	$3.67x10^{-06}$	$3.53x10^{-04}$	3.82
COL27A1	1.26	6.46	5.37	$1.32x10^{-06}$	$1.46x10^{-04}$	4.82
METTL7A	1.26	6.37	8.13	$2.77x10^{-11}$	$1.26x10^{-08}$	15.40
VAV3	1.26	5.01	7.17	$1.20x10^{-09}$	$3.39x10^{-07}$	11.69
NACA	1.26	10.63	9.09	$6.48x10^{-13}$	$4.88x10^{-10}$	19.11
FAM69C	1.26	6.83	4.44	$3.92x10^{-05}$	$2.66x10^{-03}$	1.53
TTC14	1.26	6.38	7.69	$1.57x10^{-10}$	$5.71x10^{-08}$	13.69
1-Mar	1.26	5.13	5.60	$5.59x10^{-07}$	$7.12x10^{-05}$	5.65
MSR1	1.26	5.11	7.19	$1.11x10^{-09}$	$3.17x10^{-07}$	11.76
SATB1	1.26	5.94	6.91	$3.41x10^{-09}$	$8.42x10^{-07}$	10.66
KDM7A	1.25	5.91	6.62	$1.05x10^{-08}$	$2.26x10^{-06}$	9.56
CD163L1	1.25	6.66	4.15	$1.05x10^{-04}$	$6.20x10^{-03}$	0.58
NOP58	1.25	10.44	6.59	$1.19x10^{-08}$	$2.51x10^{-06}$	9.43

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
LARP7	1.25	6.25	9.89	$2.89x10^{-14}$	$3.12x10^{-11}$	22.19
CARD8-AS1	1.25	5.42	7.93	$6.07x10^{-11}$	$2.49x10^{-08}$	14.63
PBX1	1.25	7.05	5.27	$1.89x10^{-06}$	$2.00x10^{-04}$	4.47
SLC16A14	1.25	4.67	5.20	$2.50x10^{-06}$	$2.53x10^{-04}$	4.19
TERF1	1.25	7.95	7.55	$2.72x10^{-10}$	$9.08x10^{-08}$	13.15
TDRD3	1.25	6.56	4.76	$1.25x10^{-05}$	$9.96x10^{-04}$	2.63
BMP2K	1.25	5.83	7.92	$6.22x10^{-11}$	$2.54x10^{-08}$	14.60
UBA52	1.25	12.29	7.67	$1.68x10^{-10}$	$6.02x10^{-08}$	13.62
LCP2	1.25	4.89	7.22	$1.01x10^{-09}$	$2.93x10^{-07}$	11.86
ETS2	1.25	5.85	8.65	$3.55x10^{-12}$	$2.17x10^{-09}$	17.43
FCGRT	1.25	8.70	5.94	$1.50x10^{-07}$	$2.29x10^{-05}$	6.94
PIK3C2B	1.24	7.39	6.13	$7.09x10^{-08}$	$1.20x10^{-05}$	7.68
LOC728613	1.24	6.22	5.44	$9.99x10^{-07}$	$1.17x10^{-04}$	5.09
SEMA4D	1.24	5.37	5.47	$8.96x10^{-07}$	$1.06x10^{-04}$	5.19
TRAPPC10	1.24	5.91	7.29	$7.55x10^{-10}$	$2.27x10^{-07}$	12.14
RWDD3	1.24	8.43	5.09	$3.72x10^{-06}$	$3.57x10^{-04}$	3.81
NR1H3	1.24	5.90	4.94	$6.51x10^{-06}$	$5.71x10^{-04}$	3.26
RB1CC1	1.24	8.78	6.72	$7.25x10^{-09}$	$1.64x10^{-06}$	9.92
MYO1F	1.24	6.60	4.99	$5.29x10^{-06}$	$4.79x10^{-04}$	3.47
RPL23AP32	1.24	6.38	6.61	$1.12x10^{-08}$	$2.39x10^{-06}$	9.49
CEP68	1.24	6.55	9.45	$1.56x10^{-13}$	$1.36x10^{-10}$	20.52
RTP4	1.24	5.39	4.36	$5.20x10^{-05}$	$3.41x10^{-03}$	1.26
S1PR3	1.24	7.64	4.85	$9.11x10^{-06}$	$7.66x10^{-04}$	2.94
DDX60L	1.24	6.14	8.02	$4.27x10^{-11}$	$1.86x10^{-08}$	14.98
WDR11	1.24	7.78	6.87	$4.01x10^{-09}$	$9.72x10^{-07}$	10.50
PRR11	1.24	10.08	6.47	$1.93x10^{-08}$	$3.82x10^{-06}$	8.95
SLC37A2	1.24	6.04	4.64	$1.91x10^{-05}$	$1.44x10^{-03}$	2.22
DDIT3	1.24	8.50	4.33	$5.69x10^{-05}$	$3.67x10^{-03}$	1.17
GABRB2	1.24	5.57	5.34	$1.46x10^{-06}$	$1.60x10^{-04}$	4.72
RETREG1	1.24	4.97	6.39	$2.58x10^{-08}$	$4.96x10^{-06}$	8.67
FAM49A	1.24	5.32	8.04	$3.94x10^{-11}$	$1.73x10^{-08}$	15.06
SNRPD2	1.24	11.33	4.82	$9.93x10^{-06}$	$8.22x10^{-04}$	2.85
VPS13C	1.23	5.93	10.78	$1.01x10^{-15}$	$1.65x10^{-12}$	25.50
PAPD4	1.23	6.72	5.98	$1.29x10^{-07}$	$2.01x10^{-05}$	7.09
BTG1	1.23	8.38	8.92	$1.22x10^{-12}$	$8.50x10^{-10}$	18.48
FANCL	1.23	7.98	4.52	$2.96x10^{-05}$	$2.09x10^{-03}$	1.80
ZCCHC7	1.23	6.30	7.46	$3.94x10^{-10}$	$1.26x10^{-07}$	12.78
OXR1	1.23	7.06	5.80	$2.55x10^{-07}$	$3.62x10^{-05}$	6.42
ZNF608	1.22	5.63	7.95	$5.61x10^{-11}$	$2.36x10^{-08}$	14.71
TMEM241	1.22	8.47	7.85	$8.13x10^{-11}$	$3.23x10^{-08}$	14.34
HES4	1.22	6.83	4.63	$1.95x10^{-05}$	$1.47x10^{-03}$	2.20
POT1	1.22	7.48	5.61	$5.41x10^{-07}$	$6.92x10^{-05}$	5.69
SMIM19	1.22	9.17	5.07	$4.01x10^{-06}$	$3.79x10^{-04}$	3.73
N4BP2L2	1.22	6.81	6.34	$3.14x10^{-08}$	$5.89x10^{-06}$	8.47
ZNF207	1.22	7.37	9.51	$1.24x10^{-13}$	$1.12x10^{-10}$	20.75
SUZ12P1	1.22	5.03	7.21	$1.03x10^{-09}$	$2.97x10^{-07}$	11.84
RPS6KA1	1.22	5.36	5.57	$6.09x10^{-07}$	$7.63x10^{-05}$	5.57
CREG1	1.22	10.38	4.44	$3.82x10^{-05}$	$2.61x10^{-03}$	1.55
LOC100287896	1.22	5.36	4.66	$1.81x10^{-05}$	$1.37x10^{-03}$	2.27

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
ISG20	1.22	6.35	4.58	$2.38x10^{-05}$	$1.73x10^{-03}$	2.01
COA5	1.22	7.71	6.98	$2.59x10^{-09}$	$6.67x10^{-07}$	10.93
RAB33B	1.22	6.32	6.12	$7.44x10^{-08}$	$1.25x10^{-05}$	7.63
ADAMTS9	1.22	5.72	6.52	$1.59x10^{-08}$	$3.20x10^{-06}$	9.15
BIRC3	1.22	5.02	4.06	$1.45x10^{-04}$	$8.19x10^{-03}$	0.27
TNIK	1.22	5.74	6.84	$4.52x10^{-09}$	$1.08x10^{-06}$	10.38
LAMTOR2	1.21	8.36	5.83	$2.33x10^{-07}$	$3.36x10^{-05}$	6.51
GJA4	1.21	6.37	6.77	$5.86x10^{-09}$	$1.36x10^{-06}$	10.12
ZNF493	1.21	5.46	8.63	$3.82x10^{-12}$	$2.30x10^{-09}$	17.36
NRDC	1.21	8.00	7.29	$7.73x10^{-10}$	$2.31x10^{-07}$	12.12
PDE4DIP	1.21	6.38	4.98	$5.64x10^{-06}$	$5.06x10^{-04}$	3.40
ZNF595	1.21	4.61	5.55	$6.67x10^{-07}$	$8.24x10^{-05}$	5.48
OTUD6B	1.21	7.12	5.38	$1.25x10^{-06}$	$1.40x10^{-04}$	4.87
RBBP4	1.21	7.28	6.80	$5.23x10^{-09}$	$1.22x10^{-06}$	10.24
FUBP1	1.21	6.67	7.74	$1.27x10^{-10}$	$4.75x10^{-08}$	13.90
TLR5	1.21	6.15	5.89	$1.83x10^{-07}$	$2.72x10^{-05}$	6.75
DNAAF2	1.20	7.04	5.70	$3.83x10^{-07}$	$5.16x10^{-05}$	6.02
LOC153684	1.20	7.01	6.29	$3.90x10^{-08}$	$7.11x10^{-06}$	8.26
TBC1D4	1.20	7.79	6.41	$2.44x10^{-08}$	$4.71x10^{-06}$	8.72
LINS1	1.20	5.83	6.71	$7.41x10^{-09}$	$1.67x10^{-06}$	9.89
RBM6	1.20	6.65	6.72	$7.29x10^{-09}$	$1.65x10^{-06}$	9.91
GMCL1	1.20	6.96	5.48	$8.64x10^{-07}$	$1.03x10^{-04}$	5.23
NPIPB15	1.20	6.54	5.60	$5.58x10^{-07}$	$7.11x10^{-05}$	5.66
SPNS2	1.20	6.53	5.51	$7.83x10^{-07}$	$9.50x10^{-05}$	5.32
C11orf54	1.20	6.56	8.38	$1.03x10^{-11}$	$5.33x10^{-09}$	16.38
ZNF140	1.20	6.96	4.67	$1.73x10^{-05}$	$1.32x10^{-03}$	2.32
CD58	1.20	6.36	7.25	$8.86x10^{-10}$	$2.61x10^{-07}$	11.98
SPTSSA	1.20	8.15	5.92	$1.62x10^{-07}$	$2.45x10^{-05}$	6.87
DISP1	1.20	6.09	5.91	$1.69x10^{-07}$	$2.54x10^{-05}$	6.82
PPP1CB	1.20	10.00	6.56	$1.33x10^{-08}$	$2.74x10^{-06}$	9.32
RAPGEF2	1.20	6.66	6.47	$1.89x10^{-08}$	$3.73x10^{-06}$	8.98
NHLRC3	1.20	5.76	6.84	$4.42x10^{-09}$	$1.06x10^{-06}$	10.40
SMA4	1.19	5.86	6.38	$2.74x10^{-08}$	$5.23x10^{-06}$	8.61
TTYH2	1.19	6.11	7.84	$8.68x10^{-11}$	$3.42x10^{-08}$	14.28
GON7	1.19	7.41	4.97	$5.74x10^{-06}$	$5.14x10^{-04}$	3.39
DAPK1-IT1	1.19	5.48	4.24	$7.84x10^{-05}$	$4.82x10^{-03}$	0.86
REL	1.19	5.13	7.37	$5.47x10^{-10}$	$1.68x10^{-07}$	12.46
SRFBP1	1.19	6.48	4.74	$1.35x10^{-05}$	$1.07x10^{-03}$	2.56
DRAM2	1.19	7.99	7.39	$5.05x10^{-10}$	$1.56x10^{-07}$	12.54
SORL1	1.19	5.73	5.27	$1.92x10^{-06}$	$2.02x10^{-04}$	4.45
EIF1AX	1.19	9.28	6.04	$1.02x10^{-07}$	$1.65x10^{-05}$	7.32
PTRHD1	1.19	9.18	5.46	$9.26x10^{-07}$	$1.09x10^{-04}$	5.16
NEMP1	1.19	6.40	4.09	$1.29x10^{-04}$	$7.40x10^{-03}$	0.39
ROR2	1.19	5.88	7.42	$4.51x10^{-10}$	$1.42x10^{-07}$	12.65
OPHN1	1.18	10.19	6.91	$3.47x10^{-09}$	$8.53x10^{-07}$	10.64
CRTAM	1.18	4.38	4.02	$1.61x10^{-04}$	$8.97x10^{-03}$	0.17
JUNB	1.18	7.96	4.54	$2.71x10^{-05}$	$1.94x10^{-03}$	1.88
RNF19A	1.18	7.30	6.92	$3.29x10^{-09}$	$8.16x10^{-07}$	10.69
ARRB2	1.18	6.47	6.18	$5.93x10^{-08}$	$1.03x10^{-05}$	7.85

