

Table S1: Additional BAM stats– Table showing average read depth, number of total aligned reads and aligned reads specifically in chromosome 6 in healthy controls (HC) and RA patients (RA).

Sample ID	Average Depth	Total aligned reads	%QC Passed	Aligned reads in Chr 6
HC_01	37	9953158	100	2323302
HC_02	34	9962256	100	2019076
HC_03	38	10150890	100	3119094
HC_04	37	10341636	100	2525062
HC_05	31	9148738	100	2669338
HC_06	137	16167290	100	8774004
HC_07	155	15068280	100	8326580
HC_08	154	12234242	100	6860274
HC_09	131	15617204	100	8680762
HC_10	139	15794282	100	8788548
HC_11	94	13113760	100	7277960
HC_12	151	14947558	100	8340998
HC_13	145	14230566	100	8454338
HC_14	136	8652700	100	4502246
HC_15	126	15876522	100	8792690
HC_16	161	13751662	100	7595462
HC_17	141	13178864	100	7459960
RA_01	37	9282020	100	2293042
RA_02	38	8260274	100	2579064
RA_03	37	10258894	100	2354656
RA_04	35	8872216	100	2266988
RA_05	32	7431306	100	2076940
RA_06	156	15928574	100	8821214
RA_07	149	14767336	100	8083688
RA_08	155	17077478	100	9406890
RA_09	163	13109468	100	7301638
RA_10	134	17634868	100	8830918
RA_11	151	16110900	100	8387294
RA_12	156	18626472	100	9562310
RA_13	156	14929390	100	7540138
RA_14	146	17861892	100	9874670
RA_15	166	14492544	100	7830202
RA_16	155	16356608	100	8963196
RA_17	162	17681976	100	9607416

Table S2 – Table showing the age, DAS28 scores and medications administered to ACPA+ RA patients included in the TBSeq cohort

ID	Age	DAS28	Medication
RA1	19.5	5.66	Not available
RA2	48.5	3.44	Not available
RA3	27.1	5.33	Not available
RA4	51.0	6.59	MTX; SSZ
RA5	46.8	3.55	Not available
RA6	55.4	4.00	HCQ
RA7	52.9	4.44	T3; Leflunomide
RA8	70.1	3.28	HCQ; MTX; SSZ
RA9	48.2	3.14	HCQ; MTX
RA10	35.8	2.90	Humira, percocet
RA11	53.2	3.09	MTX (Hx: HCQ, SSZ)
RA12	56.2	4.85	MTX; Hx: gold; DepoMedrol IM
RA13	58.3	3.10	MTX and HCQ x 8 weeks
RA14	41.1	2.62	MTX; Prednisone, Humira; Percocet; Tylenol #3; Folic Acid
RA15	40.1	4.64	MTX; Humira;
RA16	54.5	2.20	leflunomide; Hydroxychloroquine; Past hx: MTX, depo injections
RA17	27.4	5.42	MTX sc/weekly; HCQ, folic acid, tylenol

Table S3: Primers for mRNA targets identified through targeted bisulfite sequencing

Gene ID	Primer Sequence	NCBI Accession ID	Amplicon Size (kb)
18S	F 5'-AAAGGAATTGACGGAAGGGCACCA	NR_003286.1	174
	R 5'-ACCAGACAAATCGCTCCACCAACT		
C6ORF10	F 5'-AATTCACAGCCCCTATTCCC	NM_006781.4	119
	R 5'-TTATGGGTGCCATGGGTG		
HLA-DOB	F 5'-GTGGCTCTGCTAGTGAATCTG	NM_002120.3	114
	R 5'-TGTCCCGTTGGTGAAGTAAC		
TNXB	F 5'-TGTGTCTGCAAAGATGGGTATG	NM_019105.6	143
	R 5'-ATTTTCATAGGCATCCACGGG		
HCG18	F 5'-AAGGGATTTGGAATTGCACTTG	NR_024052.2	147
	R 5'-TGGCTTCAGTCCTGTTTCATC		

Primers were designed using Primer Quest (IDT Technologies) and verified by Primer Blast (NCBI). 18S Ribosomal RNA; F=Forward; R=Reverse

Table S4: Table showing list of all the DMLs identified in RA patients by TBSeq. Average β -value represents the difference in methylation levels at that CpG location between RA patients and ACPA-/FDR. *P*-values were calculated by Mann-Whitney U test. NA= Not applicable as gene annotation was not available at that position.

