

Table SI. 675 up-regulated differentially expressed mRNAs in oral squamous cell carcinoma.

Gene	logFC	logCPM	P-value	FDR
BMP1 ENSG00000168487 protein_coding	2.076125625	6.529909846	5.38E-36	2.14E-34
LAMC2 ENSG00000058085 protein_coding	4.26998643	10.51426873	2.52E-32	8.10E-31
MFAP2 ENSG00000117122 protein_coding	2.84986877	5.943537518	6.91E-31	2.03E-29
GPRIN1 ENSG00000169258 protein_coding	2.141495849	4.374277882	1.07E-30	3.13E-29
CA9 ENSG00000107159 protein_coding	6.304003507	5.115819489	1.40E-30	4.07E-29
KIF2C ENSG00000142945 protein_coding	2.011178226	5.356357846	1.77E-30	5.11E-29
IL11 ENSG00000095752 protein_coding	4.464576183	3.110787808	3.71E-30	1.05E-28
TGFB ENSG00000120708 protein_coding	3.886040374	9.995965728	9.32E-30	2.59E-28
SERP ENSG00000149257 protein_coding	2.249786048	8.419089241	1.31E-29	3.61E-28
INHBA ENSG00000122641 protein_coding	4.211555372	7.226910705	5.65E-29	1.50E-27
CDCA5 ENSG00000146670 protein_coding	2.062249084	5.540988498	1.28E-28	3.38E-27
MYBL2 ENSG00000101057 protein_coding	2.214916497	6.342058635	1.62E-28	4.24E-27
DPF1 ENSG00000011332 protein_coding	3.106204793	1.987503786	7.48E-28	1.87E-26
HOXC6 ENSG00000197757 protein_coding	3.502295726	0.953510587	7.48E-28	1.87E-26
HOXA10 ENSG00000253293 protein_coding	4.135113588	1.737046371	9.09E-28	2.26E-26
LOXL2 ENSG00000134013 protein_coding	3.148101342	6.367258237	1.73E-27	4.22E-26
ZNF114 ENSG00000178150 protein_coding	3.921618932	2.408797181	1.91E-27	4.62E-26
C1QTNF6 ENSG00000133466 protein_coding	2.701496589	5.553481535	1.05E-26	2.46E-25
PTHLH ENSG00000087494 protein_coding	4.009616026	7.750580468	1.18E-26	2.78E-25
CEP55 ENSG00000138180 protein_coding	2.085919936	5.492178819	1.32E-26	3.10E-25
DNMT3B ENSG00000088305 protein_coding	2.527353092	3.573776971	1.62E-26	3.78E-25
DFNA5 ENSG00000105928 protein_coding	2.445599121	5.464859808	1.77E-26	4.11E-25
OFCC1 ENSG00000181355 protein_coding	4.508599165	-1.202916956	1.79E-26	4.15E-25
IGF2BP2 ENSG00000073792 protein_coding	2.553180397	6.255471773	5.31E-26	1.19E-24
PLAU ENSG00000122861 protein_coding	2.584055794	8.334424869	1.08E-25	2.37E-24
ARTN ENSG00000117407 protein_coding	3.385192667	3.532934658	4.77E-25	1.01E-23
GJC1 ENSG00000182963 protein_coding	2.691198262	3.729077447	4.78E-25	1.01E-23
COL12A1 ENSG00000111799 protein_coding	3.134212875	8.610764788	4.94E-25	1.04E-23
CHST11 ENSG00000171310 protein_coding	2.058383011	5.695790445	1.21E-24	2.52E-23
FOXM1 ENSG00000111206 protein_coding	2.026749997	6.079232502	1.53E-24	3.15E-23
KIF14 ENSG00000118193 protein_coding	2.149746314	3.908100155	1.70E-24	3.49E-23
DCBLD1 ENSG00000164465 protein_coding	2.201086152	5.643100429	3.02E-24	6.11E-23
PKMYT1 ENSG00000127564 protein_coding	2.057080677	5.193140435	4.49E-24	9.02E-23
MMP11 ENSG00000099953 protein_coding	4.904387229	6.862923137	7.93E-24	1.57E-22
HOXC8 ENSG00000037965 protein_coding	3.996692902	0.295200249	1.07E-23	2.09E-22
ITGA5 ENSG00000161638 protein_coding	2.512247155	7.721016774	1.09E-23	2.13E-22
PLAC1 ENSG00000170965 protein_coding	4.693945943	1.130432596	1.45E-23	2.79E-22
PPEF1 ENSG00000086717 protein_coding	3.654733302	0.182054361	1.60E-23	3.07E-22
FZD2 ENSG00000180340 protein_coding	2.106965138	2.791136854	1.82E-23	3.47E-22
METTL11 ENSG00000203740 protein_coding	4.605490531	-2.00540021	9.85E-23	1.80E-21
HOXA11 ENSG00000005073 protein_coding	5.084161791	0.108897906	1.02E-22	1.85E-21
COL27A1 ENSG00000196739 protein_coding	2.099347306	5.996298294	1.06E-22	1.91E-21
HMGA2 ENSG00000149948 protein_coding	4.946814811	5.455968081	1.30E-22	2.35E-21
COL5A1 ENSG00000130635 protein_coding	3.313620542	9.142047991	1.68E-22	3.00E-21

Table SI. Continued.

Gene	logFC	logCPM	P-value	FDR
COL4A1 ENSG00000187498 protein_coding	2.316131647	8.773203508	8.67E-22	1.48E-20
AIM2 ENSG00000163568 protein_coding	3.438986974	4.522224038	1.00E-21	1.70E-20
ULBP2 ENSG00000131015 protein_coding	2.266976683	4.096358881	1.17E-21	1.98E-20
LAMA3 ENSG00000053747 protein_coding	3.286273588	9.112466271	1.37E-21	2.30E-20
PAEP ENSG00000122133 protein_coding	5.89254755	1.255519456	1.38E-21	2.31E-20
COL4A5 ENSG00000188153 protein_coding	2.191939705	6.232859558	1.43E-21	2.39E-20
HOXC9 ENSG00000180806 protein_coding	3.358858136	0.721750799	1.45E-21	2.43E-20
GRIN2D ENSG00000105464 protein_coding	3.795403425	3.668536547	1.98E-21	3.29E-20
HOXD10 ENSG00000128710 protein_coding	3.493664754	3.39382025	2.39E-21	3.93E-20
MMP12 ENSG00000262406 protein_coding	3.822367215	6.002476407	4.36E-21	7.04E-20
MMP9 ENSG00000100985 protein_coding	3.785069957	7.545583135	6.84E-21	1.09E-19
COL10A1 ENSG00000123500 protein_coding	5.164261668	5.044633165	1.04E-20	1.63E-19
COL5A2 ENSG00000204262 protein_coding	3.189526429	8.563541861	2.60E-20	3.96E-19
ISG15 ENSG00000187608 protein_coding	4.013585043	8.553071953	2.70E-20	4.11E-19
ICAM5 ENSG00000105376 protein_coding	2.797346582	1.679645683	2.86E-20	4.34E-19
WDR66 ENSG00000158023 protein_coding	2.10966605	5.773638575	5.02E-20	7.47E-19
HAPLN1 ENSG00000145681 protein_coding	3.158478573	1.37043854	5.64E-20	8.34E-19
LHX5 ENSG00000089116 protein_coding	4.803909417	0.974373848	7.09E-20	1.04E-18
ADAMTS6 ENSG00000049192 protein_coding	2.747906686	1.237696731	7.24E-20	1.06E-18
HOXC4 ENSG00000198353 protein_coding	2.867877774	1.100137067	7.39E-20	1.08E-18
COL7A1 ENSG00000114270 protein_coding	2.227780149	8.783631124	7.54E-20	1.10E-18
HOXC11 ENSG00000123388 protein_coding	3.452621456	1.536552319	9.04E-20	1.30E-18
SERPINE1 ENSG00000106366 protein_coding	3.182550173	8.703500423	1.63E-19	2.31E-18
CAMK2N2 ENSG00000163888 protein_coding	2.711671945	0.112195316	1.79E-19	2.51E-18
MMP13 ENSG00000137745 protein_coding	6.646323677	7.738555816	2.94E-19	4.08E-18
KIF26B ENSG00000162849 protein_coding	2.420438373	4.676357904	3.17E-19	4.38E-18
COL5A3 ENSG00000080573 protein_coding	2.343596256	6.582444027	3.91E-19	5.37E-18
GBX2 ENSG00000168505 protein_coding	3.853106469	-0.284599898	3.97E-19	5.46E-18
WISP1 ENSG00000104415 protein_coding	3.141052561	3.868673621	5.00E-19	6.82E-18
ITGA6 ENSG00000091409 protein_coding	2.134826936	9.915807559	5.35E-19	7.27E-18
ADAMTS2 ENSG00000087116 protein_coding	2.960223861	6.459393301	5.44E-19	7.39E-18
PMEPA1 ENSG00000124225 protein_coding	2.211690354	7.248418851	5.69E-19	7.72E-18
PDPN ENSG00000162493 protein_coding	2.213994391	7.212966686	6.13E-19	8.29E-18
E2F7 ENSG00000165891 protein_coding	2.032657724	3.744332782	7.31E-19	9.82E-18
ADAM12 ENSG00000148848 protein_coding	3.356815054	5.859461032	7.60E-19	1.02E-17
TM4SF19 ENSG00000145107 protein_coding	2.751603828	2.807671996	8.43E-19	1.13E-17
HOXD11 ENSG00000128713 protein_coding	3.526445607	2.611863033	1.07E-18	1.42E-17
ADAMTS14 ENSG00000138316 protein_coding	2.404168678	3.30858583	1.19E-18	1.57E-17
NRIP3 ENSG00000175352 protein_coding	2.422956024	2.577259672	1.27E-18	1.68E-17
PLPP4 ENSG00000203805 protein_coding	4.075717641	2.08939032	1.44E-18	1.89E-17
GNGT1 ENSG00000127928 protein_coding	3.658945992	0.62231232	1.60E-18	2.10E-17
SPOCD1 ENSG00000134668 protein_coding	2.992957167	2.98578822	1.61E-18	2.10E-17
HOXB7 ENSG00000260027 protein_coding	3.814526095	2.905868437	2.58E-18	3.32E-17
ADAMTS12 ENSG00000151388 protein_coding	3.269136913	4.748997695	2.64E-18	3.40E-17

Table SI. Continued.