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
ZNF195	1.18	6.46	5.23	$2.19x10^{-06}$	$2.27x10^{-04}$	4.32
HAUS3	1.18	7.26	5.85	$2.16x10^{-07}$	$3.14x10^{-05}$	6.59
COPS3	1.18	9.51	3.99	$1.80x10^{-04}$	$9.80x10^{-03}$	0.07
FILIP1	1.18	4.38	4.19	$9.16x10^{-05}$	$5.52x10^{-03}$	0.71
DNAJC7	1.18	7.47	7.28	$7.77x10^{-10}$	$2.32x10^{-07}$	12.11
RPA3	1.18	9.50	4.89	$7.90x10^{-06}$	$6.76x10^{-04}$	3.08
RSBN1	1.18	7.29	6.98	$2.62x10^{-09}$	$6.75x10^{-07}$	10.92
DSN1	1.18	7.14	4.84	$9.36x10^{-06}$	$7.83x10^{-04}$	2.91
F11R	1.18	5.61	7.76	$1.18x10^{-10}$	$4.47x10^{-08}$	13.97
ELOA-AS1	1.17	6.69	5.44	$1.01x10^{-06}$	$1.18x10^{-04}$	5.07
FASTKD1	1.17	8.49	6.67	$8.78x10^{-09}$	$1.94x10^{-06}$	9.73
ZNF121	1.17	8.71	5.98	$1.30x10^{-07}$	$2.02x10^{-05}$	7.08
DUS1L	1.17	8.10	7.02	$2.23x10^{-09}$	$5.84x10^{-07}$	11.08
TLR7	1.17	5.25	6.06	$9.47x10^{-08}$	$1.55x10^{-05}$	7.39
SND1-IT1	1.17	6.55	5.59	$5.71x10^{-07}$	$7.24x10^{-05}$	5.63
TMA7	1.17	12.25	6.80	$5.24x10^{-09}$	$1.23x10^{-06}$	10.23
JAM2	1.17	6.90	4.07	$1.37x10^{-04}$	$7.81x10^{-03}$	0.32
SDHAF2	1.17	7.56	6.79	$5.41x10^{-09}$	$1.26x10^{-06}$	10.20
PLEKHF2	1.17	7.24	5.38	$1.25x10^{-06}$	$1.40x10^{-04}$	4.87
ZNF665	1.17	7.92	7.58	$2.42x10^{-10}$	$8.15x10^{-08}$	13.26
STAB1	1.17	5.97	7.75	$1.22x10^{-10}$	$4.62x10^{-08}$	13.94
GPX7	1.17	8.26	4.24	$7.87x10^{-05}$	$4.84x10^{-03}$	0.86
PNISR	1.17	7.25	6.74	$6.76x10^{-09}$	$1.54x10^{-06}$	9.98
SLC12A7	1.17	9.02	5.84	$2.18x10^{-07}$	$3.17x10^{-05}$	6.58
DOCK8	1.16	4.52	6.61	$1.11x10^{-08}$	$2.38x10^{-06}$	9.49
TPD52	1.16	4.75	4.35	$5.31x10^{-05}$	$3.46x10^{-03}$	1.24
GABPB1-AS1	1.16	5.61	5.43	$1.03x10^{-06}$	$1.20x10^{-04}$	5.06
UBXN2A	1.16	9.09	8.02	$4.29x10^{-11}$	$1.87x10^{-08}$	14.97
ANKRD49	1.16	7.69	6.38	$2.67x10^{-08}$	$5.12x10^{-06}$	8.63
PCMTD2	1.16	6.33	8.16	$2.45x10^{-11}$	$1.14x10^{-08}$	15.52
TCF7	1.16	6.63	7.68	$1.60x10^{-10}$	$5.78x10^{-08}$	13.67
AHSA2P	1.16	6.13	5.99	$1.23x10^{-07}$	$1.94x10^{-05}$	7.14
MYO1D	1.16	5.23	5.29	$1.80x10^{-06}$	$1.92x10^{-04}$	4.51
CST3	1.16	7.41	5.61	$5.37x10^{-07}$	$6.88x10^{-05}$	5.69
ITPR2	1.16	5.82	6.72	$7.17x10^{-09}$	$1.63x10^{-06}$	9.93
PRKCH	1.16	6.11	6.05	$9.89x10^{-08}$	$1.61x10^{-05}$	7.35
BTK	1.15	5.24	5.61	$5.37x10^{-07}$	$6.88x10^{-05}$	5.69
SON	1.15	9.41	8.20	$2.06x10^{-11}$	$9.89x10^{-09}$	15.69
LRRC15	1.15	7.16	4.09	$1.31x10^{-04}$	$7.52x10^{-03}$	0.37
ANKRD10	1.15	5.87	7.15	$1.34x10^{-09}$	$3.71x10^{-07}$	11.58
RPS7	1.15	12.77	7.92	$6.18x10^{-11}$	$2.53x10^{-08}$	14.61
APOL6	1.15	5.72	4.98	$5.64x10^{-06}$	$5.06x10^{-04}$	3.40
PREX1	1.15	7.30	4.61	$2.11x10^{-05}$	$1.57x10^{-03}$	2.12
KCNE3	1.15	5.46	11.57	$5.48x10^{-17}$	$1.30x10^{-13}$	28.37
INTS6L	1.15	5.51	5.73	$3.42x10^{-07}$	$4.65x10^{-05}$	6.14
RBM39	1.15	8.17	8.54	$5.37x10^{-12}$	$3.09x10^{-09}$	17.02
ACOT13	1.15	8.17	5.18	$2.69x10^{-06}$	$2.70x10^{-04}$	4.12
CCNL2	1.15	7.82	6.15	$6.77x10^{-08}$	$1.16x10^{-05}$	7.72
JTB	1.15	11.48	7.16	$1.29x10^{-09}$	$3.59x10^{-07}$	11.62

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
LPAR6	1.15	5.92	10.75	$1.11x10^{-15}$	$1.76x10^{-12}$	25.40
ASAP1-IT1	1.15	6.99	4.70	$1.54x10^{-05}$	$1.20x10^{-03}$	2.43
RPL23A	1.15	13.52	6.89	$3.65x10^{-09}$	$8.93x10^{-07}$	10.59
ABCG1	1.15	5.03	6.12	$7.43x10^{-08}$	$1.25x10^{-05}$	7.63
HLA-B	1.15	11.91	5.46	$9.49x10^{-07}$	$1.11x10^{-04}$	5.14
TAF12	1.15	7.64	5.62	$5.17x10^{-07}$	$6.66x10^{-05}$	5.73
ZNF184	1.14	6.87	4.08	$1.33x10^{-04}$	$7.64x10^{-03}$	0.35
BAZ2B	1.14	7.86	5.50	$7.99x10^{-07}$	$9.68x10^{-05}$	5.31
FGFR1	1.14	7.75	6.56	$1.35x10^{-08}$	$2.78x10^{-06}$	9.30
ZNF791	1.14	7.98	5.43	$1.06x10^{-06}$	$1.23x10^{-04}$	5.03
RPS6KA5	1.14	5.05	6.58	$1.26x10^{-08}$	$2.62x10^{-06}$	9.37
GLMN	1.14	6.95	5.25	$2.09x10^{-06}$	$2.18x10^{-04}$	4.37
SMC4	1.14	8.07	5.39	$1.23x10^{-06}$	$1.39x10^{-04}$	4.88
PALD1	1.14	5.89	6.18	$5.94x10^{-08}$	$1.03x10^{-05}$	7.85
C9orf64	1.14	9.05	7.31	$7.14x10^{-10}$	$2.15x10^{-07}$	12.20
ELF2	1.14	7.51	9.80	$4.15x10^{-14}$	$4.33x10^{-11}$	21.83
DMTF1	1.14	8.62	6.63	$1.04x10^{-08}$	$2.24x10^{-06}$	9.56
SP110	1.14	7.22	4.51	$3.01x10^{-05}$	$2.12x10^{-03}$	1.78
TBRG1	1.14	6.27	6.75	$6.49x10^{-09}$	$1.49x10^{-06}$	10.02
APOL3	1.14	5.39	4.21	$8.47x10^{-05}$	$5.15x10^{-03}$	0.79
INTS8	1.13	9.06	5.66	$4.31x10^{-07}$	$5.70x10^{-05}$	5.91
ZNF862	1.13	6.46	6.94	$3.02x10^{-09}$	$7.60x10^{-07}$	10.78
MKNK1	1.13	6.59	8.72	$2.68x10^{-12}$	$1.69x10^{-09}$	17.71
RIN2	1.13	7.44	6.38	$2.76x10^{-08}$	$5.28x10^{-06}$	8.60
HSPB11	1.13	7.81	5.16	$2.83x10^{-06}$	$2.82x10^{-04}$	4.07
CPQ	1.13	8.58	5.44	$1.02x10^{-06}$	$1.19x10^{-04}$	5.07
TIA1	1.13	6.96	8.01	$4.33x10^{-11}$	$1.88x10^{-08}$	14.96
DDX5	1.13	7.26	4.68	$1.67x10^{-05}$	$1.29x10^{-03}$	2.35
CDKN1C	1.13	5.59	5.11	$3.46x10^{-06}$	$3.35x10^{-04}$	3.88
CYSLTR1	1.12	4.59	5.43	$1.03x10^{-06}$	$1.20x10^{-04}$	5.06
SETBP1	1.12	6.93	4.83	$9.83x10^{-06}$	$8.16x10^{-04}$	2.86
CSGALNACT1	1.12	6.44	5.10	$3.65x10^{-06}$	$3.52x10^{-04}$	3.83
GULP1	1.12	6.02	5.26	$2.01x10^{-06}$	$2.11x10^{-04}$	4.41
LHX2	1.12	4.78	4.15	$1.06x10^{-04}$	$6.24x10^{-03}$	0.58
MOB3B	1.12	5.79	6.96	$2.85x10^{-09}$	$7.25x10^{-07}$	10.83
BANF1	1.12	10.36	6.08	$8.79x10^{-08}$	$1.45x10^{-05}$	7.46
TAF9B	1.12	6.28	7.66	$1.79x10^{-10}$	$6.34x10^{-08}$	13.56
VGLL4	1.12	9.23	6.19	$5.61x10^{-08}$	$9.82x10^{-06}$	7.91
ARHGAP28	1.12	5.04	4.57	$2.41x10^{-05}$	$1.75x10^{-03}$	2.00
CELF2	1.12	5.48	5.08	$3.92x10^{-06}$	$3.73x10^{-04}$	3.76
FCGR3B	1.11	5.58	4.15	$1.05x10^{-04}$	$6.19x10^{-03}$	0.58
TRIM52	1.11	5.83	6.55	$1.40x10^{-08}$	$2.86x10^{-06}$	9.27
KIAA1147	1.11	6.70	7.51	$3.13x10^{-10}$	$1.02x10^{-07}$	13.01
RASGRP3	1.11	5.05	12.54	$1.70x10^{-18}$	$6.01x10^{-15}$	31.80
IGSF6	1.11	4.51	5.56	$6.38x10^{-07}$	$7.94x10^{-05}$	5.52
ZNF593	1.11	7.85	4.53	$2.81x10^{-05}$	$2.00x10^{-03}$	1.85
RNFT1	1.11	5.76	6.66	$9.06x10^{-09}$	$2.00x10^{-06}$	9.70
CREBRF	1.11	6.29	5.69	$3.89x10^{-07}$	$5.21x10^{-05}$	6.01
LAPTM4B	1.11	10.11	4.01	$1.71x10^{-04}$	$9.41x10^{-03}$	0.11

