

**Supplementary Table 5**

Name	Islands Name	Relation to Island	UCSC RefGene Name	UCSC RefGene Accession	UCSC RefGene Group	adj.P.Val	ΔBeta
cg26131019	chr3:66550318-66551848	Island	LRIG1	NM015541	1stExon	6.22E-167	-0.22
cg08634464	chr19:2900329-2901203	Island	ZNF57	NM173480	Body	3.87E-38	-0.33
cg09039163	chr2:239009072-239009361	N Shore	ESPNL;ESPNL	NM194312; NM194312	1stExon; 5'UTR	3.12E-25	-0.12
cg22730830	chr16:2867245-2868002	Island	PRSS21; PRSS21; PRSS21	NM144956; NM006799; NM144957	Body;Body;Body	4.61E-22	0.23
cg26987645		OpenSea	FMOD	NM002023	TSS200	3.85E-21	0.12
cg17518825	chr2:46523789-46527140	N Shore	EPAS1	NM001430	TSS1500	1.31E-20	-0.13
cg14417329	chr17:80186135-80189990	Island	SLC16A3; SLC16A3	NM001042422; NM004207	TSS200; TSS1500	2.04E-17	-0.12
cg01333788		OpenSea	GJB5	NM005268	5'UTR	3.12E-17	-0.11
cg17904739	chr12:3862068-3862606	N Shore	EFCAB4B; EFCAB4B; EFCAB4B	NM001144959; NM032680; NM001144958	5'UTR; 5'UTR; 5'UTR	4.70E-16	0.17
cg23817637		OpenSea	CLRN3	NM152311	TSS1500	5.56E-16	-0.13
cg12854483		OpenSea	CNN1; CNN1	NM001299; NM001299	1stExon; 5'UTR	1.30E-11	0.14
cg02022375		OpenSea	KRTAP1-1	NM030967	TSS200	1.38E-11	-0.12
cg05342835		OpenSea	SYNC; SYNC	NM030786;	Body;Body	1.60E-11	0.14

				NM 0011617 08			
cg22487 322	chr6:137 365299- 1373661 26	S Shore	IL20RA	NM 014432	TSS200	8.21E-10	0.13
cg15873 301	chr3:120 45652- 1204662 7	N Shore	SYN2;SY N2	NM 133625; NM 003178	TSS1500 ;TSS150 0	1.18E-08	-0.19
cg24512 973	chr1:155 163434- 1551638 18	N Shore	MUC1;M UC1;MU C1;MUC 1;MUC1; MUC1;M UC1	NM 0010443 91;NM 0010443 93;NM 0010180 16;NM 0010443 90;NM 0010443 92;NM 002456; NM 0010180 17	Body;Bo dy;Body; Body;Bo dy;Body; Body	2.93E-08	0.15
cg16731 240	chr19:52 390841- 5239136 8	Island	ZNF577; ZNF577; ZNF577	NR 024181; NM 032679; NM 0011355 90	TSS200; TSS200; TSS200	6.36E-08	0.15
cg18182 399	chr2:220 283200- 2202837 50	N Shore	DES;DE S	NM 001927; NM 001927	1stExon; 5'UTR	2.36E-07	0.27
cg18738 906		OpenSea	SCNN1A ;SCNN1 A;SCNN 1A	NM 0011595 75;NM 001038; NM 0011595 76	Body;Bo dy;1stEx on	4.30E-07	0.20
cg22506 059	chr22:37 914768- 3791588 3	S Shore	CARD10	NM 014550	TSS1500	1.04E-06	0.14
cg06818 777	chr17:48 545570- 4854690 0	Island	CHAD;A CSF2	NM 001267; NM 025149	TSS1500 ;Body	3.94E-05	0.12

cg06958829	chr17:48545570-48546900	Island	ACSF2;CHAD	NM025149;NM001267	Body;1st Exon	4.58E-05	0.24
cg15158783	chr4:74847528-74847830	Island	PF4	NM002619	1stExon	5.24E-05	0.13
cg00333528		OpenSea	GABRR1;GABRR1	NM002042;NM002042	5'UTR;1stExon	5.62E-05	0.12
cg01081263	chr11:9112461-9113459	Island	SCUBE2;SCUBE2	NM020974;NM001170690	Body;Body	7.14E-05	0.12
cg27278294	chrX:149736720-149737756	N Shore	MTM1	NM000252	TSS1500	7.38E-05	-0.10
cg19884600		OpenSea	PYHIN1;PYHIN1;PYHIN1;PYHIN1	NM198930;NM198928;NM198929;NM152501	5'UTR;5'UTR;5'UTR;5'UTR	2.72E-04	-0.11
cg14925024	chr1:228289669-228291184	S Shore	C1orf35	NM024319	TSS1500	2.94E-04	-0.12
cg08899626		OpenSea	LDB2;LDB2;LDB2;LDB2	NM001290;NM001130834;NM001130834;NM001290	1stExon;1stExon;5'UTR;5'UTR	5.63E-04	0.11
cg25593948	chr6:50787286-50788091	N Shore	TFAP2B	NM003221	1stExon	7.69E-04	0.10
cg05942574	chr17:48636103-48639279	Island	CACNA1G;CACNA1G;CACNA1G;CACNA1G;CACNA1G;CACNA1G;CACNA1G;CACNA1G	NM198384;NM198397;NM198396;NM198379;NM198383;	TSS1500;TSS1500;TSS1500;TSS1500;TSS1500;TSS1500;TSS1500;TSS1500	7.96E-04	0.13