Gene	logFC	logCPM	P-value	FDR
SH2D2AIENSG00000027869 protein_coding	2.205204773	3.676327515	3.03E-18	3.89E-17
IFI6IENSG00000126709 protein_coding	3.163402895	8.952712977	3.43E-18	4.37E-17
STC2IENSG00000113739 protein_coding	2.77273105	4.63367188	3.59E-18	4.57E-17
TENM2IENSG00000145934 protein_coding	2.587143229	7.488449533	4.01E-18	5.08E-17
LBX2IENSG00000179528 protein_coding	2.258966536	-0.337581943	4.44E-18	5.60E-17
GASTIENSG00000184502 protein_coding	5.113796236	1.425457824	4.47E-18	5.64E-17
CAGE1IENSG00000164304 protein_coding	2.386173198	-1.017865672	7.81E-18	9.60E-17
COL4A6IENSG00000197565 protein_coding	2.892412837	5.376590044	7.92E-18	9.73E-17
HOXB9IENSG00000170689 protein_coding	6.106796377	1.041524984	7.97E-18	9.78E-17
CYP27B1IENSG00000111012 protein_coding	2.722906673	3.705550466	1.04E-17	1.27E-16
APBA2IENSG00000034053 protein_coding	2.301177962	2.846668089	1.05E-17	1.28E-16
COL2A1IENSG00000139219 protein_coding	4.287487676	1.147342696	1.18E-17	1.43E-16
PLEK2IENSG00000100558 protein_coding	2.084479044	6.378001006	1.18E-17	1.43E-16
HTR1DIENSG00000179546 protein_coding	3.697914946	-0.026106386	1.93E-17	2.30E-16
TCF24IENSG00000261787 protein_coding	2.762892641	-1.887643089	2.28E-17	2.71E-16
IFI44IENSG00000137965 protein_coding	2.423646563	6.149296569	2.51E-17	2.97E-16
GPR158IENSG00000151025 protein_coding	3.890166961	2.127782713	2.58E-17	3.05E-16
FSTIENSG00000134363 protein_coding	2.79449791	6.924408314	4.05E-17	4.70E-16
LAMB3IENSG00000196878 protein_coding	2.033729431	9.980450176	4.37E-17	5.06E-16
ONECUT2IENSG00000119547 protein_coding	3.112252514	0.47794245	5.29E-17	6.09E-16
GPR176IENSG00000166073 protein_coding	2.393605224	4.669440204	5.54E-17	6.38E-16
GPR39IENSG00000183840 protein_coding	2.670577348	2.370959722	6.18E-17	7.08E-16
FOXD1IENSG00000251493 protein_coding	2.261321413	2.95817734	1.89E-16	2.09E-15
CNGB1IENSG00000070729 protein_coding	4.100799773	4.390369987	2.12E-16	2.33E-15
IBSPIENSG00000029559 protein_coding	4.295689409	0.741367168	3.13E-16	3.38E-15
HIST1H2AGIENSG00000196787 protein_coding	2.162080239	1.271372841	3.81E-16	4.08E-15
NT5DC4IENSG00000144130 protein_coding	2.813042866	-1.869168307	4.49E-16	4.77E-15
CREG2IENSG00000175874 protein_coding	3.434505817	2.454315331	4.71E-16	5.01E-15
FSTL3IENSG00000070404 protein_coding	2.341290554	6.008266121	6.73E-16	7.07E-15
AMIGO2IENSG00000139211 protein_coding	2.328978879	5.263211659	7.96E-16	8.30E-15
SLC2A1IENSG00000117394 protein_coding	2.007165539	10.11333563	8.04E-16	8.38E-15
CYP27C1IENSG00000186684 protein_coding	2.433638365	3.719883743	8.88E-16	9.23E-15
EPHB2IENSG00000133216 protein_coding	2.247107084	4.986296335	8.91E-16	9.26E-15
HTR7IENSG00000148680 protein_coding	2.678606825	3.536689256	9.77E-16	1.01E-14
ADAMTS7IENSG00000136378 protein_coding	2.010426025	3.417930983	1.05E-15	1.08E-14
FAPIENSG00000078098 protein_coding	2.677748223	4.798760377	1.06E-15	1.09E-14
IGF2BP1IENSG00000159217 protein_coding	5.856699721	3.08029101	1.06E-15	1.09E-14
BST2IENSG00000130303 protein_coding	2.627468518	8.280624374	1.10E-15	1.13E-14
COL1A1IENSG00000108821 protein_coding	3.122590939	12.38427713	1.15E-15	1.18E-14
LY6KIENSG00000160886 protein_coding	2.323802485	5.024417778	1.19E-15	1.22E-14
SUN3IENSG00000164744 protein_coding	4.541429698	-0.523355644	1.21E-15	1.24E-14
CSMD2IENSG00000121904 protein_coding	3.207057241	1.877745895	2.17E-15	2.19E-14
PCDHGC5IENSG00000240764 protein_coding	4.085179626	2.384111458	2.67E-15	2.66E-14
FOXL2IENSG00000183770 protein_coding	3.909252715	1.394392427	2.87E-15	2.84E-14

Table SI. Continued.

Gene	logFC	logCPM	P-value	FDR
WNT7AIENSG00000154764 protein_coding	3.015838521	3.69848523	3.13E-15	3.09E-14
ALPPIENSG00000163283 protein_coding	6.009650757	-0.372656826	3.61E-15	3.53E-14
OAS2IENSG00000111335 protein_coding	2.101230881	7.799287932	4.83E-15	4.68E-14
HIST1H2AIENSG00000196747 protein_coding	2.781775005	-0.464319404	4.93E-15	4.77E-14
DUSP9IENSG00000130829 protein_coding	3.171107101	2.892960852	5.21E-15	5.02E-14
CSF2IENSG00000164400 protein_coding	4.457993315	1.843476455	5.33E-15	5.13E-14
IL24IENSG00000162892 protein_coding	3.637188326	4.421018839	5.98E-15	5.73E-14
POSTNIENSG00000133110 protein_coding	3.409591869	8.46377017	6.48E-15	6.20E-14
HOXA13IENSG00000106031 protein_coding	4.567072706	-0.231431291	8.47E-15	8.01E-14
SH2D4BIENSG00000178217 protein_coding	2.709994985	-1.80566799	8.80E-15	8.29E-14
FBN2IENSG00000138829 protein_coding	3.493745566	5.153441429	9.36E-15	8.79E-14
CAV1IENSG00000105974 protein_coding	2.004774009	8.783952315	1.04E-14	9.77E-14
AC008687.4IENSG00000268655 protein_coding	2.808109208	-2.167641126	1.06E-14	9.89E-14
ZIC2IENSG00000043355 protein_coding	2.832628345	2.512936633	1.11E-14	1.04E-13
FEZ1IENSG00000149557 protein_coding	2.296311295	5.378010867	1.18E-14	1.10E-13
SHOX2IENSG00000168779 protein_coding	2.301276845	2.296989286	1.18E-14	1.10E-13
TREM1IENSG00000124731 protein_coding	3.007906422	3.604144296	1.22E-14	1.13E-13
IFI27IENSG00000165949 protein_coding	2.211581223	9.784562093	1.28E-14	1.18E-13
RSAD2IENSG00000134321 protein_coding	2.952405263	6.088088984	1.49E-14	1.36E-13
BMP8AIENSG00000183682 protein_coding	2.538836401	-0.327057032	1.51E-14	1.38E-13
TNCIENSG00000041982 protein_coding	2.395099029	9.986137376	1.82E-14	1.66E-13
PPP4R4IENSG00000119698 protein_coding	2.673712377	2.499497183	1.93E-14	1.74E-13
ENO2IENSG00000111674 protein_coding	2.294294688	5.028589553	2.15E-14	1.94E-13
C6orf141IENSG00000197261 protein_coding	2.401570121	3.317568337	2.24E-14	2.02E-13
LAMP5IENSG00000125869 protein_coding	2.8113824	2.779030397	2.34E-14	2.11E-13
FN1IENSG00000115414 protein_coding	3.33951715	11.1006942	2.51E-14	2.25E-13
TM4SF19-TCTEX1D2IENSG00000273331 protein_coding	3.036204065	-2.123797498	3.05E-14	2.71E-13
TERTIENSG00000164362 protein_coding	2.617370466	-0.805118578	3.60E-14	3.18E-13
CGB8IENSG00000213030 protein_coding	5.868623406	-1.446173671	4.05E-14	3.56E-13
UCN2IENSG00000145040 protein_coding	2.269706409	2.642000516	4.43E-14	3.88E-13
COL11A1IENSG00000060718 protein_coding	4.285788092	5.899335816	4.47E-14	3.91E-13
HIST1H3HIENSG00000278828 protein_coding	2.291737041	2.200227908	4.98E-14	4.34E-13
HOXC5IENSG00000172789 protein_coding	3.13614005	-3.078068359	5.58E-14	4.84E-13
TSPAN10IENSG00000182612 protein_coding	2.233403018	3.582950241	6.45E-14	5.58E-13
ZNF469IENSG00000225614 protein_coding	2.525363175	4.503459091	7.55E-14	6.48E-13
SLC24A2IENSG00000155886 protein_coding	2.692772901	0.833410295	1.27E-13	1.06E-12
TNFSF4IENSG00000117586 protein_coding	2.301254762	1.954947492	1.36E-13	1.14E-12
WNT2IENSG00000105989 protein_coding	3.233036073	2.251256932	1.45E-13	1.21E-12
COL3A1IENSG00000168542 protein_coding	2.949164855	11.71668216	1.71E-13	1.41E-12
KIAA1644IENSG00000138944 protein_coding	2.707614766	4.039549519	1.78E-13	1.47E-12
ZFP92IENSG00000189420 protein_coding	2.10214234	1.272812594	1.89E-13	1.55E-12
HIST1H3GIENSG00000273983 protein_coding	2.772112463	0.458641351	2.08E-13	1.70E-12
P3H2IENSG00000090530 protein_coding	2.676539816	6.829515453	2.18E-13	1.78E-12
CNTD2IENSG00000105219 protein_coding	3.107668023	0.401668037	2.25E-13	1.84E-12

Table SI. Continued.