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
CCDC84	1.11	7.17	5.70	$3.84x10^{-07}$	$5.17x10^{-05}$	6.02
PLEKHO1	1.11	8.30	4.30	$6.41x10^{-05}$	$4.06x10^{-03}$	1.06
GPRC5C	1.11	5.91	5.59	$5.67x10^{-07}$	$7.20x10^{-05}$	5.64
WDR75	1.11	7.55	5.63	$4.97x10^{-07}$	$6.46x10^{-05}$	5.77
ARID2	1.11	6.59	7.84	$8.60x10^{-11}$	$3.39x10^{-08}$	14.28
APOPT1	1.11	8.05	8.35	$1.13x10^{-11}$	$5.80x10^{-09}$	16.29
ICAM2	1.11	6.52	5.82	$2.40x10^{-07}$	$3.44x10^{-05}$	6.48
MIGA1	1.10	6.79	5.62	$5.13x10^{-07}$	$6.62x10^{-05}$	5.74
MFSD14A	1.10	9.35	6.13	$7.27x10^{-08}$	$1.23x10^{-05}$	7.65
TRA2A	1.10	6.51	6.69	$8.03x10^{-09}$	$1.79x10^{-06}$	9.81
C2orf68	1.10	6.15	5.98	$1.29x10^{-07}$	$2.02x10^{-05}$	7.09
ADORA3	1.10	5.21	7.29	$7.59x10^{-10}$	$2.27x10^{-07}$	12.14
CARD16	1.10	5.22	5.29	$1.76x10^{-06}$	$1.89x10^{-04}$	4.54
JDP2	1.10	6.32	5.91	$1.69x10^{-07}$	$2.54x10^{-05}$	6.83
INTS2	1.10	6.21	5.17	$2.76x10^{-06}$	$2.75x10^{-04}$	4.10
LUC7L3	1.10	7.93	6.65	$9.52x10^{-09}$	$2.09x10^{-06}$	9.65
CEP57	1.10	7.31	4.84	$9.44x10^{-06}$	$7.88x10^{-04}$	2.90
P2RX7	1.09	5.35	5.18	$2.64x10^{-06}$	$2.66x10^{-04}$	4.14
RUNDC3B	1.09	4.58	4.53	$2.86x10^{-05}$	$2.03x10^{-03}$	1.83
RUNX3	1.09	6.00	5.69	$3.88x10^{-07}$	$5.21x10^{-05}$	6.01
ROBO4	1.09	6.27	10.10	$1.31x10^{-14}$	$1.52x10^{-11}$	22.97
SLC5A3	1.09	7.71	4.34	$5.54x10^{-05}$	$3.59x10^{-03}$	1.19
XRCC2	1.09	7.02	5.42	$1.09x10^{-06}$	$1.25x10^{-04}$	5.00
GNA15	1.09	5.49	4.02	$1.65x10^{-04}$	$9.12x10^{-03}$	0.15
TMEM267	1.09	6.23	5.02	$4.91x10^{-06}$	$4.51x10^{-04}$	3.54
ARRDC3	1.09	8.73	4.13	$1.12x10^{-04}$	$6.55x10^{-03}$	0.52
LAT2	1.09	6.00	7.83	$9.03x10^{-11}$	$3.54x10^{-08}$	14.24
KLHL24	1.09	6.12	7.66	$1.75x10^{-10}$	$6.23x10^{-08}$	13.58
CCNB1IP1	1.09	9.18	4.66	$1.77x10^{-05}$	$1.34x10^{-03}$	2.30
RPL35	1.09	12.61	7.68	$1.61x10^{-10}$	$5.80x10^{-08}$	13.67
CYBB	1.09	5.00	8.08	$3.32x10^{-11}$	$1.48x10^{-08}$	15.22
SLC39A11	1.09	7.07	5.87	$1.94x10^{-07}$	$2.86x10^{-05}$	6.69
ST3GAL6	1.09	5.03	5.48	$8.71x10^{-07}$	$1.04x10^{-04}$	5.22
ZNF83	1.09	6.55	5.04	$4.50x10^{-06}$	$4.19x10^{-04}$	3.62
PSMA3-AS1	1.08	5.70	5.43	$1.05x10^{-06}$	$1.22x10^{-04}$	5.03
SS18L1	1.08	7.20	4.79	$1.13x10^{-05}$	$9.12x10^{-04}$	2.73
KAT2B	1.08	7.09	4.36	$5.15x10^{-05}$	$3.38x10^{-03}$	1.27
ANKRD12	1.08	6.55	5.69	$3.89x10^{-07}$	$5.22x10^{-05}$	6.01
BCL2L11	1.08	6.16	8.50	$6.34x10^{-12}$	$3.53x10^{-09}$	16.86
IQCH-AS1	1.08	5.81	6.91	$3.44x10^{-09}$	$8.47x10^{-07}$	10.65
FMC1	1.08	7.89	4.52	$2.94x10^{-05}$	$2.08x10^{-03}$	1.80
SGK494	1.08	4.84	6.43	$2.27x10^{-08}$	$4.41x10^{-06}$	8.79
PIK3CG	1.08	4.42	8.27	$1.56x10^{-11}$	$7.64x10^{-09}$	15.97
SUMO4	1.08	8.82	10.21	$8.48x10^{-15}$	$1.03x10^{-11}$	23.40
SRSF4	1.08	6.10	6.80	$5.26x10^{-09}$	$1.23x10^{-06}$	10.23
C1QTNF1	1.08	6.30	4.32	$5.86x10^{-05}$	$3.77x10^{-03}$	1.14
FOLR1	1.08	7.54	4.28	$6.81x10^{-05}$	$4.28x10^{-03}$	1.00
NUPL2	1.08	6.93	6.13	$7.28x10^{-08}$	$1.23x10^{-05}$	7.65
ARL15	1.07	6.55	4.84	$9.18x10^{-06}$	$7.71x10^{-04}$	2.93

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
NCK1-DT	1.07	5.67	6.24	$4.76x10^{-08}$	$8.50x10^{-06}$	8.07
GSTA4	1.07	7.98	4.42	$4.19x10^{-05}$	$2.82x10^{-03}$	1.46
METTL3	1.07	6.94	7.94	$5.89x10^{-11}$	$2.45x10^{-08}$	14.66
SLC39A8	1.07	5.25	9.38	$2.06x10^{-13}$	$1.76x10^{-10}$	20.24
HOXB-AS1	1.07	5.48	5.75	$3.09x10^{-07}$	$4.26x10^{-05}$	6.23
VASH2	1.07	4.89	4.80	$1.08x10^{-05}$	$8.79x10^{-04}$	2.78
ZEB2	1.07	6.01	8.18	$2.21x10^{-11}$	$1.05x10^{-08}$	15.63
ARHGAP9	1.07	5.63	4.71	$1.50x10^{-05}$	$1.17x10^{-03}$	2.45
SULT1A1	1.07	6.99	6.06	$9.38x10^{-08}$	$1.54x10^{-05}$	7.40
ZNF146	1.07	8.27	4.38	$4.70x10^{-05}$	$3.12x10^{-03}$	1.35
FAM13A-AS1	1.07	5.54	8.09	$3.19x10^{-11}$	$1.44x10^{-08}$	15.26
DOCK4	1.06	5.33	11.21	$2.09x10^{-16}$	$4.06x10^{-13}$	27.05
KIF21A	1.06	5.08	4.27	$7.02x10^{-05}$	$4.39x10^{-03}$	0.97
AKAP9	1.06	5.89	7.64	$1.94x10^{-10}$	$6.75x10^{-08}$	13.48
UXT	1.06	10.16	5.37	$1.30x10^{-06}$	$1.44x10^{-04}$	4.83
NFKBIA	1.06	7.53	8.65	$3.60x10^{-12}$	$2.19x10^{-09}$	17.42
MBTD1	1.06	5.17	11.09	$3.18x10^{-16}$	$5.86x10^{-13}$	26.64
FMNL3	1.06	5.94	5.43	$1.04x10^{-06}$	$1.21x10^{-04}$	5.05
TSPAN33	1.06	7.21	5.21	$2.42x10^{-06}$	$2.47x10^{-04}$	4.23
ALMS1	1.06	7.02	6.82	$4.92x10^{-09}$	$1.16x10^{-06}$	10.30
THOC1	1.06	8.52	5.32	$1.60x10^{-06}$	$1.73x10^{-04}$	4.63
LMO2	1.06	5.65	6.93	$3.20x10^{-09}$	$7.96x10^{-07}$	10.72
RRN3P2	1.06	5.59	6.10	$7.97x10^{-08}$	$1.33x10^{-05}$	7.56
RGS10	1.05	6.65	5.62	$5.13x10^{-07}$	$6.63x10^{-05}$	5.74
CENPC	1.05	6.23	5.42	$1.08x10^{-06}$	$1.25x10^{-04}$	5.01
CDCA7	1.05	5.92	4.44	$3.85x10^{-05}$	$2.62x10^{-03}$	1.54
RPL31	1.05	9.77	5.23	$2.23x10^{-06}$	$2.30x10^{-04}$	4.31
MAP2	1.05	5.06	4.55	$2.62x10^{-05}$	$1.88x10^{-03}$	1.92
TCF4	1.05	8.95	5.73	$3.33x10^{-07}$	$4.54x10^{-05}$	6.16
PPP4R3A	1.05	6.76	7.20	$1.09x10^{-09}$	$3.13x10^{-07}$	11.78
GEMIN2	1.05	6.64	4.52	$2.97x10^{-05}$	$2.10x10^{-03}$	1.79
GORAB	1.05	8.06	4.62	$2.09x10^{-05}$	$1.55x10^{-03}$	2.14
DCLRE1C	1.05	6.00	5.81	$2.45x10^{-07}$	$3.49x10^{-05}$	6.46
RNF19B	1.05	6.86	5.13	$3.19x10^{-06}$	$3.12x10^{-04}$	3.96
COX2	1.05	13.61	7.03	$2.09x10^{-09}$	$5.54x10^{-07}$	11.14
C8orf76	1.04	7.12	4.68	$1.64x10^{-05}$	$1.26x10^{-03}$	2.37
DNM3	1.04	4.87	5.32	$1.56x10^{-06}$	$1.70x10^{-04}$	4.65
NOL11	1.04	9.29	4.76	$1.25x10^{-05}$	$9.96x10^{-04}$	2.63
SNCAIP	1.04	5.50	4.83	$9.68x10^{-06}$	$8.05x10^{-04}$	2.88
ZBTB34	1.04	7.24	5.32	$1.59x10^{-06}$	$1.73x10^{-04}$	4.63
CD48	1.04	5.70	4.41	$4.27x10^{-05}$	$2.87x10^{-03}$	1.45
FAM221A	1.04	4.45	5.33	$1.55x10^{-06}$	$1.69x10^{-04}$	4.66
NDC1	1.04	7.58	4.30	$6.24x10^{-05}$	$3.97x10^{-03}$	1.08
CMC4	1.04	8.09	4.78	$1.16x10^{-05}$	$9.32x10^{-04}$	2.71
NASP	1.04	6.69	5.52	$7.38x10^{-07}$	$9.01x10^{-05}$	5.38
ZNF704	1.04	5.11	8.32	$1.28x10^{-11}$	$6.46x10^{-09}$	16.17
CLNS1A	1.04	8.43	4.79	$1.11x10^{-05}$	$9.00x10^{-04}$	2.75
PTPN22	1.03	4.56	4.79	$1.13x10^{-05}$	$9.12x10^{-04}$	2.73
ITGA6	1.03	6.28	7.35	$5.90x10^{-10}$	$1.80x10^{-07}$	12.39