			A1G;CA CNA1G; CACNA1 G;CACN A1G;CA CNA1G; CACNA1 G;CACN A1G;CA CNA1G	NM 198380; NM 198387; NM 198378; NM 198377; NM 198386; NM 198376; NM 198385; NM 018896; NM 198388; NM 198382	0;TSS15 00;TSS1 500;TSS 1500;TS S1500;T SS1500; TSS1500		
cg16415 058	chr10:10 8923780- 1089248 05	Island	SORCS1 ;SORCS 1	NM 0010130 31;NM 052918	1stExon; 1stExon	8.34E-04	0.19
cg20773 127	chr4:111 397677- 1113980 89	N Shore	ENPEP	NM 001977	TSS200	8.40E-04	0.11
cg10014 293	chr16:56 701863- 5670220 8	S Shore	MT1H	NM 005951	Body	9.56E-04	0.12
cg22605 643		OpenSea	RGS4;R GS4;RG S4;RGS4	NM 005613; NM 0011024 45;NM 0011133 81;NM 005613	1stExon; Body;TS S200;5'U TR	1.10E-03	0.10
cg03760 483	chr17:68 98820- 6900427	Island	ALOX12	NM 000697	TSS200	1.26E-03	0.12
cg10925 082		OpenSea	ARHGDI B	NM 001175	TSS200	1.52E-03	0.11
cg17142 183		OpenSea	IL1R2	NM 004633	TSS200	1.61E-03	-0.11
cg25438 963	chr6:260 45644- 2604603 3	Island	HIST1H3 C	NM 003531	1stExon	3.08E-03	0.26
cg15799 267		OpenSea	ALOX15 B;ALOX 15B;ALOX	NM 001141; NM	5'UTR;5' UTR;1st Exon;5'U	3.76E-03	0.11

			15B;ALOX15B;ALOX15B;ALOX15B	001039130;NM001039131;NM001039131;NM001141;NM001039130	TR;1stExon;1stExon		
cg09137696	chr16:56671937-56672530	Island	MT1A	NM005946	TSS200	4.59E-03	0.17
cg21922574	chr18:70533965-70536871	Island	NETO1	NM138966	TSS1500	8.03E-03	0.17
cg07636178	chr6:26045644-26046033	N Shore	HIST1H3C	NM003531	TSS200	9.43E-03	0.11
cg09313705	chr17:46620367-46621373	S Shore	HOXB2	NM002145	TSS200	9.58E-03	0.12
cg03573747		OpenSea	ADIPOQ	NM004797	5'UTR	1.18E-02	0.11
cg09980522	chr11:105481126-105481422	S Shore	GRIA4;GRIA4;GRIA4;GRIA4	NM001077243;NM001077244;NM001112812;NM000829	Body;Body;1stExon;Body	1.34E-02	0.14
cg02916816	chr14:24044886-24046760	S Shore	JPH4;JPH4	NM001146028;NM032452	5'UTR;5'UTR	1.39E-02	0.14
cg20449692	chr3:170136242-170137886	Island	CLDN11	NM005602	1stExon	1.43E-02	0.12
cg11762346		OpenSea	HKDC1;HKDC1	NM025130;NM025130	5'UTR;1stExon	1.72E-02	0.18
cg15740508		OpenSea	AMPD1	NM000036	TSS1500	1.84E-02	0.16
cg26029902	chr20:56884738-56885222	N Shore	RAB22A;PPP4R1L	NM020673;NR003505	TSS1500;Body	1.89E-02	0.13

cg25239996	chr20:44746822-44747060	N Shore	CD40;CD40	NM152854;NM001250	TSS200;TSS200	1.97E-02	0.12
cg23995753	chr2:160760604-160761452	Island	LY75	NM002349	Body	2.01E-02	0.15
cg12100791	chr16:31213566-31214287	S Shore	PYCARD;PYCARD	NM013258;NM145182	TSS200;TSS200	2.02E-02	0.10
cg08124030		OpenSea	TM4SF1	NM014220	1stExon	2.14E-02	0.10
cg21880903		OpenSea	KLB	NM175737	1stExon	2.19E-02	0.14
cg19994834	chrX:122318752-122319149	N Shore	GRIA3;GRIA3	NM007325;NM000828	TSS200;TSS200	2.33E-02	0.10
cg01058368		OpenSea	CDH10	NM006727	TSS1500	2.83E-02	0.11
cg26385222	chr7:150496809-150498206	Island	TMEM176B;TMEM176B;TMEM176A;TMEM176B;TMEM176B;TMEM176B	NM001101313;NM001101311;NM018487;NM014020;NM001101312;NM001101314	TSS1500;5'UTR;TSS1500;5'UTR;5'UTR;5'UTR	3.24E-02	0.10
cg00891278	chr3:126113547-126113967	Island	CCDC37;CCDC37	NM182628;NM182628	1stExon;5'UTR	3.73E-02	0.13
cg15077070	chr2:102803672-102804556	N Shore	IL1RL2	NM003854	TSS200	4.53E-02	0.11

Name: DNA methylation probe name

Relations to Island: position of methylation probe relative to nearest island

UCSC RefGene Name

UCSC RefGene Accession number

UCSC RefGeneGroup: Assigned DNA loci per UCSC designation

adj.P.Val: P-value adjusted for multiple hypothesis testing

$\Delta$  Beta: Difference in mean beta methylation level (EA – AA)