Gene	logFC	logCPM	P-value	FDR
HOXC10 ENSG00000180818 protein_coding	3.795283002	2.63612117	2.26E-13	1.85E-12
RNASE10 ENSG00000182545 protein_coding	4.298238594	1.198880616	2.99E-13	2.42E-12
ZANI ENSG00000146839 protein_coding	3.345719499	0.54413946	3.05E-13	2.47E-12
TMEFF1 ENSG00000241697 protein_coding	3.146150208	-2.960733658	4.21E-13	3.37E-12
TENM3 ENSG00000218336 protein_coding	2.167844792	4.887305254	4.38E-13	3.50E-12
CHST2 ENSG00000175040 protein_coding	2.374829532	6.086268901	4.62E-13	3.68E-12
HKDC1 ENSG00000156510 protein_coding	4.069235968	2.116749195	4.68E-13	3.72E-12
VEGFC ENSG00000150630 protein_coding	2.323099237	4.825305962	4.77E-13	3.79E-12
RFX8 ENSG00000196460 protein_coding	2.331348293	-0.868030595	4.85E-13	3.85E-12
OASLI ENSG00000135114 protein_coding	2.734294406	6.048385162	4.90E-13	3.89E-12
C1QL1 ENSG00000131094 protein_coding	2.75371526	0.960309713	5.59E-13	4.41E-12
HOXD13 ENSG00000128714 protein_coding	3.922160546	2.079895594	6.30E-13	4.94E-12
RGS4 ENSG00000117152 protein_coding	2.600281566	3.339653543	6.48E-13	5.08E-12
CTSV ENSG00000136943 protein_coding	2.067210238	6.675146799	6.78E-13	5.32E-12
ADAMTS20 ENSG00000173157 protein_coding	4.902079215	-0.097792671	7.80E-13	6.07E-12
HIST1H2BO ENSG00000274641 protein_coding	2.920328904	-1.714206181	9.54E-13	7.37E-12
DNAH17 ENSG00000187775 protein_coding	2.908626484	5.456408468	1.10E-12	8.41E-12
MATN3 ENSG00000132031 protein_coding	2.521634649	1.849608527	1.20E-12	9.19E-12
RDH8 ENSG00000080511 protein_coding	3.428899248	-2.78169146	1.23E-12	9.40E-12
COL6A1 ENSG00000142156 protein_coding	2.043366083	9.489467808	1.27E-12	9.68E-12
COL1A2 ENSG00000164692 protein_coding	2.64537506	11.50661588	1.32E-12	1.00E-11
GFI1 ENSG00000162676 protein_coding	2.065397359	1.622962967	1.49E-12	1.12E-11
SOX11 ENSG00000176887 protein_coding	3.096824336	1.569257289	1.71E-12	1.28E-11
IGF2BP3 ENSG00000136231 protein_coding	3.091457709	3.77369552	1.79E-12	1.34E-11
NID1 ENSG00000116962 protein_coding	2.053615138	6.624455947	2.00E-12	1.49E-11
EPSTI1 ENSG00000133106 protein_coding	2.077778322	5.909653706	2.19E-12	1.63E-11
NRG1 ENSG00000157168 protein_coding	2.39971244	5.724107626	2.26E-12	1.67E-11
CSPG4 ENSG00000173546 protein_coding	2.224353671	7.417908149	2.28E-12	1.69E-11
SH2D5 ENSG00000189410 protein_coding	2.811939836	4.261242681	2.47E-12	1.83E-11
CTHRC1 ENSG00000164932 protein_coding	2.37476945	5.532691071	2.64E-12	1.95E-11
PROCI ENSG00000115718 protein_coding	2.696703152	1.792143864	3.11E-12	2.29E-11
CD70 ENSG00000125726 protein_coding	3.074485902	1.963875824	3.57E-12	2.61E-11
SCG5 ENSG00000166922 protein_coding	2.397416344	2.051527467	3.83E-12	2.79E-11
GLIS1 ENSG00000174332 protein_coding	2.330268314	1.389861771	4.38E-12	3.17E-11
XAF1 ENSG00000132530 protein_coding	2.040398931	4.425448235	5.36E-12	3.85E-11
HOXD12 ENSG00000170178 protein_coding	3.742377978	-3.338832215	5.36E-12	3.85E-11
LHBI ENSG00000104826 protein_coding	2.663346159	-1.442758324	5.40E-12	3.88E-11
TMEM26 ENSG00000196932 protein_coding	2.002007435	0.073463471	5.82E-12	4.17E-11
CSAG2 ENSG00000268902 protein_coding	4.596961662	-0.70714432	6.30E-12	4.50E-11
SALL4 ENSG00000101115 protein_coding	2.526553329	-0.027751604	6.50E-12	4.63E-11
IFIT3 ENSG00000119917 protein_coding	2.376341715	7.008176982	6.78E-12	4.82E-11
ONECUT3 ENSG00000205922 protein_coding	4.610054904	-0.392303609	7.85E-12	5.54E-11
PCSK9 ENSG00000169174 protein_coding	2.516973596	5.203007266	8.09E-12	5.70E-11
MMP10 ENSG00000166670 protein_coding	3.855916987	7.647246549	8.11E-12	5.70E-11

Table SI. Continued.

Gene	logFC	logCPM	P-value	FDR
CNGB3 ENSG00000170289 protein_coding	2.927324894	-0.947335521	8.62E-12	6.05E-11
OR2B6 ENSG00000124657 protein_coding	3.757118151	-1.942678045	9.22E-12	6.44E-11
KHDC1 ENSG00000256980 protein_coding	3.451835976	1.644671937	9.79E-12	6.83E-11
CELSR3 ENSG00000008300 protein_coding	2.204152825	3.4703821	1.06E-11	7.37E-11
SLCO1B3 ENSG00000111700 protein_coding	4.493837557	2.009332313	1.10E-11	7.61E-11
ZIC5 ENSG00000139800 protein_coding	3.115872921	1.62310859	1.25E-11	8.64E-11
LHX1 ENSG00000273706 protein_coding	3.593647975	1.388365425	1.29E-11	8.89E-11
CALB1 ENSG00000104327 protein_coding	6.587756688	4.501841868	1.46E-11	1.00E-10
CDX1 ENSG00000113722 protein_coding	2.616797132	-0.813817218	1.46E-11	1.00E-10
HIST1H1D ENSG00000124575 protein_coding	2.560654289	-1.581522813	1.76E-11	1.20E-10
FSD1 ENSG00000105255 protein_coding	2.58667314	0.223609971	1.95E-11	1.33E-10
TLX2 ENSG00000115297 protein_coding	3.546871722	-1.310939919	1.97E-11	1.34E-10
IFIT1 ENSG00000185745 protein_coding	2.405071398	6.588882778	2.00E-11	1.36E-10
EN1 ENSG00000163064 protein_coding	2.61540158	2.91264033	2.03E-11	1.37E-10
NELL2 ENSG00000184613 protein_coding	2.97246572	6.29586493	2.33E-11	1.57E-10
SLC5A12 ENSG00000148942 protein_coding	3.864470405	0.553925177	2.49E-11	1.68E-10
FIBCD1 ENSG00000130720 protein_coding	3.631828851	1.110593103	3.03E-11	2.02E-10
CT62 ENSG00000225362 protein_coding	3.460381934	-0.691780956	3.31E-11	2.20E-10
LHX9 ENSG00000143355 protein_coding	4.492347943	0.419815679	3.43E-11	2.27E-10
ASPNI ENSG00000106819 protein_coding	2.78514101	5.393566019	3.62E-11	2.39E-10
CGB5 ENSG00000189052 protein_coding	5.046864326	-2.353972962	3.71E-11	2.45E-10
DSCAM ENSG00000171587 protein_coding	3.471789695	0.95834477	3.81E-11	2.51E-10
CSMD3 ENSG00000164796 protein_coding	4.059642272	-0.642681595	3.90E-11	2.57E-10
HAP1 ENSG00000173805 protein_coding	2.459168041	2.923766996	3.90E-11	2.57E-10
FOXL1 ENSG00000176678 protein_coding	2.289942662	1.86985382	3.90E-11	2.57E-10
C4orf26 ENSG00000174792 protein_coding	5.377758481	1.607264266	4.04E-11	2.66E-10
COL6A3 ENSG00000163359 protein_coding	2.330819473	9.610726893	4.56E-11	2.99E-10
B4GALNT1 ENSG00000135454 protein_coding	2.023498672	3.398193689	5.13E-11	3.34E-10
IFIT2 ENSG00000119922 protein_coding	2.286959995	5.251351157	5.67E-11	3.68E-10
CEBPE ENSG00000092067 protein_coding	3.327325657	-0.94631142	6.19E-11	4.01E-10
SULF1 ENSG00000137573 protein_coding	2.16494258	6.886208318	6.47E-11	4.18E-10
RPE65 ENSG00000116745 protein_coding	4.677926328	2.228870205	6.66E-11	4.29E-10
KCNK9 ENSG00000169427 protein_coding	3.140059101	-0.487027233	6.75E-11	4.34E-10
ACANI ENSG00000157766 protein_coding	2.279463029	1.795118446	6.81E-11	4.38E-10
PDZD7 ENSG00000186862 protein_coding	2.206400965	0.508470875	6.83E-11	4.40E-10
DISP3 ENSG00000204624 protein_coding	3.760471383	0.317772634	7.37E-11	4.72E-10
KREMEN2 ENSG00000131650 protein_coding	2.351502507	3.601834474	8.24E-11	5.26E-10
GTSF1 ENSG00000170627 protein_coding	4.326922226	2.144174728	8.60E-11	5.48E-10
C20orf141 ENSG00000258713 protein_coding	3.827876693	-1.786664255	9.72E-11	6.16E-10
ZPLD1 ENSG00000170044 protein_coding	2.71970385	-1.429541645	9.93E-11	6.29E-10
NT5E ENSG00000135318 protein_coding	2.023117979	5.90355407	1.13E-10	7.09E-10
CSAG3 ENSG00000268916 protein_coding	4.203762508	0.141367046	1.13E-10	7.11E-10
PLEKHG4B ENSG00000153404 protein_coding	2.397578776	3.19257537	1.15E-10	7.21E-10
ANXA10 ENSG00000109511 protein_coding	5.43837366	0.961171896	1.18E-10	7.38E-10

Table SI. Continued.