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
KLF10	1.03	9.93	4.81	$1.05x10^{-05}$	$8.65x10^{-04}$	2.80
IMP3	1.03	7.74	6.59	$1.18x10^{-08}$	$2.49x10^{-06}$	9.44
PAXIP1-AS1	1.03	4.97	3.99	$1.82x10^{-04}$	$9.88x10^{-03}$	0.06
MRPL34	1.03	7.94	5.21	$2.36x10^{-06}$	$2.42x10^{-04}$	4.25
LOC114224	1.03	5.82	4.67	$1.70x10^{-05}$	$1.30x10^{-03}$	2.33
ABHD18	1.03	6.22	7.16	$1.26x10^{-09}$	$3.52x10^{-07}$	11.64
ZNF430	1.03	6.06	5.58	$5.90x10^{-07}$	$7.44x10^{-05}$	5.60
PPFIA2	1.03	5.17	4.90	$7.45x10^{-06}$	$6.42x10^{-04}$	3.13
NCAM1	1.03	5.50	5.23	$2.19x10^{-06}$	$2.27x10^{-04}$	4.32
AUP1	1.03	8.77	5.56	$6.50x10^{-07}$	$8.06x10^{-05}$	5.51
ZHX2	1.02	5.88	5.46	$9.43x10^{-07}$	$1.11x10^{-04}$	5.14
LOC100133315	1.02	6.09	5.30	$1.71x10^{-06}$	$1.84x10^{-04}$	4.56
PLD1	1.02	5.12	7.84	$8.60x10^{-11}$	$3.39x10^{-08}$	14.29
ZNF431	1.02	4.86	6.52	$1.55x10^{-08}$	$3.15x10^{-06}$	9.17
FBXW12	1.02	6.65	7.20	$1.09x10^{-09}$	$3.13x10^{-07}$	11.78
ZNF518A	1.02	6.10	7.89	$6.96x10^{-11}$	$2.83x10^{-08}$	14.49
GNA13	1.02	7.76	7.51	$3.14x10^{-10}$	$1.03x10^{-07}$	13.01
MGME1	1.02	8.57	4.59	$2.32x10^{-05}$	$1.69x10^{-03}$	2.04
NCOA1	1.02	7.23	6.64	$9.90x10^{-09}$	$2.15x10^{-06}$	9.61
PDE2A	1.02	6.17	6.24	$4.78x10^{-08}$	$8.52x10^{-06}$	8.06
FLVCR1	1.01	6.25	4.16	$1.02x10^{-04}$	$6.04x10^{-03}$	0.61
CCAR1	1.01	7.05	7.64	$1.91x10^{-10}$	$6.70x10^{-08}$	13.50
ZFHX4	1.01	6.71	4.06	$1.41x10^{-04}$	$7.98x10^{-03}$	0.30
CREB5	1.01	5.74	5.57	$6.09x10^{-07}$	$7.63x10^{-05}$	5.57
RAB42	1.01	7.17	4.81	$1.05x10^{-05}$	$8.63x10^{-04}$	2.80
EFHC1	1.01	6.36	6.38	$2.77x10^{-08}$	$5.29x10^{-06}$	8.60
COX6B1	1.01	10.39	5.94	$1.48x10^{-07}$	$2.26x10^{-05}$	6.96
LINC00847	1.01	6.29	6.54	$1.47x10^{-08}$	$2.99x10^{-06}$	9.22
ZRANB2	1.01	9.57	7.06	$1.88x10^{-09}$	$5.04x10^{-07}$	11.24
HECA	1.01	6.53	7.88	$7.31x10^{-11}$	$2.94x10^{-08}$	14.45
PRKRA	1.01	7.28	5.81	$2.49x10^{-07}$	$3.55x10^{-05}$	6.44
RHOJ	1.01	5.70	4.84	$9.29x10^{-06}$	$7.79x10^{-04}$	2.92
POLR2J	1.01	9.55	4.92	$7.08x10^{-06}$	$6.14x10^{-04}$	3.18
RAMP2	1.01	6.37	5.28	$1.83x10^{-06}$	$1.95x10^{-04}$	4.50
PCAT19	1.01	5.19	6.19	$5.80x10^{-08}$	$1.01x10^{-05}$	7.87
ATP5PF	1.00	11.21	7.54	$2.79x10^{-10}$	$9.24x10^{-08}$	13.12
NOSTRIN	1.00	4.65	4.40	$4.45x10^{-05}$	$2.97x10^{-03}$	1.41
SH2B2	1.00	7.65	7.86	$7.92x10^{-11}$	$3.17x10^{-08}$	14.37
COX7C	1.00	10.77	5.24	$2.10x10^{-06}$	$2.19x10^{-04}$	4.36
C21orf91	1.00	7.22	4.65	$1.88x10^{-05}$	$1.42x10^{-03}$	2.24
ZC3H8	1.00	5.98	5.80	$2.57x10^{-07}$	$3.64x10^{-05}$	6.41
PMP22	1.00	6.55	5.24	$2.15x10^{-06}$	$2.24x10^{-04}$	4.34
UBL7-AS1	1.00	5.51	5.20	$2.47x10^{-06}$	$2.51x10^{-04}$	4.20
ZNF426	1.00	6.51	4.06	$1.41x10^{-04}$	$7.99x10^{-03}$	0.30
NDUFB11	1.00	10.48	6.06	$9.46x10^{-08}$	$1.55x10^{-05}$	7.39
WASF1	-1.00	7.08	-4.88	$8.00x10^{-06}$	$6.84x10^{-04}$	3.06
MICA	-1.00	7.10	-5.23	$2.25x10^{-06}$	$2.31x10^{-04}$	4.30
BCL9L	-1.01	6.51	-6.02	$1.12x10^{-07}$	$1.79x10^{-05}$	7.23
PDHB	-1.01	8.99	-6.84	$4.49x10^{-09}$	$1.07x10^{-06}$	10.39

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
MGAM	-1.01	3.73	-8.94	$1.13x10^{-12}$	$7.94x10^{-10}$	18.56
PEAK1	-1.01	7.91	-8.88	$1.44x10^{-12}$	$9.69x10^{-10}$	18.33
FERMT2	-1.01	9.15	-4.00	$1.77x10^{-04}$	$9.70x10^{-03}$	0.08
DIAPH3	-1.01	5.28	-6.70	$7.73x10^{-09}$	$1.73x10^{-06}$	9.85
TMEM171	-1.01	3.99	-7.95	$5.56x10^{-11}$	$2.35x10^{-08}$	14.71
TMEM246	-1.01	5.35	-7.91	$6.57x10^{-11}$	$2.68x10^{-08}$	14.55
RAI14	-1.02	9.52	-4.26	$7.22x10^{-05}$	$4.49x10^{-03}$	0.94
NHS	-1.02	4.86	-5.23	$2.23x10^{-06}$	$2.30x10^{-04}$	4.31
RAB36	-1.02	5.56	-6.49	$1.75x10^{-08}$	$3.49x10^{-06}$	9.05
ABAT	-1.02	4.93	-7.07	$1.78x10^{-09}$	$4.79x10^{-07}$	11.30
CDIP1	-1.02	6.12	-8.58	$4.68x10^{-12}$	$2.75x10^{-09}$	17.16
DBN1	-1.02	7.59	-5.19	$2.60x10^{-06}$	$2.62x10^{-04}$	4.16
TSPAN4	-1.02	7.92	-4.38	$4.84x10^{-05}$	$3.21x10^{-03}$	1.32
CDR2L	-1.02	6.87	-7.40	$4.89x10^{-10}$	$1.52x10^{-07}$	12.57
ENG	-1.02	6.45	-7.50	$3.33x10^{-10}$	$1.08x10^{-07}$	12.95
KIF3C	-1.02	6.62	-7.21	$1.03x10^{-09}$	$2.98x10^{-07}$	11.84
NFIC	-1.03	7.37	-4.90	$7.51x10^{-06}$	$6.46x10^{-04}$	3.13
RMND5B	-1.03	5.76	-7.19	$1.10x10^{-09}$	$3.16x10^{-07}$	11.77
RAB11FIP5	-1.03	7.13	-6.32	$3.49x10^{-08}$	$6.45x10^{-06}$	8.37
RPS27L	-1.03	8.06	-6.13	$7.26x10^{-08}$	$1.23x10^{-05}$	7.65
TRIM6	-1.03	5.86	-4.35	$5.24x10^{-05}$	$3.43x10^{-03}$	1.25
TCTA	-1.03	7.66	-5.67	$4.29x10^{-07}$	$5.69x10^{-05}$	5.91
TPM2	-1.03	6.75	-4.89	$7.69x10^{-06}$	$6.60x10^{-04}$	3.10
PARP3	-1.04	5.87	-6.91	$3.41x10^{-09}$	$8.42x10^{-07}$	10.66
C1GALT1	-1.04	7.33	-5.16	$2.85x10^{-06}$	$2.84x10^{-04}$	4.06
TST	-1.04	7.40	-5.40	$1.20x10^{-06}$	$1.35x10^{-04}$	4.91
ACOX3	-1.04	6.37	-6.27	$4.17x10^{-08}$	$7.51x10^{-06}$	8.20
MFSD10	-1.04	6.92	-5.07	$3.96x10^{-06}$	$3.76x10^{-04}$	3.75
PARVA	-1.04	6.90	-6.58	$1.23x10^{-08}$	$2.58x10^{-06}$	9.40
ADRA2C	-1.04	5.39	-6.49	$1.75x10^{-08}$	$3.49x10^{-06}$	9.05
CLCF1	-1.04	6.18	-9.65	$7.41x10^{-14}$	$7.13x10^{-11}$	21.26
VCL	-1.05	7.06	-9.05	$7.42x10^{-13}$	$5.46x10^{-10}$	18.98
KCNMA1	-1.05	5.25	-7.84	$8.71x10^{-11}$	$3.42x10^{-08}$	14.27
GALNT5	-1.05	5.54	-5.60	$5.53x10^{-07}$	$7.06x10^{-05}$	5.66
GLS	-1.05	6.15	-9.92	$2.57x10^{-14}$	$2.82x10^{-11}$	22.30
AIFM2	-1.05	6.06	-6.38	$2.69x10^{-08}$	$5.14x10^{-06}$	8.63
RHBDF1	-1.05	6.02	-7.51	$3.20x10^{-10}$	$1.04x10^{-07}$	12.99
DOLK	-1.05	6.91	-5.55	$6.55x10^{-07}$	$8.12x10^{-05}$	5.50
CRISPLD2	-1.06	6.83	-4.41	$4.30x10^{-05}$	$2.89x10^{-03}$	1.44
MYH9	-1.06	8.88	-4.31	$6.17x10^{-05}$	$3.93x10^{-03}$	1.09
ELOVL6	-1.06	5.66	-4.04	$1.53x10^{-04}$	$8.59x10^{-03}$	0.22
NAT14	-1.06	6.49	-5.77	$2.85x10^{-07}$	$4.00x10^{-05}$	6.31
GLIS2	-1.06	8.13	-4.11	$1.20x10^{-04}$	$6.97x10^{-03}$	0.45
TRNP1	-1.06	5.17	-8.49	$6.57x10^{-12}$	$3.62x10^{-09}$	16.82
CD151	-1.06	8.05	-5.04	$4.50x10^{-06}$	$4.18x10^{-04}$	3.62
TUBB3	-1.06	10.21	-5.74	$3.19x10^{-07}$	$4.39x10^{-05}$	6.20
FGF7	-1.07	3.92	-5.39	$1.24x10^{-06}$	$1.39x10^{-04}$	4.88
FAM234A	-1.07	7.69	-6.08	$8.87x10^{-08}$	$1.46x10^{-05}$	7.46
CAV2	-1.07	7.20	-4.13	$1.13x10^{-04}$	$6.63x10^{-03}$	0.51