Gene	logFC	logCPM	P-value	FDR
IFI44L ENSG00000137959 protein_coding	2.332652918	5.872643015	1.22E-10	7.63E-10
NKX6-1 ENSG00000163623 protein_coding	2.996428639	-0.765379385	1.22E-10	7.65E-10
GUCA1A ENSG00000048545 protein_coding	2.348365196	-1.855549962	1.36E-10	8.46E-10
PDCD1LG2 ENSG00000197646 protein_coding	2.16079351	3.103592228	1.48E-10	9.17E-10
SYT16 ENSG00000139973 protein_coding	2.791261662	-0.637397807	1.87E-10	1.15E-09
CMPK2 ENSG00000134326 protein_coding	2.009666527	4.685503646	1.92E-10	1.17E-09
ADGRD2 ENSG00000180264 protein_coding	2.294467478	-0.443430407	2.11E-10	1.28E-09
SLC22A1 ENSG00000175003 protein_coding	3.573419529	1.571604621	2.19E-10	1.33E-09
SLAMF9 ENSG00000162723 protein_coding	2.849184024	0.672299252	2.31E-10	1.40E-09
FOXL2 ENSG00000206262 protein_coding	3.266763405	-0.594857395	2.91E-10	1.75E-09
RAG1 ENSG00000166349 protein_coding	2.060646065	2.212555573	2.94E-10	1.77E-09
BCAT1 ENSG00000060982 protein_coding	2.053068671	5.083129207	3.02E-10	1.81E-09
NLRP7 ENSG00000167634 protein_coding	3.533030207	1.047752645	3.02E-10	1.81E-09
ITGA11 ENSG00000137809 protein_coding	2.435829172	4.381343175	3.18E-10	1.90E-09
OBP2A ENSG00000122136 protein_coding	3.286046304	-2.042764259	3.81E-10	2.26E-09
GRK7 ENSG00000114124 protein_coding	2.541828582	-1.409421356	4.22E-10	2.50E-09
IFNK ENSG00000147896 protein_coding	6.254649996	-0.203931251	4.90E-10	2.89E-09
DLX6 ENSG00000006377 protein_coding	2.541338726	0.977869077	4.95E-10	2.91E-09
SIGLEC12 ENSG00000254521 protein_coding	2.802371764	1.051036587	5.13E-10	3.01E-09
IFNL1 ENSG00000182393 protein_coding	3.432465333	-2.133495325	5.53E-10	3.23E-09
COL22A1 ENSG00000169436 protein_coding	3.231534567	4.463296421	5.60E-10	3.27E-09
AMZ1 ENSG00000174945 protein_coding	2.251751568	-0.008665129	6.07E-10	3.53E-09
GDPD2 ENSG00000130055 protein_coding	3.116724073	3.89253678	6.43E-10	3.73E-09
NPBWR1 ENSG00000183729 protein_coding	3.296669701	1.406652042	6.58E-10	3.81E-09
DLX2 ENSG00000115844 protein_coding	2.228782361	1.401677182	6.58E-10	3.81E-09
NETO1 ENSG00000166342 protein_coding	3.422987057	-1.021288516	7.21E-10	4.16E-09
TMEM249 ENSG00000261587 protein_coding	2.430180531	-2.164774091	7.28E-10	4.20E-09
MMP1 ENSG00000196611 protein_coding	2.929868392	9.654261303	7.29E-10	4.21E-09
AC093893.1 ENSG00000234828 protein_coding	3.996711215	-2.987766018	8.10E-10	4.66E-09
PSG5 ENSG00000204941 protein_coding	4.099436674	-0.669966507	8.87E-10	5.07E-09
DEC1 ENSG00000173077 protein_coding	2.836788963	0.980701899	9.14E-10	5.22E-09
GAD1 ENSG00000128683 protein_coding	2.313998258	0.741588624	9.27E-10	5.29E-09
ANXA13 ENSG00000104537 protein_coding	2.693202854	-0.412202909	9.33E-10	5.32E-09
ZFP42 ENSG00000179059 protein_coding	5.908215505	1.042400326	9.62E-10	5.48E-09
AC040162.4 ENSG00000263201 protein_coding	4.237242366	-2.00487128	1.07E-09	6.07E-09
AC011604.2 ENSG00000257046 protein_coding	3.94404192	-3.481054442	1.08E-09	6.13E-09
NID2 ENSG00000087303 protein_coding	2.057125912	4.18187362	1.09E-09	6.14E-09
FOLR3 ENSG00000110203 protein_coding	3.645460858	2.180234745	1.12E-09	6.32E-09
HOXB8 ENSG00000120068 protein_coding	3.791062324	-1.809243012	1.29E-09	7.22E-09
EN2 ENSG00000164778 protein_coding	2.528659767	1.197936217	1.30E-09	7.24E-09
STRA6 ENSG00000137868 protein_coding	2.471919704	3.794967682	1.33E-09	7.42E-09
DISP2 ENSG00000140323 protein_coding	2.203420414	2.204832927	1.34E-09	7.48E-09
PRAME ENSG00000185686 protein_coding	5.037360872	3.681831623	1.35E-09	7.55E-09
HIST1H3B ENSG00000274267 protein_coding	2.202603701	-2.48613614	1.39E-09	7.72E-09

Table SI. Continued.

Gene	logFC	logCPM	P-value	FDR
CXCL13 ENSG00000156234 protein_coding	2.27407774	4.391558051	1.52E-09	8.46E-09
CILP2 ENSG00000160161 protein_coding	2.570111139	1.69292529	1.78E-09	9.83E-09
NPSR1 ENSG00000187258 protein_coding	3.682857332	-0.835102564	1.88E-09	1.03E-08
MAGEA11 ENSG00000185247 protein_coding	6.720709486	2.857916531	2.17E-09	1.18E-08
SPERT ENSG00000174015 protein_coding	2.187383592	-0.837714119	2.17E-09	1.19E-08
SLC6A7 ENSG00000011083 protein_coding	2.015453351	-2.354183365	2.25E-09	1.22E-08
CCDC194 ENSG00000269720 protein_coding	2.875248662	-3.012565621	2.32E-09	1.26E-08
LAIR2 ENSG00000167618 protein_coding	2.084584389	-1.170623802	2.39E-09	1.30E-08
CXCL11 ENSG00000169248 protein_coding	3.582479283	5.789370917	2.70E-09	1.46E-08
MYO7B ENSG00000169994 protein_coding	3.129224485	2.298776786	2.81E-09	1.52E-08
GUCA1C ENSG00000138472 protein_coding	3.756943984	-3.572382444	2.96E-09	1.59E-08
MMP3 ENSG00000149968 protein_coding	2.838845056	7.202416602	3.21E-09	1.72E-08
GBP5 ENSG00000154451 protein_coding	2.835100787	6.819449408	3.35E-09	1.79E-08
NECAB2 ENSG00000103154 protein_coding	3.392209406	-0.448666948	3.38E-09	1.80E-08
SATL1 ENSG00000184788 protein_coding	5.099327573	-3.072554975	3.64E-09	1.93E-08
KLHDC7B ENSG00000130487 protein_coding	2.803824548	4.803485402	4.05E-09	2.14E-08
IGFBP6 ENSG00000167779 protein_coding	2.419411169	7.570901634	4.33E-09	2.28E-08
HOXD1 ENSG00000128645 protein_coding	2.074548686	-1.496767468	4.40E-09	2.32E-08
WARSI ENSG00000140105 protein_coding	2.061624705	9.548033561	4.44E-09	2.33E-08
DLL3 ENSG00000090932 protein_coding	2.645053534	-0.445563171	4.46E-09	2.34E-08
MIOX ENSG00000100253 protein_coding	4.020464104	-1.23196007	4.65E-09	2.44E-08
CSAG1 ENSG00000198930 protein_coding	5.054625254	2.178790134	4.70E-09	2.46E-08
SLC6A2 ENSG00000103546 protein_coding	2.406252391	2.771463962	4.80E-09	2.51E-08
GOLGA6L2 ENSG00000174450 protein_coding	2.518262872	-1.874105759	4.95E-09	2.58E-08
IL1A ENSG00000115008 protein_coding	2.409130439	5.697603536	5.69E-09	2.95E-08
SMC1B ENSG00000077935 protein_coding	3.827120602	0.523269199	5.93E-09	3.07E-08
CDKN2A ENSG00000147889 protein_coding	3.220585025	5.139893235	5.97E-09	3.09E-08
BLACE ENSG00000204960 protein_coding	3.813286978	-3.673626744	6.25E-09	3.23E-08
C1QL4 ENSG00000186897 protein_coding	2.992804745	-1.14662833	6.51E-09	3.34E-08
PLPPR5 ENSG00000117598 protein_coding	2.814653856	-1.961961276	6.59E-09	3.38E-08
HIST1H1T ENSG00000187475 protein_coding	3.451658607	-3.868331221	6.59E-09	3.38E-08
DRD5 ENSG00000169676 protein_coding	3.200581886	-1.723675264	6.78E-09	3.47E-08
STEAP1B ENSG00000105889 protein_coding	2.616002089	2.443151218	8.65E-09	4.39E-08
CLEC1B ENSG00000165682 protein_coding	2.121880345	-2.539248338	9.86E-09	4.97E-08
MARCH4 ENSG00000144583 protein_coding	2.086247935	-1.558619632	9.90E-09	4.98E-08
LHFPL5 ENSG00000197753 protein_coding	2.204544047	-3.007191279	1.08E-08	5.42E-08
PNCK ENSG00000130822 protein_coding	3.041935528	2.154499939	1.09E-08	5.45E-08
COX6B2 ENSG00000160471 protein_coding	2.0506368	1.781472819	1.26E-08	6.23E-08
DMP1 ENSG00000152592 protein_coding	2.66688829	-2.748222166	1.31E-08	6.48E-08
HHLA1 ENSG00000132297 protein_coding	3.244174919	-3.948168467	1.33E-08	6.55E-08
HIST1H2A ENSG00000276903 protein_coding	2.051355589	-2.693042154	1.38E-08	6.80E-08
KYNU ENSG00000115919 protein_coding	2.026954416	5.414038601	1.54E-08	7.54E-08
DIRC1 ENSG00000174325 protein_coding	2.575657801	-2.30909588	1.77E-08	8.58E-08
RAB3B ENSG00000169213 protein_coding	2.599351978	2.443560723	1.87E-08	9.03E-08

1	Table SI. Continued.					61
2	Gene	logFC	logCPM	P-value	FDR	62
3						63
4	TRIML2 ENSG00000179046 protein_coding	4.045633546	1.602740784	2.36E-08	1.13E-07	64
5	RXFP3 ENSG00000182631 protein_coding	3.024323375	-3.725700279	2.38E-08	1.14E-07	65
6	PHF24 ENSG00000122733 protein_coding	2.033980635	1.710135888	2.40E-08	1.14E-07	66
7	AJAP1 ENSG00000196581 protein_coding	2.541941319	3.79035291	2.40E-08	1.14E-07	67
8	PLCXD2 ENSG00000240891 protein_coding	2.402515067	1.625505271	2.69E-08	1.27E-07	68
9	BHMG1 ENSG00000237452 protein_coding	3.422288495	-2.091080118	2.82E-08	1.33E-07	69
10	SPDYCI ENSG00000204710 protein_coding	5.697023819	0.195484729	2.98E-08	1.40E-07	70
11	DKK1 ENSG00000107984 protein_coding	2.64291682	4.147704829	3.01E-08	1.41E-07	71
12	EPYCI ENSG00000083782 protein_coding	4.130151355	-0.932572705	3.13E-08	1.46E-07	72
13	C19orf84 ENSG00000262874 protein_coding	2.554631904	-1.154343152	3.32E-08	1.55E-07	73
14	NPWI ENSG00000183971 protein_coding	2.780386634	0.830228366	3.36E-08	1.56E-07	74
15	ACTL8 ENSG00000117148 protein_coding	4.834505304	0.604005947	3.64E-08	1.69E-07	75
16	LAG3 ENSG00000089692 protein_coding	2.001032151	3.376780835	4.01E-08	1.85E-07	76
17	MS4A15 ENSG00000166961 protein_coding	3.256751513	-2.461455743	4.15E-08	1.91E-07	77
18	MAGEA4 ENSG00000147381 protein_coding	5.937464528	5.645131119	4.22E-08	1.94E-07	78
19	LRRN4 ENSG00000125872 protein_coding	2.64614926	-0.530699392	4.26E-08	1.96E-07	79
20	HIST1H3C ENSG00000278272 protein_coding	2.185474121	-1.989263899	4.38E-08	2.02E-07	80
21	JPH3 ENSG00000154118 protein_coding	3.293682193	0.570847908	4.50E-08	2.07E-07	81
22	MAGEA10 ENSG00000124260 protein_coding	8.041714672	1.901021817	4.64E-08	2.12E-07	82
23	FGF19 ENSG00000162344 protein_coding	5.975700176	0.148650567	4.66E-08	2.13E-07	83
24	MAGEB2 ENSG00000099399 protein_coding	7.649561267	2.217846111	4.95E-08	2.26E-07	84
25	HHIPL2 ENSG00000143512 protein_coding	3.2790715	0.253208454	5.06E-08	2.30E-07	85
26	ADGRE1 ENSG00000174837 protein_coding	2.331279127	1.687428534	5.07E-08	2.31E-07	86
27	BRDT ENSG00000137948 protein_coding	7.201095133	0.049149793	5.22E-08	2.37E-07	87
28	C11orf87 ENSG00000185742 protein_coding	4.225106811	0.552359368	5.38E-08	2.44E-07	88
29	KRT9 ENSG00000171403 protein_coding	2.029438121	2.236305044	5.39E-08	2.45E-07	89
30	PADI3 ENSG00000142619 protein_coding	2.656585422	4.575343161	5.60E-08	2.54E-07	90
31	NGBI ENSG00000165553 protein_coding	4.335980793	0.363473028	5.89E-08	2.66E-07	91
32	ERVV-2 ENSG00000268964 protein_coding	4.938069056	-2.246538149	6.34E-08	2.85E-07	92
33	IFNL2 ENSG00000183709 protein_coding	3.932239659	-3.434704915	6.58E-08	2.95E-07	93
34	LYPD8 ENSG00000259823 protein_coding	4.189676164	-0.596916799	6.68E-08	3.00E-07	94
35	NR5A1 ENSG00000136931 protein_coding	5.66036801	1.434039116	6.90E-08	3.09E-07	95
36	RASGEF1A ENSG00000198915 protein_coding	2.01951005	3.286106297	7.25E-08	3.24E-07	96
37	GPR50 ENSG00000102195 protein_coding	5.169955821	1.217399158	7.67E-08	3.42E-07	97
38	MAGEC2 ENSG00000046774 protein_coding	9.324342341	1.9260683	7.79E-08	3.46E-07	98
39	RTBDN ENSG00000132026 protein_coding	2.688972752	-1.556877187	7.95E-08	3.53E-07	99
40	CPA6 ENSG00000165078 protein_coding	2.268678866	0.914002242	7.96E-08	3.53E-07	100
41	SLCO1B7 ENSG00000205754 protein_coding	3.790728371	-3.837457988	8.07E-08	3.57E-07	101
42	CACNA1B ENSG00000148408 protein_coding	3.361260535	1.261119802	8.21E-08	3.64E-07	102
43	RIMS2 ENSG00000176406 protein_coding	2.089086551	2.079730052	8.66E-08	3.82E-07	103
44	MAGEA6 ENSG00000197172 protein_coding	6.186782393	4.12825447	9.06E-08	3.98E-07	104
45	RETNLB ENSG00000163515 protein_coding	2.850235635	-2.913123686	9.58E-08	4.20E-07	105
46	ONECUT1 ENSG00000169856 protein_coding	2.882465723	-3.132058345	9.69E-08	4.24E-07	106
47	PTPRN ENSG00000054356 protein_coding	2.517190278	1.001024215	9.89E-08	4.33E-07	107
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1	Table SI. Continued.					61
2	Gene	logFC	logCPM	P-value	FDR	62
3						63
4	HIST1H2AJIENSG00000276368 protein_coding	2.139935398	-2.345173471	1.06E-07	4.62E-07	64
5	LAMA1IENSG00000101680 protein_coding	2.137532281	4.024314605	1.07E-07	4.67E-07	65
6	CLDN6IENSG00000184697 protein_coding	4.464745367	0.473169713	1.09E-07	4.71E-07	66
7	CXCL10IENSG00000169245 protein_coding	2.767086708	7.294741431	1.09E-07	4.74E-07	67
8	NKX3-2IENSG00000109705 protein_coding	2.285144616	-0.158766452	1.12E-07	4.86E-07	68
9	C6orf10IENSG00000204296 protein_coding	2.54075076	-0.278716987	1.19E-07	5.15E-07	69
10	HDGFL1IENSG00000112273 protein_coding	4.128411589	-2.636034158	1.21E-07	5.21E-07	70
11	NTSR1IENSG00000101188 protein_coding	3.649525391	1.220578799	1.22E-07	5.28E-07	71
12	GRIA3IENSG00000125675 protein_coding	2.212711376	0.945330392	1.24E-07	5.33E-07	72
13	PSG6IENSG00000170848 protein_coding	4.432104377	-2.469999677	1.51E-07	6.44E-07	73
14	ALPPL2IENSG00000163286 protein_coding	4.174982935	-1.94570712	1.53E-07	6.50E-07	74
15	SYNGR4IENSG00000105467 protein_coding	2.882601494	-1.608921985	1.55E-07	6.57E-07	75
16	OR1J4IENSG00000239590 protein_coding	2.663393958	-3.893584806	1.64E-07	6.94E-07	76
17	MPP4IENSG00000082126 protein_coding	2.021540454	-1.128243161	1.69E-07	7.15E-07	77
18	AC024940.1IENSG00000177359 protein_coding	2.626464217	0.926269385	1.73E-07	7.31E-07	78
19	AC020922.1IENSG00000267706 protein_coding	2.870964981	-2.942031012	1.74E-07	7.35E-07	79
20	HTR3EIENSG00000186038 protein_coding	3.445460337	-2.957350268	1.92E-07	8.05E-07	80
21	STK31IENSG00000196335 protein_coding	2.078990636	0.958701826	1.95E-07	8.17E-07	81
22	IFNEIENSG00000184995 protein_coding	2.141660473	0.188214624	2.10E-07	8.78E-07	82
23	NEFLIENSG00000277586 protein_coding	2.181426028	5.78729808	2.11E-07	8.79E-07	83
24	TMEM52BIENSG00000165685 protein_coding	2.42329792	0.842088472	2.12E-07	8.83E-07	84
25	OR2L2IENSG00000203663 protein_coding	3.749025	-3.332653315	2.33E-07	9.67E-07	85
26	EMX1IENSG00000135638 protein_coding	2.083918491	-0.026603337	2.50E-07	1.03E-06	86
27	FOXH1IENSG00000160973 protein_coding	3.574856396	-1.146555308	2.86E-07	1.17E-06	87
28	LRRC15IENSG00000172061 protein_coding	2.240961533	5.64687167	2.89E-07	1.18E-06	88
29	AMTNIENSG00000187689 protein_coding	3.651413884	5.103867863	3.08E-07	1.25E-06	89
30	SLCO6A1IENSG00000205359 protein_coding	2.518760925	-1.922301274	3.13E-07	1.27E-06	90
31	ARL14EPLIENSG00000268223 protein_coding	3.644531561	-3.34415692	3.22E-07	1.31E-06	91
32	NKX2-1IENSG00000136352 protein_coding	3.57899488	-2.061108117	3.28E-07	1.33E-06	92
33	FAM71F1IENSG00000135248 protein_coding	3.688667457	-1.947969693	4.00E-07	1.60E-06	93
34	GDF6IENSG00000156466 protein_coding	2.21102945	-0.57903667	4.17E-07	1.66E-06	94
35	EXOC3L4IENSG00000205436 protein_coding	2.11575238	1.323409038	4.24E-07	1.69E-06	95
36	CCL26IENSG00000006606 protein_coding	2.629302576	1.49997935	4.63E-07	1.84E-06	96
37	MAGEB6IENSG00000176746 protein_coding	5.559654169	-1.917747341	4.75E-07	1.88E-06	97
38	HOXD4IENSG00000170166 protein_coding	2.16519182	-1.837700265	4.88E-07	1.93E-06	98
39	RXFP1IENSG00000171509 protein_coding	2.620489719	-0.639602108	5.35E-07	2.11E-06	99
40	MAGEA9BIENSG00000267978 protein_coding	6.837301737	-0.534133708	5.55E-07	2.18E-06	100
41	CT45A10IENSG00000269586 protein_coding	8.019587127	-0.46941395	5.72E-07	2.24E-06	101
42	TAS2R38IENSG00000257138 protein_coding	2.610053795	-3.700916057	5.72E-07	2.24E-06	102
43	TMEM88BIENSG00000205116 protein_coding	2.570613743	-2.4765828	6.03E-07	2.35E-06	103
44	SPINK1IENSG00000164266 protein_coding	2.941693024	-0.934658336	6.40E-07	2.49E-06	104
45	HTR2CIENSG00000147246 protein_coding	3.876234612	-0.08691618	6.42E-07	2.49E-06	105
46	MYL7IENSG00000106631 protein_coding	4.750474328	-0.542909315	6.55E-07	2.54E-06	106
47	ADRA1BIENSG00000170214 protein_coding	2.173321824	-0.981564688	6.73E-07	2.61E-06	107
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1	Table SI. Continued.					61
2	Gene	logFC	logCPM	P-value	FDR	62
3						63
4	SMCPIENSG00000163206 protein_coding	5.048951414	-1.876439016	7.05E-07	2.72E-06	64
5	ELAVL2IENSG00000107105 protein_coding	2.294335921	2.129068148	7.53E-07	2.89E-06	65
6	MAGEA3IENSG00000221867 protein_coding	5.326244616	4.233576569	8.13E-07	3.10E-06	66
7	IFNL3IENSG00000197110 protein_coding	3.300623328	-3.553961316	8.20E-07	3.12E-06	67
8	NLRP10IENSG00000182261 protein_coding	2.746151652	0.722740671	8.22E-07	3.13E-06	68
9	CRYBA2IENSG00000163499 protein_coding	2.626865044	-1.21670066	8.75E-07	3.32E-06	69
10	HIST1H2BMIENSG00000273703 protein_coding	2.225004398	-3.316487535	8.86E-07	3.35E-06	70
11	MEPEIENSG00000152595 protein_coding	2.448882312	-3.656047473	9.66E-07	3.64E-06	71
12	FNDC1IENSG00000164694 protein_coding	2.05044377	5.124019114	1.04E-06	3.90E-06	72
13	SYT14IENSG00000143469 protein_coding	2.281709954	-0.367095953	1.05E-06	3.93E-06	73
14	TSKSIENSG00000126467 protein_coding	2.535391496	1.512940764	1.07E-06	3.99E-06	74
15	GOLGA6L7PIENSG00000261649 protein_coding	5.25700939	-0.924294989	1.13E-06	4.20E-06	75
16	PDIA2IENSG00000185615 protein_coding	3.82768435	1.406793259	1.31E-06	4.82E-06	76
17	CRYGCIENSG00000163254 protein_coding	3.597417017	-4.120418296	1.49E-06	5.46E-06	77
18	GRPIENSG00000134443 protein_coding	2.601654499	0.307308038	1.59E-06	5.82E-06	78
19	SPP1IENSG00000118785 protein_coding	2.360232846	7.794929051	1.80E-06	6.55E-06	79
20	SPANXDIENSG00000196406 protein_coding	6.280506699	-2.105292521	1.85E-06	6.70E-06	80
21	VIL1IENSG00000127831 protein_coding	3.316587338	-1.752298918	1.85E-06	6.70E-06	81
22	TBX4IENSG00000121075 protein_coding	2.724548174	-0.238957753	1.86E-06	6.72E-06	82
23	SERPINA10IENSG00000140093 protein_coding	2.087364729	-2.10097778	1.87E-06	6.76E-06	83
24	ESPNLIENSG00000144488 protein_coding	2.171410518	0.904701041	1.93E-06	6.98E-06	84
25	TINAGIENSG00000137251 protein_coding	2.78292687	-3.28413417	1.96E-06	7.08E-06	85
26	SALL1IENSG00000103449 protein_coding	2.063173248	0.214014241	2.23E-06	8.00E-06	86
27	CALHM3IENSG00000183128 protein_coding	3.428922196	-1.877481972	2.24E-06	8.04E-06	87
28	NOBOXIENSG00000106410 protein_coding	7.775023605	-0.204642104	2.48E-06	8.83E-06	88
29	RTP3IENSG00000163825 protein_coding	3.311972075	-0.252498928	2.49E-06	8.84E-06	89
30	NUTM2FIENSG00000130950 protein_coding	2.415226724	-3.773405888	2.50E-06	8.88E-06	90
31	EPHA8IENSG00000070886 protein_coding	2.860688606	-1.712027017	2.60E-06	9.21E-06	91
32	SPANXCIENSG00000198573 protein_coding	5.599401691	-2.003728836	2.67E-06	9.43E-06	92
33	PNMA5IENSG00000198883 protein_coding	5.050523289	2.571917555	2.75E-06	9.72E-06	93
34	IGFL2IENSG00000204866 protein_coding	2.070194151	3.692690929	2.81E-06	9.92E-06	94
35	WT1IENSG00000184937 protein_coding	3.207592275	-1.555341582	3.28E-06	1.14E-05	95
36	IRGMIENSG00000237693 protein_coding	2.076748298	-2.418173544	3.36E-06	1.17E-05	96
37	STRA8IENSG00000146857 protein_coding	3.381472119	-1.219616541	3.43E-06	1.19E-05	97
38	SOHLH1IENSG00000165643 protein_coding	6.190850089	0.775876404	3.85E-06	1.33E-05	98
39	ELFN2IENSG00000166897 protein_coding	2.219892437	1.100187575	3.89E-06	1.34E-05	99
40	RBM46IENSG00000151962 protein_coding	4.363010586	-1.981024019	3.90E-06	1.34E-05	100
41	DPPA2IENSG00000163530 protein_coding	6.083212819	-1.284000226	4.19E-06	1.43E-05	101
42	CNTNAP2IENSG00000174469 protein_coding	2.251730026	4.200321507	4.20E-06	1.44E-05	102
43	MAGEC1IENSG00000155495 protein_coding	7.569897146	1.708364671	4.42E-06	1.51E-05	103
44	AKR1C3IENSG00000196139 protein_coding	2.1835828	6.711300572	4.58E-06	1.56E-05	104
45	CTAG2IENSG00000126890 protein_coding	7.169243595	1.21660008	4.77E-06	1.62E-05	105
46	CHIT1IENSG00000133063 protein_coding	2.865463782	3.949095243	5.34E-06	1.80E-05	106
47	POU6F2IENSG00000106536 protein_coding	3.736259714	0.611297978	5.55E-06	1.86E-05	107
48						108
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Table SI. Continued.