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
TNFAIP1	-1.07	7.20	-7.71	$1.41x10^{-10}$	$5.25x10^{-08}$	13.79
RUSC2	-1.07	7.27	-11.51	$6.91x10^{-17}$	$1.61x10^{-13}$	28.15
BACE1	-1.07	7.74	-5.13	$3.20x10^{-06}$	$3.13x10^{-04}$	3.95
SH3BP4	-1.07	6.36	-6.29	$3.88x10^{-08}$	$7.09x10^{-06}$	8.27
LIMK2	-1.07	5.74	-8.43	$8.46x10^{-12}$	$4.50x10^{-09}$	16.57
MAGEE1	-1.07	5.31	-6.86	$4.20x10^{-09}$	$1.01x10^{-06}$	10.45
ADD3	-1.07	9.50	-4.92	$6.91x10^{-06}$	$6.03x10^{-04}$	3.21
TES	-1.08	6.88	-6.01	$1.15x10^{-07}$	$1.83x10^{-05}$	7.20
GOPC	-1.08	6.82	-8.01	$4.33x10^{-11}$	$1.88x10^{-08}$	14.96
MLF2	-1.08	8.83	-4.30	$6.36x10^{-05}$	$4.03x10^{-03}$	1.06
FAM129B	-1.08	7.19	-10.03	$1.69x10^{-14}$	$1.92x10^{-11}$	22.72
TMCO3	-1.08	6.04	-5.13	$3.17x10^{-06}$	$3.11x10^{-04}$	3.96
PGRMC2	-1.08	8.27	-5.30	$1.72x10^{-06}$	$1.85x10^{-04}$	4.56
TGFB2	-1.08	5.03	-4.61	$2.15x10^{-05}$	$1.59x10^{-03}$	2.11
P3H3	-1.08	6.49	-5.47	$8.99x10^{-07}$	$1.07x10^{-04}$	5.19
HRCT1	-1.09	6.50	-5.95	$1.43x10^{-07}$	$2.20x10^{-05}$	6.99
NABP1	-1.09	6.23	-5.24	$2.17x10^{-06}$	$2.25x10^{-04}$	4.33
DOCK5	-1.09	5.14	-8.86	$1.57x10^{-12}$	$1.05x10^{-09}$	18.24
NDST1	-1.09	5.83	-9.89	$2.90x10^{-14}$	$3.12x10^{-11}$	22.18
HOXA3	-1.10	5.16	-8.04	$3.98x10^{-11}$	$1.75x10^{-08}$	15.04
DNAJC6	-1.10	4.05	-6.96	$2.82x10^{-09}$	$7.20x10^{-07}$	10.84
NEK7	-1.10	10.27	-4.68	$1.67x10^{-05}$	$1.29x10^{-03}$	2.35
BPGM	-1.10	7.55	-4.19	$9.09x10^{-05}$	$5.48x10^{-03}$	0.72
CPT1C	-1.11	5.26	-4.90	$7.62x10^{-06}$	$6.54x10^{-04}$	3.11
KATNAL1	-1.11	6.22	-6.66	$9.09x10^{-09}$	$2.00x10^{-06}$	9.69
TP53	-1.11	5.56	-4.34	$5.41x10^{-05}$	$3.51x10^{-03}$	1.22
SOCS5	-1.11	8.13	-5.69	$3.85x10^{-07}$	$5.17x10^{-05}$	6.02
WTIP	-1.12	5.84	-5.85	$2.12x10^{-07}$	$3.10x10^{-05}$	6.60
TSPAN5	-1.12	6.14	-5.20	$2.48x10^{-06}$	$2.52x10^{-04}$	4.20
11-Sep	-1.12	7.78	-5.91	$1.67x10^{-07}$	$2.51x10^{-05}$	6.84
VASP	-1.12	7.87	-6.08	$8.64x10^{-08}$	$1.44x10^{-05}$	7.48
CLIP3	-1.12	5.97	-7.66	$1.73x10^{-10}$	$6.17x10^{-08}$	13.60
EBF3	-1.12	5.17	-5.27	$1.91x10^{-06}$	$2.01x10^{-04}$	4.46
ATP13A3	-1.12	7.72	-5.70	$3.71x10^{-07}$	$5.01x10^{-05}$	6.05
KIRREL3	-1.12	4.47	-11.61	$4.72x10^{-17}$	$1.15x10^{-13}$	28.52
LACTB	-1.13	6.75	-6.62	$1.05x10^{-08}$	$2.26x10^{-06}$	9.55
SPATA18	-1.13	5.02	-6.85	$4.29x10^{-09}$	$1.03x10^{-06}$	10.43
RGS20	-1.13	4.62	-15.16	$2.75x10^{-22}$	$2.33x10^{-18}$	40.37
TUBB6	-1.13	10.68	-6.19	$5.61x10^{-08}$	$9.82x10^{-06}$	7.90
ACLY	-1.14	8.73	-6.60	$1.13x10^{-08}$	$2.41x10^{-06}$	9.47
TTLL1	-1.14	6.34	-7.42	$4.46x10^{-10}$	$1.41x10^{-07}$	12.66
CD59	-1.14	9.15	-5.39	$1.20x10^{-06}$	$1.36x10^{-04}$	4.91
ITGA11	-1.14	6.49	-4.36	$5.18x10^{-05}$	$3.40x10^{-03}$	1.26
FDXR	-1.14	5.02	-6.37	$2.82x10^{-08}$	$5.36x10^{-06}$	8.58
MFGE8	-1.14	7.70	-4.30	$6.21x10^{-05}$	$3.95x10^{-03}$	1.08
VSIR	-1.14	5.88	-6.22	$5.00x10^{-08}$	$8.86x10^{-06}$	8.02
TCEAL3	-1.14	9.03	-5.55	$6.60x10^{-07}$	$8.17x10^{-05}$	5.49
CCDC102A	-1.14	5.06	-10.52	$2.66x10^{-15}$	$3.71x10^{-12}$	24.54
ANXA2P1	-1.15	4.88	-8.60	$4.26x10^{-12}$	$2.52x10^{-09}$	17.25

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
ABL1	-1.15	8.32	-4.51	$3.05x10^{-05}$	$2.15x10^{-03}$	1.77
C16orf45	-1.15	6.23	-8.36	$1.12x10^{-11}$	$5.75x10^{-09}$	16.30
MIPEP	-1.15	5.76	-7.13	$1.42x10^{-09}$	$3.92x10^{-07}$	11.52
CCDC9B	-1.15	6.00	-6.21	$5.31x10^{-08}$	$9.34x10^{-06}$	7.96
ZDHHC7	-1.15	8.85	-6.88	$3.82x10^{-09}$	$9.31x10^{-07}$	10.55
PLAUR	-1.15	7.55	-4.42	$4.16x10^{-05}$	$2.81x10^{-03}$	1.47
GALNT2	-1.15	6.84	-6.36	$2.91x10^{-08}$	$5.50x10^{-06}$	8.55
FKRP	-1.15	5.34	-8.39	$9.92x10^{-12}$	$5.18x10^{-09}$	16.42
ZNF703	-1.15	7.45	-5.01	$5.06x10^{-06}$	$4.63x10^{-04}$	3.51
PRSS23	-1.16	7.66	-4.60	$2.19x10^{-05}$	$1.62x10^{-03}$	2.09
ZDHHC16	-1.16	8.26	-7.56	$2.58x10^{-10}$	$8.64x10^{-08}$	13.20
TFPI	-1.16	5.98	-4.50	$3.11x10^{-05}$	$2.18x10^{-03}$	1.75
CTIF	-1.16	5.65	-13.19	$1.84x10^{-19}$	$8.86x10^{-16}$	33.99
TP53I3	-1.16	8.12	-4.42	$4.17x10^{-05}$	$2.81x10^{-03}$	1.47
CCDC92	-1.17	8.53	-4.94	$6.50x10^{-06}$	$5.71x10^{-04}$	3.27
LOC101928076	-1.17	4.28	-5.19	$2.56x10^{-06}$	$2.59x10^{-04}$	4.17
MEGF6	-1.17	5.78	-5.18	$2.70x10^{-06}$	$2.71x10^{-04}$	4.12
MRVI1	-1.18	5.76	-4.87	$8.41x10^{-06}$	$7.14x10^{-04}$	3.02
PSG5	-1.18	4.89	-8.84	$1.70x10^{-12}$	$1.13x10^{-09}$	18.16
CDC42EP2	-1.18	6.04	-10.62	$1.82x10^{-15}$	$2.71x10^{-12}$	24.92
ERLIN1	-1.18	7.55	-6.54	$1.46x10^{-08}$	$2.97x10^{-06}$	9.23
GYS1	-1.18	7.65	-4.27	$7.09x10^{-05}$	$4.43x10^{-03}$	0.96
FRMD5	-1.18	4.47	-9.50	$1.28x10^{-13}$	$1.14x10^{-10}$	20.72
OSCP1	-1.18	4.98	-8.44	$8.16x10^{-12}$	$4.38x10^{-09}$	16.61
PLIN3	-1.18	9.22	-5.68	$4.12x10^{-07}$	$5.48x10^{-05}$	5.95
HOXA5	-1.18	7.53	-5.14	$3.06x10^{-06}$	$3.01x10^{-04}$	4.00
LMO7	-1.18	5.54	-8.45	$7.93x10^{-12}$	$4.28x10^{-09}$	16.64
MTCL1	-1.18	7.27	-4.10	$1.23x10^{-04}$	$7.14x10^{-03}$	0.43
TMEM155	-1.19	3.95	-7.70	$1.52x10^{-10}$	$5.58x10^{-08}$	13.72
FAS	-1.19	6.16	-4.17	$9.78x10^{-05}$	$5.84x10^{-03}$	0.65
KCNQ5	-1.19	3.99	-6.96	$2.84x10^{-09}$	$7.25x10^{-07}$	10.84
PNKP	-1.19	6.30	-5.72	$3.45x10^{-07}$	$4.69x10^{-05}$	6.13
RTL8C	-1.20	9.98	-5.30	$1.68x10^{-06}$	$1.82x10^{-04}$	4.58
PSG4	-1.20	4.82	-6.74	$6.74x10^{-09}$	$1.54x10^{-06}$	9.99
PXDC1	-1.20	7.84	-12.73	$8.78x10^{-19}$	$3.51x10^{-15}$	32.45
YIF1A	-1.20	9.56	-5.89	$1.82x10^{-07}$	$2.71x10^{-05}$	6.75
AVPI1	-1.20	7.88	-6.23	$4.97x10^{-08}$	$8.82x10^{-06}$	8.02
LASP1	-1.20	10.43	-8.12	$2.80x10^{-11}$	$1.28x10^{-08}$	15.39
NEFM	-1.20	4.09	-7.98	$4.94x10^{-11}$	$2.12x10^{-08}$	14.83
DPCD	-1.21	7.19	-6.66	$8.95x10^{-09}$	$1.97x10^{-06}$	9.71
KCTD10	-1.21	8.43	-8.61	$4.10x10^{-12}$	$2.45x10^{-09}$	17.29
HHIP	-1.21	4.35	-4.04	$1.51x10^{-04}$	$8.49x10^{-03}$	0.23
FAM50B	-1.22	6.12	-6.29	$3.91x10^{-08}$	$7.13x10^{-06}$	8.26
SMAD7	-1.22	7.74	-5.05	$4.35x10^{-06}$	$4.06x10^{-04}$	3.66
TPM4	-1.22	8.25	-5.46	$9.29x10^{-07}$	$1.10x10^{-04}$	5.16
GPR176	-1.23	6.60	-7.41	$4.73x10^{-10}$	$1.48x10^{-07}$	12.60
GALNT1	-1.23	9.00	-7.56	$2.65x10^{-10}$	$8.85x10^{-08}$	13.18
LRRC32	-1.24	7.10	-4.11	$1.19x10^{-04}$	$6.91x10^{-03}$	0.46
SLC7A11	-1.24	5.60	-4.37	$4.97x10^{-05}$	$3.28x10^{-03}$	1.30