Gene	logFC	logCPM	P-value	FDR
TMEM239 ENSG00000198326 protein_coding	2.385034764	-3.927708867	5.65E-06	1.90E-05
OR1F1 ENSG00000168124 protein_coding	2.145216068	-3.399572725	5.70E-06	1.91E-05
ERVV-1 ENSG00000269526 protein_coding	3.581424986	-2.054737339	5.73E-06	1.92E-05
MMP8 ENSG00000118113 protein_coding	2.544363784	-0.774877694	5.79E-06	1.93E-05
PKHD1 ENSG00000170927 protein_coding	2.643807636	-0.759616677	6.11E-06	2.03E-05
ACOD1 ENSG00000102794 protein_coding	2.567704583	-2.103685757	6.76E-06	2.24E-05
SOX1 ENSG00000182968 protein_coding	3.287296776	-0.242731934	7.12E-06	2.35E-05
OR6C70 ENSG00000184954 protein_coding	4.139305368	-3.491197096	7.17E-06	2.36E-05
TH ENSG00000180176 protein_coding	2.609016681	1.951283645	7.35E-06	2.42E-05
SPANXB1 ENSG00000227234 protein_coding	5.474361244	0.013677035	7.35E-06	2.42E-05
HOXB13 ENSG00000159184 protein_coding	3.366597597	0.278533104	7.39E-06	2.43E-05
STPG4 ENSG00000239605 protein_coding	2.873747746	-2.41065446	7.39E-06	2.43E-05
PDX1 ENSG00000139515 protein_coding	3.249837699	-2.206450827	7.55E-06	2.48E-05
SCUBE3 ENSG00000146197 protein_coding	2.514295624	2.428279321	7.64E-06	2.51E-05
AL035460.1 ENSG00000241690 protein_coding	2.508719489	-4.109222224	7.83E-06	2.57E-05
TEX19 ENSG00000182459 protein_coding	2.272003727	-3.109158064	7.89E-06	2.58E-05
SSX1 ENSG00000126752 protein_coding	4.505109413	-2.494907385	8.45E-06	2.76E-05
SLC35G5 ENSG00000177710 protein_coding	2.314409134	-2.761297212	8.54E-06	2.78E-05
PRDM13 ENSG00000112238 protein_coding	3.174623515	-1.322749862	8.70E-06	2.83E-05
FOXE3 ENSG00000186790 protein_coding	2.441869022	-2.572454703	8.81E-06	2.86E-05
DCSTAMP ENSG00000164935 protein_coding	2.179923726	-0.862756022	8.85E-06	2.88E-05
TBPL2 ENSG00000182521 protein_coding	2.134905571	-4.163257649	9.18E-06	2.97E-05
HOXA7 ENSG00000122592 protein_coding	2.05999569	-0.04066815	9.36E-06	3.02E-05
LHX3 ENSG00000107187 protein_coding	3.12224118	-1.019130029	1.01E-05	3.25E-05
LIN28B ENSG00000187772 protein_coding	6.175124906	-0.939669711	1.02E-05	3.29E-05
PPP4R3C ENSG00000224960 protein_coding	5.74068299	-2.565602911	1.03E-05	3.31E-05
GDPD4 ENSG00000178795 protein_coding	2.10959099	-3.052571478	1.16E-05	3.69E-05
PIWIL1 ENSG00000125207 protein_coding	2.503399666	-2.070953503	1.26E-05	3.99E-05
DMRT1 ENSG00000137090 protein_coding	3.183581557	-1.683482262	1.37E-05	4.33E-05
TFPI2 ENSG00000105825 protein_coding	2.608048598	3.592873344	1.42E-05	4.46E-05
MAGEA1 ENSG00000198681 protein_coding	6.465717893	2.445171257	1.42E-05	4.46E-05
SCN9A ENSG00000169432 protein_coding	2.254637691	2.526555677	1.43E-05	4.50E-05
PNMA6 ENSG00000214897 protein_coding	6.382402057	-1.270691324	1.50E-05	4.69E-05
CALHM1 ENSG00000185933 protein_coding	3.04692619	-1.459174433	1.53E-05	4.77E-05
FAM178B ENSG00000168754 protein_coding	2.254224633	2.475957457	1.75E-05	5.43E-05
NKX2-2 ENSG00000125820 protein_coding	4.436449099	-1.084897739	1.82E-05	5.61E-05
GATA4 ENSG00000136574 protein_coding	4.10155495	-0.140363059	1.84E-05	5.68E-05
TMEM114 ENSG00000232258 protein_coding	3.209013371	-3.16690331	1.93E-05	5.93E-05
MROH2A ENSG00000185038 protein_coding	3.086086441	0.839107328	1.95E-05	5.99E-05
GAGE1 ENSG00000205777 protein_coding	5.989783817	-2.637250799	2.08E-05	6.35E-05
GJB7 ENSG00000164411 protein_coding	2.396448833	0.214001766	2.08E-05	6.37E-05
CT45A1 ENSG00000268940 protein_coding	6.881147611	-1.520602974	2.10E-05	6.42E-05
WISP3 ENSG00000112761 protein_coding	2.00837576	1.976259218	2.86E-05	8.55E-05
GAGE2A ENSG00000189064 protein_coding	6.499107417	-2.210987679	3.19E-05	9.48E-05

Table SI. Continued.

Gene	logFC	logCPM	P-value	FDR
IDO1 ENSG00000131203 protein_coding	2.026394186	5.560232624	3.21E-05	9.52E-05
FAM133A ENSG00000179083 protein_coding	4.058477245	0.155021129	3.23E-05	9.58E-05
SP9 ENSG00000217236 protein_coding	2.239833933	-1.226804556	3.25E-05	9.64E-05
PAGE1 ENSG00000068985 protein_coding	5.567214346	-2.66552121	3.27E-05	9.69E-05
MAGEB1 ENSG00000214107 protein_coding	7.129229879	-1.389256	3.36E-05	9.93E-05
ADD2 ENSG00000075340 protein_coding	2.100599342	2.344154955	3.53E-05	0.000103858
C11orf86 ENSG00000173237 protein_coding	3.447143682	-2.26246492	3.56E-05	0.000104843
DCAF4L2 ENSG00000176566 protein_coding	8.053597673	-0.530065345	3.99E-05	0.000115964
PSG1 ENSG00000231924 protein_coding	2.573505345	-3.421413157	4.07E-05	0.000118125
CXorf67 ENSG00000187690 protein_coding	6.476154245	0.087804169	4.29E-05	0.00012417
PTX4 ENSG00000251692 protein_coding	3.264175902	-1.44034848	4.55E-05	0.000131203
A4GNT ENSG00000118017 protein_coding	2.076934989	-3.784015344	4.69E-05	0.000134767
COX7B2 ENSG00000170516 protein_coding	7.299511178	-0.987962217	4.73E-05	0.00013585
ROS1 ENSG00000047936 protein_coding	2.380366931	1.993270329	5.17E-05	0.000147363
TMPRSS15 ENSG00000154646 protein_coding	3.885434699	-1.281961233	5.23E-05	0.000149041
DDX53 ENSG00000184735 protein_coding	5.039161318	-2.886419805	5.93E-05	0.000167478
FGF5 ENSG00000138675 protein_coding	2.281879884	-0.10294715	6.12E-05	0.000172652
AKR1C1 ENSG00000187134 protein_coding	2.111532974	7.452747522	6.20E-05	0.000174771
TREML4 ENSG00000188056 protein_coding	2.025846111	-3.245975202	6.41E-05	0.000180366
REG1A ENSG00000115386 protein_coding	4.011316123	-2.800877484	6.51E-05	0.000182919
MAGEA9 ENSG00000123584 protein_coding	5.78832519	-2.00841896	6.58E-05	0.000184715
ZFR2 ENSG00000105278 protein_coding	2.889928395	-0.490242184	6.69E-05	0.000187539
LUZP4 ENSG00000102021 protein_coding	4.112265492	-3.64958516	6.74E-05	0.000188946
PRMT8 ENSG00000111218 protein_coding	2.649958056	-0.351659704	6.80E-05	0.000190463
CFHR4 ENSG00000134365 protein_coding	2.951577901	-3.021200304	6.86E-05	0.000191974
AMDHD1 ENSG00000139344 protein_coding	2.013429226	0.755197665	6.86E-05	0.000191975
GPR149 ENSG00000174948 protein_coding	4.565771053	-1.951580525	6.98E-05	0.000194807
KISS1R ENSG00000116014 protein_coding	2.00266595	-2.294165051	7.05E-05	0.000196771
TBX5 ENSG00000089225 protein_coding	2.951243109	-1.882968194	7.57E-05	0.000210182
MAGEA8 ENSG00000156009 protein_coding	3.385744521	-1.836352117	7.83E-05	0.00021657
GABRG2 ENSG00000113327 protein_coding	4.880849895	-1.021105496	8.00E-05	0.000220798
SLC5A11 ENSG00000158865 protein_coding	2.070099723	-1.849987606	8.03E-05	0.000221648
HMX2 ENSG00000188816 protein_coding	3.697023092	-2.198256785	8.13E-05	0.000224207
IL13RA2 ENSG00000123496 protein_coding	2.305914385	1.800210815	8.36E-05	0.000230031
MAGEA12 ENSG00000213401 protein_coding	5.226569453	2.390577877	8.60E-05	0.000236137
ZP4 ENSG00000116996 protein_coding	2.529547248	-2.559673769	9.24E-05	0.000252636
SLC8A2 ENSG00000118160 protein_coding	2.195818921	0.286662296	9.60E-05	0.000261535
TIENSG00000164458 protein_coding	2.494393232	-3.669649559	9.61E-05	0.000261801
NKX2-4 ENSG00000125816 protein_coding	5.320749917	-2.916976243	9.92E-05	0.000269656
H2BFWT ENSG00000123569 protein_coding	2.868195441	-3.158863946	0.000102771	0.000278334
AC004233.2 ENSG00000270168 protein_coding	2.788302061	-1.658312569	0.000107994	0.000291382
SPINK6 ENSG00000178172 protein_coding	2.607627367	4.321897298	0.00011212	0.000301791
NAA11 ENSG00000156269 protein_coding	4.885908079	-1.660975754	0.000115561	0.000310309
TMEM202 ENSG00000187806 protein_coding	4.01388361	-3.946392963	0.000122823	0.000327656

Table SI. Continued.

Gene	logFC	logCPM	P-value	FDR
ZNF280A ENSG00000169548 protein_coding	3.291810097	-2.28007469	0.000125096	0.000333226
TMEM247 ENSG00000187600 protein_coding	4.56989769	-3.591436829	0.000126472	0.000336491
R3HDML ENSG00000101074 protein_coding	3.340324852	-4.211809052	0.000127125	0.000337929
FGFBP2 ENSG00000137441 protein_coding	3.11966471	3.736218565	0.000127802	0.000339477
SULT1E1 ENSG00000109193 protein_coding	2.083651851	1.616995509	0.000127838	0.000339523
TBR1 ENSG00000136535 protein_coding	2.907869988	-3.288992434	0.000129888	0.000344559
HMX1 ENSG00000215612 protein_coding	2.49621054	-0.408655093	0.000136555	0.000360701
SERPINA9 ENSG00000170054 protein_coding	2.131559155	-0.48067152	0.000141938	0.000373933
IGFL3 ENSG00000188624 protein_coding	2.29225647	1.692439845	0.000147155	0.000386599
DMRTA2 ENSG00000142700 protein_coding	3.000370188	0.792479728	0.000151825	0.000397995
AFPI ENSG00000081051 protein_coding	2.04266137	-2.734244783	0.000162599	0.00042346
TMEM235 ENSG00000204278 protein_coding	3.156088426	-3.486821315	0.000162837	0.000424017
GHSRI ENSG00000121853 protein_coding	5.178963562	-2.196103995	0.000163283	0.000425116
SPANXN3 ENSG00000189252 protein_coding	3.548185854	-3.98024024	0.00016395	0.000426793
OR51B4 ENSG00000183251 protein_coding	4.105312872	-2.783921134	0.000172896	0.00044781
CGB3 ENSG00000104827 protein_coding	2.608067908	-3.740026084	0.000178187	0.00046032
SP8 ENSG00000164651 protein_coding	2.341878161	-0.392451843	0.000179698	0.000463891
SLCO1B1 ENSG00000134538 protein_coding	2.168138756	-2.733646787	0.000196459	0.000503329
SAGE1 ENSG00000181433 protein_coding	5.045477446	0.312713986	0.000199695	0.000510381
MSLN ENSG00000162006 protein_coding	2.682257416	-2.632324546	0.000220178	0.000558603
OR7D4 ENSG00000174667 protein_coding	6.357024337	-2.359646042	0.000222416	0.000563725
C1orf94 ENSG00000142698 protein_coding	3.080260273	-2.635118355	0.000230373	0.000582739
POU4F1 ENSG00000152192 protein_coding	2.499351195	-0.899834619	0.000247507	0.000622926
ZG16 ENSG00000174992 protein_coding	2.110049895	-3.666251816	0.000253026	0.000635748
SPATA21 ENSG00000187144 protein_coding	2.7067561	-2.564590688	0.000261829	0.000656034
PASD1 ENSG00000166049 protein_coding	4.656109537	-1.898195544	0.000312629	0.000773609
GIPI ENSG00000159224 protein_coding	2.700699789	-3.527170298	0.000323552	0.000799429
DPPA4 ENSG00000121570 protein_coding	2.245559847	-2.072194045	0.000335043	0.000825212
TPTE ENSG00000274391 protein_coding	3.961923726	-3.955794128	0.000338599	0.000832943
LRATI ENSG00000121207 protein_coding	2.124840149	2.211877196	0.000343375	0.000843652
NEUROD2 ENSG00000171532 protein_coding	2.132735053	-2.021456578	0.000347321	0.000851802
IFITM5 ENSG00000206013 protein_coding	3.022609733	-3.847258127	0.000347767	0.000852695
PRAC2 ENSG00000229637 protein_coding	3.294498016	-2.466241169	0.000370629	0.000904311
DMRTC2 ENSG00000142025 protein_coding	3.684472833	-3.183194728	0.000372372	0.000908193
FAM237A ENSG00000235118 protein_coding	2.248331019	-4.041820329	0.000384932	0.000937047
HOXC12 ENSG00000123407 protein_coding	3.433087436	-1.528087738	0.000401463	0.000974518
TLX3 ENSG00000164438 protein_coding	4.847964433	-1.201420754	0.000407212	0.000987538
HBE1 ENSG00000213931 protein_coding	3.616714142	-0.520895843	0.000411019	0.000995561
CACNG7 ENSG00000105605 protein_coding	2.194747869	-3.429486631	0.000419231	0.001013269
MUC6 ENSG00000184956 protein_coding	3.361533262	1.912002546	0.000425779	0.001028128
SPZ1 ENSG00000164299 protein_coding	3.119386854	-3.943794941	0.000433285	0.001044708
TGIF2LX ENSG00000153779 protein_coding	3.825803043	-4.010849182	0.000443839	0.001067721
FSTL5 ENSG00000168843 protein_coding	2.886836083	-1.035107522	0.000459401	0.001102208
HORMAD1 ENSG00000143452 protein_coding	2.119095004	1.952901389	0.000475433	0.001137332

Table SI. Continued.