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
COTL1	-1.24	7.05	-7.75	$1.24x10^{-10}$	$4.65x10^{-08}$	13.92
GPAM	-1.24	6.41	-4.53	$2.80x10^{-05}$	$2.00x10^{-03}$	1.85
GALNT10	-1.24	6.70	-6.14	$7.00x10^{-08}$	$1.19x10^{-05}$	7.69
LIMA1	-1.24	7.23	-5.93	$1.57x10^{-07}$	$2.39x10^{-05}$	6.90
SH2D4A	-1.24	5.50	-9.18	$4.50x10^{-13}$	$3.54x10^{-10}$	19.47
MSRB3	-1.24	7.67	-5.75	$3.16x10^{-07}$	$4.35x10^{-05}$	6.21
LIMS2	-1.24	6.16	-7.33	$6.47x10^{-10}$	$1.97x10^{-07}$	12.29
NPAS1	-1.25	4.92	-10.56	$2.28x10^{-15}$	$3.30x10^{-12}$	24.70
AFAP1	-1.26	4.94	-7.20	$1.09x10^{-09}$	$3.13x10^{-07}$	11.78
PHLDA3	-1.26	6.42	-8.18	$2.25x10^{-11}$	$1.07x10^{-08}$	15.61
MYL9	-1.26	7.71	-5.20	$2.51x10^{-06}$	$2.54x10^{-04}$	4.19
NME5	-1.26	4.71	-7.17	$1.24x10^{-09}$	$3.48x10^{-07}$	11.65
STK39	-1.26	7.82	-5.08	$3.90x10^{-06}$	$3.71x10^{-04}$	3.76
DHCR7	-1.27	6.31	-7.62	$2.09x10^{-10}$	$7.25x10^{-08}$	13.41
LTBP1	-1.27	8.81	-4.97	$5.89x10^{-06}$	$5.24x10^{-04}$	3.36
TCTEX1D2	-1.27	6.83	-5.45	$9.88x10^{-07}$	$1.16x10^{-04}$	5.10
HK1	-1.27	10.38	-8.00	$4.59x10^{-11}$	$1.98x10^{-08}$	14.90
DUSP2	-1.27	5.65	-5.94	$1.49x10^{-07}$	$2.28x10^{-05}$	6.95
PAPSS2	-1.27	8.98	-5.18	$2.67x10^{-06}$	$2.69x10^{-04}$	4.13
PRDM16	-1.27	4.15	-10.95	$5.28x10^{-16}$	$9.39x10^{-13}$	26.14
EXT1	-1.27	7.08	-5.83	$2.30x10^{-07}$	$3.32x10^{-05}$	6.52
SERPINB7	-1.27	4.20	-6.72	$7.08x10^{-09}$	$1.61x10^{-06}$	9.94
MET	-1.28	5.95	-8.08	$3.32x10^{-11}$	$1.48x10^{-08}$	15.22
NMT2	-1.28	5.25	-6.21	$5.30x10^{-08}$	$9.34x10^{-06}$	7.96
PCDH19	-1.28	4.97	-4.81	$1.04x10^{-05}$	$8.53x10^{-04}$	2.81
PTGES	-1.28	6.90	-4.83	$9.70x10^{-06}$	$8.07x10^{-04}$	2.88
IRX3	-1.28	9.21	-4.44	$3.83x10^{-05}$	$2.61x10^{-03}$	1.55
ACOX2	-1.28	5.56	-7.18	$1.16x10^{-09}$	$3.29x10^{-07}$	11.72
DUSP14	-1.29	8.19	-6.62	$1.08x10^{-08}$	$2.33x10^{-06}$	9.52
SEL1L3	-1.29	5.15	-6.64	$9.88x10^{-09}$	$2.14x10^{-06}$	9.61
MOXD1	-1.29	4.71	-4.69	$1.57x10^{-05}$	$1.22x10^{-03}$	2.41
FAM171A1	-1.29	8.31	-4.80	$1.08x10^{-05}$	$8.83x10^{-04}$	2.77
LINC00619	-1.29	3.54	-7.55	$2.75x10^{-10}$	$9.13x10^{-08}$	13.14
STAM	-1.30	8.23	-8.96	$1.05x10^{-12}$	$7.41x10^{-10}$	18.64
CNTNAP1	-1.30	6.43	-6.08	$8.80x10^{-08}$	$1.45x10^{-05}$	7.46
ARSI	-1.30	5.41	-6.31	$3.61x10^{-08}$	$6.64x10^{-06}$	8.34
SMAGP	-1.30	7.15	-5.48	$8.63x10^{-07}$	$1.03x10^{-04}$	5.23
LOC101929398	-1.30	4.92	-7.57	$2.48x10^{-10}$	$8.34x10^{-08}$	13.24
SPOCD1	-1.31	6.84	-4.01	$1.70x10^{-04}$	$9.35x10^{-03}$	0.12
BNC1	-1.31	3.78	-13.28	$1.31x10^{-19}$	$6.45x10^{-16}$	34.32
HMGA1	-1.31	6.36	-7.77	$1.16x10^{-10}$	$4.41x10^{-08}$	13.99
ZNF580	-1.32	7.16	-7.60	$2.24x10^{-10}$	$7.67x10^{-08}$	13.34
PRKD1	-1.32	4.90	-8.16	$2.41x10^{-11}$	$1.13x10^{-08}$	15.54
ODC1	-1.32	10.00	-5.00	$5.21x10^{-06}$	$4.74x10^{-04}$	3.48
ZMAT3	-1.32	7.12	-6.78	$5.71x10^{-09}$	$1.33x10^{-06}$	10.15
GAP43	-1.33	4.16	-10.36	$4.93x10^{-15}$	$6.40x10^{-12}$	23.93
DRAM1	-1.33	7.74	-4.39	$4.55x10^{-05}$	$3.03x10^{-03}$	1.38
UBASH3B	-1.33	4.60	-12.91	$4.70x10^{-19}$	$1.99x10^{-15}$	33.06
FAM155A	-1.33	4.43	-5.55	$6.76x10^{-07}$	$8.33x10^{-05}$	5.47

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
TNS1	-1.33	6.49	-7.40	$4.98x10^{-10}$	$1.54x10^{-07}$	12.55
PTGER2	-1.34	4.82	-5.29	$1.76x10^{-06}$	$1.89x10^{-04}$	4.53
ASL	-1.34	6.86	-6.93	$3.15x10^{-09}$	$7.85x10^{-07}$	10.73
ANO10	-1.34	7.06	-8.94	$1.13x10^{-12}$	$7.96x10^{-10}$	18.56
ENDOD1	-1.34	6.50	-7.98	$5.03x10^{-11}$	$2.15x10^{-08}$	14.81
RPS6KA2	-1.34	6.57	-7.96	$5.42x10^{-11}$	$2.30x10^{-08}$	14.74
TRIM16	-1.34	6.61	-4.67	$1.74x10^{-05}$	$1.33x10^{-03}$	2.31
RBPMS	-1.35	5.31	-7.13	$1.42x10^{-09}$	$3.91x10^{-07}$	11.52
BRD3OS	-1.35	6.51	-5.89	$1.79x10^{-07}$	$2.66x10^{-05}$	6.77
LINC00565	-1.35	4.58	-10.42	$3.85x10^{-15}$	$5.07x10^{-12}$	24.18
F2RL1	-1.35	4.75	-6.61	$1.09x10^{-08}$	$2.34x10^{-06}$	9.51
TRPC4	-1.35	4.51	-7.07	$1.81x10^{-09}$	$4.85x10^{-07}$	11.28
FMN2	-1.35	4.37	-12.17	$6.45x10^{-18}$	$1.85x10^{-14}$	30.49
DLX2	-1.36	5.05	-7.93	$5.98x10^{-11}$	$2.48x10^{-08}$	14.64
SYNDIG1	-1.36	4.49	-7.51	$3.13x10^{-10}$	$1.02x10^{-07}$	13.01
SORCS2	-1.36	5.52	-5.53	$7.16x10^{-07}$	$8.77x10^{-05}$	5.41
PPP1R13L	-1.36	5.92	-7.60	$2.26x10^{-10}$	$7.71x10^{-08}$	13.33
TRIP6	-1.36	8.53	-6.15	$6.77x10^{-08}$	$1.16x10^{-05}$	7.72
UGDH	-1.37	9.18	-8.48	$7.02x10^{-12}$	$3.83x10^{-09}$	16.76
MYOF	-1.37	7.80	-5.45	$9.58x10^{-07}$	$1.12x10^{-04}$	5.13
AKR1C2	-1.37	6.02	-4.58	$2.33x10^{-05}$	$1.70x10^{-03}$	2.03
CREB3	-1.37	8.31	-8.60	$4.25x10^{-12}$	$2.52x10^{-09}$	17.26
DSEL	-1.38	5.40	-4.89	$7.81x10^{-06}$	$6.70x10^{-04}$	3.09
FAM57A	-1.39	7.74	-7.06	$1.92x10^{-09}$	$5.11x10^{-07}$	11.22
ALCAM	-1.39	7.24	-5.42	$1.09x10^{-06}$	$1.25x10^{-04}$	5.00
FGF1	-1.39	4.66	-10.82	$8.58x10^{-16}$	$1.44x10^{-12}$	25.66
LOXL3	-1.40	7.14	-4.57	$2.45x10^{-05}$	$1.78x10^{-03}$	1.98
ZNF423	-1.40	7.07	-4.80	$1.08x10^{-05}$	$8.78x10^{-04}$	2.78
TUFT1	-1.40	6.45	-4.77	$1.20x10^{-05}$	$9.60x10^{-04}$	2.67
PHLDA2	-1.40	4.88	-9.98	$2.04x10^{-14}$	$2.28x10^{-11}$	22.53
QSOX1	-1.40	6.26	-11.15	$2.58x10^{-16}$	$4.92x10^{-13}$	26.85
CLIP4	-1.41	5.70	-5.65	$4.55x10^{-07}$	$5.98x10^{-05}$	5.86
ERCC2	-1.41	6.66	-10.88	$6.95x10^{-16}$	$1.21x10^{-12}$	25.87
LAMC1	-1.41	9.96	-6.25	$4.51x10^{-08}$	$8.13x10^{-06}$	8.12
MICAL2	-1.41	6.71	-5.38	$1.26x10^{-06}$	$1.41x10^{-04}$	4.86
TBC1D19	-1.42	6.99	-5.82	$2.41x10^{-07}$	$3.45x10^{-05}$	6.48
MGAT4B	-1.43	7.81	-7.11	$1.57x10^{-09}$	$4.29x10^{-07}$	11.42
CYB561A3	-1.43	7.61	-7.58	$2.38x10^{-10}$	$8.05x10^{-08}$	13.28
AJUBA	-1.43	5.76	-8.41	$9.24x10^{-12}$	$4.87x10^{-09}$	16.49
PRSS12	-1.43	3.82	-10.61	$1.90x10^{-15}$	$2.82x10^{-12}$	24.87
GADD45A	-1.43	8.88	-4.23	$7.99x10^{-05}$	$4.90x10^{-03}$	0.84
SRXN1	-1.43	8.69	-9.11	$5.78x10^{-13}$	$4.42x10^{-10}$	19.23
GCNT1	-1.44	6.41	-5.29	$1.78x10^{-06}$	$1.90x10^{-04}$	4.53
CDH6	-1.45	4.81	-7.77	$1.14x10^{-10}$	$4.38x10^{-08}$	14.00
FBLIM1	-1.46	6.96	-8.10	$3.05x10^{-11}$	$1.38x10^{-08}$	15.31
PERP	-1.47	4.86	-11.21	$2.07x10^{-16}$	$4.06x10^{-13}$	27.06
LINC01503	-1.47	6.31	-6.90	$3.48x10^{-09}$	$8.53x10^{-07}$	10.64
S100A16	-1.48	9.43	-5.22	$2.32x10^{-06}$	$2.38x10^{-04}$	4.27
STXBP1	-1.48	7.92	-5.41	$1.13x10^{-06}$	$1.29x10^{-04}$	4.97

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
KIF1BP	-1.48	7.81	-7.93	$6.00x10^{-11}$	$2.48x10^{-08}$	14.64
OLFML3	-1.48	10.38	-4.62	$2.07x10^{-05}$	$1.55x10^{-03}$	2.14
CDC42EP3	-1.49	8.53	-5.58	$6.06x10^{-07}$	$7.61x10^{-05}$	5.58
TM4SF1	-1.50	6.24	-6.94	$3.03x10^{-09}$	$7.62x10^{-07}$	10.77
OXTR	-1.51	5.35	-4.10	$1.23x10^{-04}$	$7.14x10^{-03}$	0.43
AVEN	-1.51	7.30	-7.55	$2.67x10^{-10}$	$8.91x10^{-08}$	13.17
FLNC	-1.51	7.72	-5.08	$3.89x10^{-06}$	$3.71x10^{-04}$	3.76
SH3RF1	-1.52	6.92	-10.25	$7.41x10^{-15}$	$9.12x10^{-12}$	23.53
CAVIN1	-1.52	8.64	-5.46	$9.32x10^{-07}$	$1.10x10^{-04}$	5.16
SLC16A2	-1.53	5.89	-6.74	$6.56x10^{-09}$	$1.50x10^{-06}$	10.01
ANKRD1	-1.53	4.00	-5.37	$1.32x10^{-06}$	$1.46x10^{-04}$	4.82
TPM1	-1.54	8.49	-8.20	$2.09x10^{-11}$	$9.99x10^{-09}$	15.68
ZYX	-1.54	8.09	-5.85	$2.14x10^{-07}$	$3.12x10^{-05}$	6.59
MOK	-1.55	7.39	-5.22	$2.29x10^{-06}$	$2.35x10^{-04}$	4.28
TCF7L1	-1.55	6.35	-5.96	$1.41x10^{-07}$	$2.18x10^{-05}$	7.00
TPD52L1	-1.56	6.64	-4.57	$2.43x10^{-05}$	$1.76x10^{-03}$	1.99
FN1	-1.56	10.29	-5.90	$1.74x10^{-07}$	$2.60x10^{-05}$	6.80
CITED2	-1.56	6.46	-8.17	$2.33x10^{-11}$	$1.10x10^{-08}$	15.57
MAFF	-1.56	7.23	-6.56	$1.34x10^{-08}$	$2.76x10^{-06}$	9.31
EVA1C	-1.58	5.19	-5.21	$2.42x10^{-06}$	$2.47x10^{-04}$	4.22
BAIAP2L1	-1.58	5.50	-6.03	$1.06x10^{-07}$	$1.71x10^{-05}$	7.28
PAMR1	-1.58	7.17	-4.06	$1.43x10^{-04}$	$8.10x10^{-03}$	0.29
FGF5	-1.59	4.68	-12.63	$1.27x10^{-18}$	$4.81x10^{-15}$	32.08
EHD2	-1.59	7.88	-8.60	$4.32x10^{-12}$	$2.55x10^{-09}$	17.24
STK17A	-1.59	6.59	-10.45	$3.53x10^{-15}$	$4.79x10^{-12}$	24.26
MVP	-1.60	7.81	-5.60	$5.60x10^{-07}$	$7.13x10^{-05}$	5.65
B3GALT2	-1.60	3.52	-8.50	$6.51x10^{-12}$	$3.59x10^{-09}$	16.83
MRAP2	-1.60	4.91	-7.22	$1.02x10^{-09}$	$2.95x10^{-07}$	11.85
FAM46B	-1.60	5.34	-10.79	$9.86x10^{-16}$	$1.63x10^{-12}$	25.52
MGST1	-1.61	6.16	-5.43	$1.04x10^{-06}$	$1.20x10^{-04}$	5.05
NFASC	-1.61	4.50	-19.51	$8.09x10^{-28}$	$2.45x10^{-23}$	52.74
NACC2	-1.62	6.19	-10.56	$2.31x10^{-15}$	$3.32x10^{-12}$	24.68
SMURF2	-1.62	7.35	-9.19	$4.37x10^{-13}$	$3.48x10^{-10}$	19.50
ADAMTS2	-1.63	7.38	-6.24	$4.75x10^{-08}$	$8.47x10^{-06}$	8.07
ALDH1B1	-1.63	5.95	-7.77	$1.14x10^{-10}$	$4.37x10^{-08}$	14.01
LMOD1	-1.63	5.41	-7.64	$1.92x10^{-10}$	$6.73x10^{-08}$	13.49
EFEMP2	-1.64	9.05	-7.39	$5.05x10^{-10}$	$1.56x10^{-07}$	12.54
AOX1	-1.64	5.01	-6.30	$3.73x10^{-08}$	$6.82x10^{-06}$	8.31
NEXN	-1.64	7.72	-4.28	$6.72x10^{-05}$	$4.23x10^{-03}$	1.01
SERPINE2	-1.65	7.82	-7.99	$4.84x10^{-11}$	$2.08x10^{-08}$	14.85
POPDC3	-1.65	6.42	-4.49	$3.30x10^{-05}$	$2.30x10^{-03}$	1.69
PDE1C	-1.65	4.38	-16.08	$1.55x10^{-23}$	$1.94x10^{-19}$	43.18
DACT1	-1.65	7.73	-4.76	$1.25x10^{-05}$	$9.96x10^{-04}$	2.63
WNT5B	-1.66	5.29	-9.71	$5.70x10^{-14}$	$5.89x10^{-11}$	21.51
CDK7	-1.66	7.69	-9.07	$6.81x10^{-13}$	$5.09x10^{-10}$	19.06
ARMCX2	-1.66	9.10	-4.72	$1.44x10^{-05}$	$1.13x10^{-03}$	2.49
FADS3	-1.69	7.05	-8.52	$5.96x10^{-12}$	$3.37x10^{-09}$	16.92