Gene	logFC	logCPM	P-value	FDR
FRG2CIENSG00000172969 protein_coding	2.841755512	-3.256258117	0.000482603	0.001152797
TSPY1IENSG00000258992 protein_coding	5.922939509	-2.692155348	0.000502264	0.00119468
LIM2IENSG00000105370 protein_coding	3.053197697	-1.512215164	0.000521834	0.001238442
FMR1NBIENSG00000176988 protein_coding	3.809345998	-3.385157909	0.000523804	0.001242297
NEFMIENSG00000104722 protein_coding	2.183653924	3.689371293	0.000588122	0.00137955
AKR1C4IENSG00000198610 protein_coding	2.163084073	-2.986299633	0.000681461	0.001579532
TSPY2IENSG00000168757 protein_coding	5.259921429	-3.173011521	0.000695013	0.001607833
ZNF560IENSG00000198028 protein_coding	2.888955245	-2.483525136	0.000740123	0.001704729
TKTL1IENSG00000007350 protein_coding	3.882741658	3.1539494	0.000818008	0.001869649
FOXI3IENSG00000214336 protein_coding	2.270618143	-0.395374089	0.000890291	0.002019814
OLIG2IENSG00000205927 protein_coding	2.347904423	-2.731842694	0.000918842	0.002080909
LIN28AIENSG00000131914 protein_coding	2.759349124	-3.352446432	0.000923999	0.002091535
TDRD15IENSG00000218819 protein_coding	4.109796548	-2.38997058	0.000988182	0.002224214
PAGE2BIENSG00000238269 protein_coding	3.520984586	-2.495812179	0.000988776	0.002225271
OR51B5IENSG00000242180 protein_coding	3.275180639	-4.063806364	0.000991575	0.002231292
MAGEB16IENSG00000189023 protein_coding	3.754737895	-3.770139608	0.001029478	0.00230878
LINGO2IENSG00000174482 protein_coding	2.063880022	-1.460129791	0.001083076	0.002421128
C19orf81IENSG00000235034 protein_coding	2.117412756	-2.261629839	0.001083594	0.002421684
ASIC5IENSG00000256394 protein_coding	2.0514764	-4.069829783	0.001107173	0.002467629
PSG7IENSG00000221878 protein_coding	2.050534408	-3.935931212	0.001122851	0.002498855
KCNA10IENSG00000143105 protein_coding	2.035726231	-4.210533637	0.001174667	0.002605459
FOXR2IENSG00000189299 protein_coding	5.33311907	-2.770335317	0.001207645	0.002674315
CDX2IENSG00000165556 protein_coding	2.789468551	-0.799125275	0.001212941	0.002684391
PAGE2IENSG00000234068 protein_coding	5.253928006	0.477307663	0.001233631	0.002725017
ANKRD34BIENSG00000189127 protein_coding	2.125896045	-1.439955577	0.001318699	0.002894215
TSPY10IENSG00000236424 protein_coding	5.108766355	-3.261963341	0.00152327	0.003300877
LYPD4IENSG00000273111 protein_coding	2.936313433	-3.498711633	0.001582031	0.003416678
AMER2IENSG00000165566 protein_coding	2.038759129	-3.368893957	0.001648897	0.003548297
FRG2BIENSG00000225899 protein_coding	2.404521676	-3.978404417	0.001665057	0.003578783
RSPH6AIENSG00000104941 protein_coding	2.212335685	-3.355032857	0.001706072	0.003660815
TUBA3EIENSG00000152086 protein_coding	2.634295732	-1.751001496	0.001784859	0.003818477
NTSIENSG00000133636 protein_coding	3.029110308	5.595159855	0.001786057	0.00382013
MCHR2IENSG00000152034 protein_coding	2.314039448	-4.143378851	0.001843891	0.003934933
CTRB1IENSG00000168925 protein_coding	2.525341316	-3.363604109	0.00186872	0.003983662
PRDM9IENSG00000164256 protein_coding	2.651638366	-3.988999663	0.001884565	0.004016012
CHATIENSG00000070748 protein_coding	2.614890199	-2.705749701	0.001910049	0.004065016
CCDC155IENSG00000161609 protein_coding	2.268491066	-2.659102863	0.002055459	0.004345157
SEPT14IENSG00000154997 protein_coding	2.763152307	-3.863987579	0.002112604	0.004454434
FGF3IENSG00000186895 protein_coding	4.828686923	-1.463795418	0.002133368	0.004493998
NFE4IENSG00000230257 protein_coding	2.389276951	-1.732725346	0.002135033	0.004496979
FFAR1IENSG00000126266 protein_coding	2.218598379	-3.633358623	0.002298296	0.004807061
NPPBIENSG00000120937 protein_coding	2.584346227	-4.233361998	0.002347309	0.004897606
GAD2IENSG00000136750 protein_coding	2.216749021	-4.240411173	0.002594217	0.005366677
CT45A5IENSG00000228836 protein_coding	2.88080685	-4.256297137	0.002643079	0.005457708

Table SI. Continued.

Gene	logFC	logCPM	P-value	FDR
MAGEA2 ENSG00000268606 protein_coding	2.788756395	-4.103917532	0.002870523	0.005886783
RPL10L ENSG00000165496 protein_coding	2.143262976	-2.664673352	0.003386084	0.006846441
ZNF716 ENSG00000182111 protein_coding	2.665896178	-4.004918194	0.003424732	0.006913696
CCDC144NL ENSG00000205212 protein_coding	2.232517238	-2.873098218	0.003578836	0.007194898
FLJ22763 ENSG00000241224 protein_coding	3.873491006	-3.790478019	0.003726142	0.007458267
ADGRG7 ENSG00000144820 protein_coding	2.639841594	-0.865819319	0.003785689	0.007565907
MAGEC3 ENSG00000165509 protein_coding	2.661234454	-3.861635651	0.003880608	0.007742693
TAC3 ENSG00000166863 protein_coding	2.224980672	-2.31963871	0.004010269	0.00796955
TBATA ENSG00000166220 protein_coding	2.268731683	-2.497505549	0.004218234	0.008335835
OTOS ENSG00000178602 protein_coding	2.302350564	-3.613830692	0.004230272	0.008355948
VCX ENSG00000182583 protein_coding	2.31852638	-2.946908521	0.004385302	0.008636551
F11 ENSG00000088926 protein_coding	3.804455016	-1.97056247	0.00454739	0.008919614
SALL3 ENSG00000256463 protein_coding	2.851918913	-0.061657912	0.004662647	0.009120806
OR6C2 ENSG00000179695 protein_coding	2.265661962	-4.141650238	0.004677006	0.009144913
DEFB126 ENSG00000125788 protein_coding	2.176671203	-2.62957544	0.00504784	0.009784852

Table SII. 79 identified differentially expressed mRNAs associated with pathological N stage.

Gene	logFC	logCPM	P-value	FDR
MUC6	-6.111532939	6.1469157	2.79E-29	5.32E-26
OR7D4	8.563850294	3.54789206	1.65E-21	1.57E-18
GHSR	5.141362678	2.246224641	3.28E-19	2.09E-16
RPL10L	3.233455051	1.94373923	4.53E-19	2.16E-16
CDC20B	2.338538404	1.344966286	4.97E-16	1.90E-13
MYL7	2.927709829	3.482346877	5.20E-15	1.65E-12
LIN28A	2.991742144	1.073144972	9.16E-15	2.50E-12
KRT36	2.390464939	3.249746271	3.23E-14	7.70E-12
C4orf26	-2.942207988	6.500879832	4.34E-14	9.21E-12
NFE4	-3.249256284	2.841860267	1.56E-13	2.97E-11
ADGRG7	-3.546272642	3.022840579	4.94E-13	8.58E-11
PTPRT	2.227034402	3.758410148	9.20E-13	1.46E-10
DCDC2	1.565576133	2.409112924	1.78E-12	2.62E-10
SPINK7	-2.654736315	9.667878065	7.27E-12	9.25E-10
TSPY1	-6.683530392	2.205797496	1.10E-11	1.32E-09
ATP13A5	-2.834738992	5.771023096	1.29E-11	1.44E-09
KLHDC8A	1.558103436	4.743595637	1.95E-11	2.07E-09
TSPY10	-6.2636189	1.534176881	2.19E-11	2.18E-09
VIL1	2.047806264	2.586624974	2.28E-11	2.18E-09
MUC22	-2.73858009	3.326247042	5.42E-11	4.92E-09
GABRP	2.056059403	8.103318968	6.55E-11	5.68E-09
TAC3	-2.985619451	2.510114125	8.91E-11	7.40E-09
C7	1.734377846	4.669555032	5.64E-10	4.30E-08
BPIFA1	-4.590188618	6.5420096	6.18E-10	4.54E-08
STOML3	1.901686967	1.939458631	2.12E-09	1.45E-07
C1orf94	-2.647673918	2.021304942	3.23E-09	2.13E-07
CAPSL	1.661383622	1.309802115	4.51E-09	2.87E-07
PYGM	1.764351639	7.519051934	7.84E-09	4.83E-07
TGM3	-2.146691787	12.43022163	1.16E-08	6.93E-07
MGAM2	-2.389376675	2.308052533	1.56E-08	8.85E-07
FRG2B	-2.497809216	0.528516072	1.58E-08	8.85E-07
UPK1A	-2.039357613	5.392450939	1.67E-08	9.09E-07
OSTN	2.065782007	0.462052077	2.98E-08	1.54E-06
SCGB3A2	1.704638759	2.562862003	8.65E-08	3.93E-06
PPP1R1B	-2.000419067	6.240371009	1.78E-07	7.91E-06
FMR1NB	2.591103894	1.049262022	2.56E-07	1.08E-05
SPANXN3	2.21936088	0.294539629	2.79E-07	1.16E-05
DPCR1	-1.519873884	1.093438692	4.94E-07	1.89E-05
NTS	2.302732913	10.1877012	7.28E-07	2.62E-05
OPRPN	-2.840876689	-0.011878051	8.88E-07	3.06E-05
KRT40	1.629982576	1.356048697	1.05E-06	3.47E-05
SPINK9	-1.856828261	2.2059578	1.20E-06	3.88E-05
PAX1	-1.701279316	5.791972059	1.56E-06	4.73E-05
EPYC	1.503456123	3.22793431	1.76E-06	5.24E-05

Table SII. Continued.

Gene	logFC	logCPM	P-value	FDR
TKTL1	-2.939420736	8.030114319	2.13E-06	6.17E-05
MAGEC3	1.986447228	0.446838133	2.30E-06	6.56E-05
FGF3	2.985359867	2.825660832	2.38E-06	6.65E-05
MUC5B	-2.226953241	9.022114846	3.02E-06	8.12E-05
SPRR2F	-1.535682197	10.01614933	3.58E-06	9.11E-05
BPIFB6	-2.820466294	0.488710968	4.13E-06	0.000103836
PDIA2	-1.847096554	6.101379599	5.14E-06	0.000125851
LTF	-1.938244867	10.49551697	5.62E-06	0.000134043
OLIG2	-1.665524873	1.623302621	6.49E-06	0.000146251
AGBL1	1.521999002	2.543046169	6.51E-06	0.000146251
RPTN	-1.52401071	9.232393238	8.96E-06	0.000187876
AQP5	-1.533393307	5.952405196	1.27E-05	0.000250285
TDRD15	-2.772223698	2.166817297	1.39E-05	0.000268657
ANXA10	-1.741449684	6.007586728	1.69E-05	0.000306679
SEPT14	-2.055518974	0.709116984	2.24E-05	0.000385298
HTN3	2.083451531	0.967933726	2.81E-05	0.000464061
MAGEA8	-1.862275132	2.725697194	4.11E-05	0.000608434
DMBT1	-1.547629022	7.740154582	9.82E-05	0.001179522
C8orf22	1.659968567	2.812644298	0.000101917	0.001193622
PNMA6E	2.222371545	3.592337925	0.000136177	0.001494029
GPR12	-1.557430229	0.794524376	0.000194531	0.002007347
C20orf85	1.618517793	0.630302043	0.000207507	0.002107083
R3HDML	-1.652129264	0.074447444	0.000265156	0.002543636
HSD3B1	-1.800060231	-0.013525805	0.000274116	0.002590529
PRB2	-1.67218308	2.686612668	0.000305361	0.002789163
SCGB1A1	-1.798508295	5.407387931	0.000311916	0.002822029
FLJ22763	2.259636415	0.583334618	0.00032589	0.002934543
CRNN	-1.51340982	11.77399299	0.000386808	0.003311288
TSPY2	-2.920146353	1.576909001	0.000521548	0.00406382
BPIFA2	-2.030067662	1.346983761	0.000595286	0.004393493
CST5	-1.822224884	0.377351245	0.000713502	0.00508237
TFF1	-1.625066666	2.398213034	0.000716595	0.00508543
SALL3	1.694786132	4.794538498	0.000828836	0.005607403
BPIFB2	-2.323178328	8.034359016	0.000982846	0.006317352
SPANXD	-1.571732153	2.777583976	0.010224441	0.037391683