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
AKAP12	-1.69	5.88	-7.65	$1.83x10^{-10}$	$6.44x10^{-08}$	13.54
FBN1	-1.69	8.89	-4.79	$1.11x10^{-05}$	$9.00x10^{-04}$	2.75
MXRA7	-1.70	7.83	-10.16	$1.04x10^{-14}$	$1.24x10^{-11}$	23.20
CNN2	-1.71	8.33	-9.34	$2.43x10^{-13}$	$2.05x10^{-10}$	20.08
CPA4	-1.71	5.75	-12.79	$7.14x10^{-19}$	$2.91x10^{-15}$	32.65
BMPER	-1.71	3.82	-8.56	$5.07x10^{-12}$	$2.97x10^{-09}$	17.08
MMP24OS	-1.73	7.35	-11.29	$1.52x10^{-16}$	$3.04x10^{-13}$	27.37
NRG1	-1.73	4.62	-19.89	$2.96x10^{-28}$	$1.25x10^{-23}$	53.71
INA	-1.75	5.37	-7.23	$9.74x10^{-10}$	$2.84x10^{-07}$	11.89
XYLT1	-1.76	5.67	-9.94	$2.36x10^{-14}$	$2.61x10^{-11}$	22.38
CORO2B	-1.77	5.25	-5.71	$3.57x10^{-07}$	$4.84x10^{-05}$	6.09
ALDH1A3	-1.77	5.28	-7.69	$1.53x10^{-10}$	$5.61x10^{-08}$	13.71
TGM2	-1.80	5.94	-8.50	$6.49x10^{-12}$	$3.59x10^{-09}$	16.84
MBNL1-AS1	-1.80	6.43	-6.12	$7.37x10^{-08}$	$1.24x10^{-05}$	7.64
RRAS2	-1.81	7.47	-7.17	$1.23x10^{-09}$	$3.46x10^{-07}$	11.66
SUGCT	-1.81	6.90	-5.08	$3.90x10^{-06}$	$3.71x10^{-04}$	3.76
BAALC	-1.81	6.02	-5.23	$2.20x10^{-06}$	$2.27x10^{-04}$	4.32
CALHM5	-1.82	5.98	-12.39	$2.98x10^{-18}$	$9.41x10^{-15}$	31.25
GNG12	-1.82	7.60	-7.99	$4.83x10^{-11}$	$2.08x10^{-08}$	14.85
MRGPRF	-1.82	6.31	-4.04	$1.52x10^{-04}$	$8.54x10^{-03}$	0.23
TGFB1I1	-1.83	9.35	-6.81	$5.01x10^{-09}$	$1.18x10^{-06}$	10.28
FSTL3	-1.83	6.48	-11.99	$1.21x10^{-17}$	$3.31x10^{-14}$	29.87
KCTD11	-1.84	5.77	-11.94	$1.44x10^{-17}$	$3.85x10^{-14}$	29.70
ITGA3	-1.84	5.59	-10.47	$3.18x10^{-15}$	$4.35x10^{-12}$	24.37
ANO3	-1.84	4.29	-8.39	$9.79x10^{-12}$	$5.15x10^{-09}$	16.43
BST1	-1.84	5.22	-8.98	$9.76x10^{-13}$	$6.94x10^{-10}$	18.71
TIMP3	-1.85	8.92	-4.32	$5.98x10^{-05}$	$3.83x10^{-03}$	1.12
ARNT2	-1.85	5.01	-9.49	$1.33x10^{-13}$	$1.18x10^{-10}$	20.68
PAPPA	-1.85	5.30	-11.27	$1.66x10^{-16}$	$3.28x10^{-13}$	27.28
PLPP4	-1.85	6.37	-4.59	$2.29x10^{-05}$	$1.67x10^{-03}$	2.05
AXL	-1.88	7.53	-9.33	$2.53x10^{-13}$	$2.12x10^{-10}$	20.04
OSR1	-1.88	4.11	-8.78	$2.13x10^{-12}$	$1.37x10^{-09}$	17.94
F2RL2	-1.88	3.89	-9.71	$5.87x10^{-14}$	$5.97x10^{-11}$	21.49
KRT19	-1.88	4.34	-11.33	$1.30x10^{-16}$	$2.76x10^{-13}$	27.52
FZD2	-1.89	6.02	-10.59	$2.08x10^{-15}$	$3.06x10^{-12}$	24.78
GLIPR1	-1.90	8.50	-6.57	$1.31x10^{-08}$	$2.72x10^{-06}$	9.33
NEGR1	-1.90	4.75	-7.02	$2.25x10^{-09}$	$5.87x10^{-07}$	11.07
DCBLD2	-1.91	6.23	-15.26	$1.98x10^{-22}$	$1.83x10^{-18}$	40.69
CXCL6	-1.92	3.68	-6.60	$1.16x10^{-08}$	$2.45x10^{-06}$	9.46
FOXD1	-1.93	6.10	-10.19	$9.40x10^{-15}$	$1.13x10^{-11}$	23.30
LIF	-1.93	5.89	-7.87	$7.78x10^{-11}$	$3.12x10^{-08}$	14.38
CDKN1A	-1.93	9.41	-7.79	$1.04x10^{-10}$	$3.98x10^{-08}$	14.10
RGMB	-1.94	5.67	-9.52	$1.19x10^{-13}$	$1.09x10^{-10}$	20.78
TBC1D2	-1.96	5.74	-9.71	$5.76x10^{-14}$	$5.92x10^{-11}$	21.50
RRAS	-1.96	7.43	-8.23	$1.84x10^{-11}$	$8.88x10^{-09}$	15.81
C11orf87	-1.96	3.59	-8.28	$1.53x10^{-11}$	$7.50x10^{-09}$	15.99
IER3	-1.96	9.28	-5.97	$1.36x10^{-07}$	$2.11x10^{-05}$	7.04

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
CA12	-1.97	6.81	-6.75	$6.26x10^{-09}$	$1.44x10^{-06}$	10.06
CAV1	-1.97	10.15	-5.93	$1.59x10^{-07}$	$2.41x10^{-05}$	6.88
RNF182	-1.97	5.42	-6.72	$7.30x10^{-09}$	$1.65x10^{-06}$	9.91
INHBA	-1.98	7.30	-5.94	$1.47x10^{-07}$	$2.26x10^{-05}$	6.96
P3H2	-1.99	6.99	-8.73	$2.63x10^{-12}$	$1.67x10^{-09}$	17.73
SCRN1	-2.02	7.35	-6.55	$1.38x10^{-08}$	$2.82x10^{-06}$	9.28
SFRP1	-2.02	4.88	-8.04	$3.85x10^{-11}$	$1.70x10^{-08}$	15.08
CCBE1	-2.03	5.18	-10.82	$8.56x10^{-16}$	$1.44x10^{-12}$	25.66
PENK	-2.03	5.22	-6.01	$1.16x10^{-07}$	$1.85x10^{-05}$	7.19
DDAH1	-2.03	6.27	-16.54	$3.83x10^{-24}$	$5.40x10^{-20}$	44.54
TNFRSF10D	-2.03	5.50	-10.66	$1.59x10^{-15}$	$2.38x10^{-12}$	25.05
FOSL1	-2.04	6.02	-8.00	$4.59x10^{-11}$	$1.98x10^{-08}$	14.91
CRLF1	-2.04	5.59	-9.70	$6.12x10^{-14}$	$6.17x10^{-11}$	21.44
SMIM3	-2.04	7.61	-5.75	$3.06x10^{-07}$	$4.22x10^{-05}$	6.24
FANK1	-2.05	4.61	-9.43	$1.69x10^{-13}$	$1.47x10^{-10}$	20.44
SLC1A1	-2.05	5.69	-7.44	$4.21x10^{-10}$	$1.34x10^{-07}$	12.72
PLPP3	-2.07	9.12	-5.83	$2.32x10^{-07}$	$3.34x10^{-05}$	6.51
FBLN5	-2.07	6.93	-5.20	$2.50x10^{-06}$	$2.53x10^{-04}$	4.19
PAWR	-2.07	5.45	-7.26	$8.47x10^{-10}$	$2.51x10^{-07}$	12.03
GDF5	-2.08	6.27	-10.06	$1.51x10^{-14}$	$1.75x10^{-11}$	22.83
CSRP1	-2.09	10.02	-7.66	$1.75x10^{-10}$	$6.23x10^{-08}$	13.58
MYADM	-2.10	8.82	-10.26	$7.19x10^{-15}$	$8.90x10^{-12}$	23.56
MGARP	-2.11	4.46	-7.80	$9.94x10^{-11}$	$3.86x10^{-08}$	14.14
KRT18	-2.11	6.90	-5.37	$1.33x10^{-06}$	$1.47x10^{-04}$	4.81
DCBLD1	-2.11	6.47	-13.82	$2.16x10^{-20}$	$1.24x10^{-16}$	36.09
SEMA3C	-2.13	6.22	-4.38	$4.75x10^{-05}$	$3.15x10^{-03}$	1.34
LOXL1	-2.13	8.88	-4.06	$1.41x10^{-04}$	$7.98x10^{-03}$	0.30
GATA6	-2.13	4.63	-10.54	$2.49x10^{-15}$	$3.51x10^{-12}$	24.61
MAMLD1	-2.13	5.86	-9.14	$5.17x10^{-13}$	$4.01x10^{-10}$	19.34
PPP1R14A	-2.17	5.18	-4.75	$1.31x10^{-05}$	$1.04x10^{-03}$	2.59
WISP3	-2.17	4.01	-9.67	$6.76x10^{-14}$	$6.69x10^{-11}$	21.35
PFKP	-2.19	8.99	-6.93	$3.13x10^{-09}$	$7.80x10^{-07}$	10.74
LOXL1-AS1	-2.19	4.81	-8.56	$5.11x10^{-12}$	$2.98x10^{-09}$	17.07
LOC100288911	-2.19	5.45	-12.48	$2.16x10^{-18}$	$7.15x10^{-15}$	31.56
SCUBE3	-2.20	5.77	-11.62	$4.67x10^{-17}$	$1.15x10^{-13}$	28.53
PXDN	-2.22	8.42	-6.05	$9.95x10^{-08}$	$1.61x10^{-05}$	7.34
ARSJ	-2.24	6.05	-8.34	$1.18x10^{-11}$	$6.02x10^{-09}$	16.25
TNFRSF12A	-2.25	8.19	-8.62	$3.95x10^{-12}$	$2.37x10^{-09}$	17.33
NTM	-2.25	5.83	-8.66	$3.40x10^{-12}$	$2.08x10^{-09}$	17.48
LOC728392	-2.26	6.99	-7.40	$4.89x10^{-10}$	$1.52x10^{-07}$	12.57
MIR31HG	-2.26	5.80	-9.07	$6.83x10^{-13}$	$5.09x10^{-10}$	19.06
PEAR1	-2.27	5.84	-11.40	$1.02x10^{-16}$	$2.26x10^{-13}$	27.76
HACD1	-2.29	5.54	-9.96	$2.26x10^{-14}$	$2.52x10^{-11}$	22.43
LOX	-2.29	8.75	-4.99	$5.30x10^{-06}$	$4.80x10^{-04}$	3.46
LDOC1	-2.30	7.97	-6.58	$1.25x10^{-08}$	$2.61x10^{-06}$	9.38
IGFBP4	-2.30	9.91	-6.19	$5.61x10^{-08}$	$9.82x10^{-06}$	7.90
SPOCK1	-2.31	7.99	-4.48	$3.33x10^{-05}$	$2.32x10^{-03}$	1.68
NDN	-2.31	7.35	-5.59	$5.74x10^{-07}$	$7.26x10^{-05}$	5.63
4-Mar	-2.32	5.08	-22.16	$9.13x10^{-31}$	$4.83x10^{-26}$	59.24

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
LINC01119	-2.32	5.34	-9.14	$5.27x10^{-13}$	$4.07x10^{-10}$	19.32
G6PD	-2.32	6.66	-11.14	$2.71x10^{-16}$	$5.07x10^{-13}$	26.80
IGFBP6	-2.33	8.27	-6.49	$1.76x10^{-08}$	$3.51x10^{-06}$	9.04
FLG	-2.33	3.72	-7.03	$2.10x10^{-09}$	$5.55x10^{-07}$	11.14
RPS11	-2.33	7.20	-6.80	$5.16x10^{-09}$	$1.21x10^{-06}$	10.25
AMOTL2	-2.34	8.15	-9.13	$5.43x10^{-13}$	$4.18x10^{-10}$	19.29
PLAT	-2.34	6.58	-5.52	$7.40x10^{-07}$	$9.03x10^{-05}$	5.38
SERPINB2	-2.36	4.27	-7.93	$6.04x10^{-11}$	$2.49x10^{-08}$	14.63
ALPK2	-2.37	5.27	-11.45	$8.61x10^{-17}$	$1.98x10^{-13}$	27.93
BDKRB1	-2.38	4.82	-14.26	$5.00x10^{-21}$	$3.41x10^{-17}$	37.53
EVA1A	-2.38	6.52	-8.55	$5.22x10^{-12}$	$3.02x10^{-09}$	17.05
C12orf75	-2.40	8.54	-6.40	$2.48x10^{-08}$	$4.79x10^{-06}$	8.71
LYPD6B	-2.40	4.98	-10.93	$5.79x10^{-16}$	$1.02x10^{-12}$	26.05
LYPD1	-2.41	5.63	-5.29	$1.76x10^{-06}$	$1.89x10^{-04}$	4.54
KCNE4	-2.41	5.66	-9.35	$2.31x10^{-13}$	$1.97x10^{-10}$	20.13
MIF-AS1	-2.42	4.98	-10.43	$3.73x10^{-15}$	$4.97x10^{-12}$	24.21
KCNK2	-2.44	5.30	-8.85	$1.61x10^{-12}$	$1.07x10^{-09}$	18.21
CNN1	-2.48	6.29	-5.48	$8.72x10^{-07}$	$1.04x10^{-04}$	5.22
CYR61	-2.48	9.82	-6.15	$6.67x10^{-08}$	$1.14x10^{-05}$	7.74
SLC14A1	-2.48	4.16	-8.11	$3.00x10^{-11}$	$1.36x10^{-08}$	15.33
LURAP1L	-2.50	6.02	-7.70	$1.48x10^{-10}$	$5.44x10^{-08}$	13.75
NT5E	-2.50	6.37	-9.56	$1.02x10^{-13}$	$9.39x10^{-11}$	20.94
COL8A1	-2.52	5.70	-9.64	$7.61x10^{-14}$	$7.29x10^{-11}$	21.23
CHI3L1	-2.53	5.33	-5.94	$1.50x10^{-07}$	$2.29x10^{-05}$	6.94
FGF7P3	-2.54	5.49	-10.44	$3.57x10^{-15}$	$4.81x10^{-12}$	24.25
WNT5A	-2.54	7.87	-6.51	$1.61x10^{-08}$	$3.24x10^{-06}$	9.13
PRR16	-2.54	6.01	-8.07	$3.50x10^{-11}$	$1.55x10^{-08}$	15.17
SHISAL1	-2.56	6.08	-10.26	$7.00x10^{-15}$	$8.72x10^{-12}$	23.59
CYP1B1	-2.57	7.66	-5.86	$2.08x10^{-07}$	$3.04x10^{-05}$	6.62
CAP2	-2.58	6.58	-6.23	$4.92x10^{-08}$	$8.75x10^{-06}$	8.03
IGFBP3	-2.61	9.97	-7.47	$3.76x10^{-10}$	$1.21x10^{-07}$	12.83
CEMIP	-2.62	6.96	-8.27	$1.58x10^{-11}$	$7.73x10^{-09}$	15.95
FZD7	-2.62	7.69	-7.64	$1.94x10^{-10}$	$6.75x10^{-08}$	13.48
CRIM1	-2.65	7.88	-11.59	$5.08x10^{-17}$	$1.22x10^{-13}$	28.45
MIR100HG	-2.65	7.42	-5.58	$5.88x10^{-07}$	$7.43x10^{-05}$	5.60
CCDC80	-2.66	7.90	-9.92	$2.64x10^{-14}$	$2.86x10^{-11}$	22.28
NTN4	-2.70	6.08	-5.81	$2.48x10^{-07}$	$3.54x10^{-05}$	6.45
ADAMTS1	-2.70	7.81	-7.20	$1.07x10^{-09}$	$3.10x10^{-07}$	11.79
THBS1	-2.71	6.68	-8.91	$1.30x10^{-12}$	$8.94x10^{-10}$	18.43
EFEMP1	-2.73	6.28	-6.89	$3.67x10^{-09}$	$8.98x10^{-07}$	10.58
BDNF	-2.77	5.69	-8.84	$1.70x10^{-12}$	$1.13x10^{-09}$	18.16
GREM1	-2.78	7.33	-4.66	$1.75x10^{-05}$	$1.34x10^{-03}$	2.30
BOK	-2.78	6.28	-12.61	$1.36x10^{-18}$	$5.04x10^{-15}$	32.02
WASF3	-2.78	6.66	-7.86	$8.12x10^{-11}$	$3.23x10^{-08}$	14.34
AHRR	-2.81	5.24	-7.74	$1.27x10^{-10}$	$4.75x10^{-08}$	13.90
RAB3B	-2.84	4.66	-19.69	$5.05x10^{-28}$	$1.78x10^{-23}$	53.20
CLDN11	-2.89	6.13	-8.52	$5.88x10^{-12}$	$3.34x10^{-09}$	16.93
C5orf30	-2.89	6.66	-12.33	$3.62x10^{-18}$	$1.08x10^{-14}$	31.05
CCND1	-2.93	7.69	-9.06	$7.23x10^{-13}$	$5.35x10^{-10}$	19.00

Table SII. Continued.

Gene symbol	log_2FC	AveExp	t-score	P-value	P^{adj}	B-value
TNFRSF11B	-2.95	5.74	-7.29	$7.46x10^{-10}$	$2.25x10^{-07}$	12.15
MFAP5	-2.99	5.67	-4.47	$3.44x10^{-05}$	$2.37x10^{-03}$	1.65
VEGFC	-2.99	8.16	-10.21	$8.72x10^{-15}$	$1.06x10^{-11}$	23.37
CXCL12	-3.05	8.01	-6.34	$3.24x10^{-08}$	$6.04x10^{-06}$	8.44
APCDD1L	-3.06	6.31	-12.11	$7.95x10^{-18}$	$2.24x10^{-14}$	30.28
GREM2	-3.08	4.44	-14.40	$3.15x10^{-21}$	$2.22x10^{-17}$	37.98
TAGLN	-3.10	9.01	-7.36	$5.75x10^{-10}$	$1.76x10^{-07}$	12.41
TMEM200A	-3.14	7.73	-6.83	$4.66x10^{-09}$	$1.11x10^{-06}$	10.35
IL6	-3.14	6.40	-7.54	$2.86x10^{-10}$	$9.47x10^{-08}$	13.10
AMIGO2	-3.18	7.47	-7.98	$4.98x10^{-11}$	$2.13x10^{-08}$	14.82
SYNC	-3.22	6.45	-8.44	$8.11x10^{-12}$	$4.36x10^{-09}$	16.62
FST	-3.23	6.35	-10.75	$1.13x10^{-15}$	$1.76x10^{-12}$	25.39
ENC1	-3.28	7.50	-12.60	$1.40x10^{-18}$	$5.12x10^{-15}$	31.99
HAS2	-3.30	7.43	-6.76	$6.18x10^{-09}$	$1.42x10^{-06}$	10.07
SERPINE1	-3.34	6.53	-8.99	$9.30x10^{-13}$	$6.67x10^{-10}$	18.76
CTGF	-3.36	9.96	-7.76	$1.16x10^{-10}$	$4.41x10^{-08}$	13.99
LINC01279	-3.39	7.16	-7.49	$3.50x10^{-10}$	$1.13x10^{-07}$	12.90
BEX1	-3.44	5.21	-10.69	$1.39x10^{-15}$	$2.10x10^{-12}$	25.19
LINC00968	-3.46	4.39	-14.04	$1.01x10^{-20}$	$6.71x10^{-17}$	36.83
FHL2	-3.47	9.26	-11.05	$3.67x10^{-16}$	$6.64x10^{-13}$	26.50
KRTAP1-1	-3.49	4.81	-15.05	$3.86x10^{-22}$	$3.15x10^{-18}$	40.04
MEST	-3.49	8.68	-5.58	$6.05x10^{-07}$	$7.60x10^{-05}$	5.58
NQO1	-3.59	7.59	-11.32	$1.40x10^{-16}$	$2.84x10^{-13}$	27.45
ITGBL1	-3.65	6.73	-9.92	$2.63x10^{-14}$	$2.86x10^{-11}$	22.28
FGF2	-3.65	4.76	-23.93	$1.39x10^{-32}$	$1.47x10^{-27}$	63.21
HAS1	-3.79	5.74	-10.87	$7.17x10^{-16}$	$1.23x10^{-12}$	25.84
GAS6	-3.86	8.30	-12.45	$2.34x10^{-18}$	$7.52x10^{-15}$	31.48
VGLL3	-3.91	5.93	-8.69	$3.06x10^{-12}$	$1.90x10^{-09}$	17.58
LTBP2	-3.99	7.91	-12.64	$1.20x10^{-18}$	$4.67x10^{-15}$	32.14
DSP	-4.00	6.85	-8.51	$6.14x10^{-12}$	$3.43x10^{-09}$	16.89
NPR3	-4.07	5.77	-16.82	$1.66x10^{-24}$	$3.19x10^{-20}$	45.36
RGS4	-4.08	6.30	-12.49	$2.07x10^{-18}$	$7.07x10^{-15}$	31.61
PTX3	-4.19	8.95	-7.46	$3.81x10^{-10}$	$1.22x10^{-07}$	12.82
TFPI2	-4.23	5.06	-11.62	$4.55x10^{-17}$	$1.13x10^{-13}$	28.56
STC2	-4.25	6.78	-16.57	$3.47x10^{-24}$	$5.25x10^{-20}$	44.64
DKK1	-4.68	7.14	-7.45	$4.00x10^{-10}$	$1.28x10^{-07}$	12.77
KRTAP1-5	-5.36	5.76	-17.48	$2.37x10^{-25}$	$5.57x10^{-21}$	47.25

OS, osteosarcoma; log_2FC, log_2(fold change); AveExp, average expression across all samples; P^{adj}, adjusted P-value; t-score, statistic value for t-test; B, negative B-statistic value.