CpG Position	Gene	Ave β-Value (RA - Control)	<i>P</i>-Value
32986780	NA	-1.22	0.00041
32777215	NA	-2.28	0.00152
32764718	NA	-2.33	0.00156
32780469	<i>HLA-DOB</i>	-2.75	0.00249
32774787	NA	-2.21	0.00273
31154433	NA	-0.50	0.00274
33043508	<i>HLA-DPA1</i>	-0.85	0.00436
32761774	NA	-2.27	0.00452
32780200	<i>HLA-DOB</i>	-2.54	0.00639
32765613	NA	-0.54	0.00676
32740732	NA	-0.90	0.00685
32836118	NA	0.64	0.00825
31010741	NA	-0.59	0.01272
32899295	NA	-1.99	0.01381
31508958	<i>DDX39B</i>	-0.91	0.01423
30713294	<i>IER3</i>	-0.31	0.01635
30951556	<i>MUC21</i>	0.15	0.01827
32341351	<i>C6orf10</i>	-1.56	0.01961
32765450	NA	-0.66	0.02126
30232512	<i>HLA-L</i>	1.57	0.02136
31584370	<i>AIF1</i>	-0.86	0.02214
29557409	<i>OR2H2</i>	-0.61	0.02324
32305977	<i>C6orf10</i>	-1.69	0.02364
31320339	NA	-0.30	0.02504
30325617	NA	0.67	0.0263
29717695	<i>HLA-F-AS1</i>	-0.82	0.02648
32760712	NA	-1.83	0.02722
29558189	NA	-1.25	0.02725
30112729	<i>TRIM40</i>	0.23	0.02782
32765670	NA	-1.41	0.0291
30099090	NA	0.67	0.02926
31350089	NA	1.57	0.02928
32303846	<i>C6orf10</i>	-1.51	0.02935
30104439	<i>TRIM40</i>	0.66	0.03022

30584269	<i>PPP1R10</i>	-0.60	0.03034
33021414	NA	-1.34	0.03044
32767672	NA	-1.35	0.03059
32754212	NA	-0.69	0.03067
32338985	<i>C6orf10</i>	-1.21	0.03096
32777539	NA	-1.44	0.03143
32762790	NA	-1.72	0.03283
33022485	NA	-1.44	0.03287
32070067	<i>TNXB</i>	-1.95	0.03455
30224304	NA	1.83	0.0348
32816956	<i>TAP1</i>	-1.75	0.0362
32780154	<i>HLA-DOB</i>	-1.45	0.03625
30264306	<i>HCG18</i>	1.87	0.03699
31946612	<i>STK19</i>	-1.77	0.03811
29644501	<i>ZFP57</i>	1.62	0.03879
31369118	<i>MICA</i>	0.42	0.03929
30286728	<i>HCG18</i>	1.67	0.0397
32941824	<i>BRD2</i>	-0.52	0.04048
32953082	NA	0.86	0.04146
33021371	NA	-1.43	0.04153
30325646	NA	-0.64	0.04227
30809095	NA	-0.54	0.04236
32767431	NA	-1.33	0.04248
29821690	NA	-0.26	0.04277
32033005	<i>TNXB</i>	-1.62	0.04286
30316738	NA	1.76	0.04297
32760443	NA	-1.78	0.04298
32935520	<i>BRD2</i>	-0.57	0.043
33023161	NA	-1.49	0.04377
32358230	<i>HCG23</i>	-1.35	0.044
32754918	NA	-1.72	0.04472
32991503	NA	-1.14	0.04592
32022897	<i>TNXB</i>	-1.76	0.04652
30065849	NA	0.26	0.04689
29816120	NA	-0.70	0.04731
30270078	<i>HCG18</i>	1.56	0.04798
30565189	NA	0.15	0.04834
31320162	NA	-0.19	0.04913
31369237	<i>MICA</i>	-0.65	0.04915
30244710	NA	1.61	0.04993

Table S5: Summary of the top findings from Ingenuity Pathway Analysis of genes harboring significant DMLs

Genes with Hypermethylated CpGs			Genes with Hypomethylated CpGs		
Name	P-value	Focus Molecules	Name	P-value	Focus Molecules
Canonical Pathways			Canonical Pathways		
Crosstalk between Dendritic Cells and Natural Killer Cells	2.27E-02	1	Antigen Presentation Pathway	1.94E-06	3
Molecular and Cellular Functions			Molecular and Cellular Functions		
Cell Death & Survival	1.38E-02 - 5.14E-04	1	Allograft Rejection Pathway	4.57E-04	2
Post Translational Modification	1.80E-03 - 1.80E-03	1	OX40 Signaling Pathway	6.22E-04	2
Cellular Compromise	1.38E-02 - 3.08E-03	1	Cdc42 Signaling	3.24E-03	2
Cell Morphology	1.76E-02 - 1.76E-02	1	Th1 Pathway	3.29E-03	2
Physiological System Development and Function			Molecular and Cellular Functions		
Hematological System Development and Function	4.16E-02 - 1.45E-04	4	Cellular Development	3.81E-02 - 3.95E-04	6
Hematopoiesis	1.24E-02 - 1.45E-04	3	Cellular Growth and Proliferation	3.81E-02 - 3.95E-04	6
Lymphoid Tissue Structure and Development	1.24E-02 - 1.45E-04	4	Cell Death & Survival	3.55E-02 - 1.34E-03	3
Organismal Functions	2.46E-02 - 3.02E-04	2	Cellular Assembly and Organization	3.10E-02 - 1.34E-03	5
Organismal Survival	2.98E-02 - 2.98E-03	3	Physiological System Development and Function		
Diseases and Disorders			Diseases and Disorders		
Insulin-dependent Diabetes Mellitus	5.44E-10	5	Hematological System Development and Function	3.95E-04	3
Rheumatoid Arthritis	2.50E-02	2	Lymphoid Tissue Structure and Development	3.95E-04	3
Upstream Regulator			Diseases and Disorders		
IFN alpha receptor	4.98E-04		Insulin-dependent Diabetes Mellitus	7.44E-17	10
ADAM10	1.25E-03		Rheumatoid Arthritis	1.81E-09	9
ATR	2.74E-03		Systemic Lupus Erythematosus	4.33E-04	3
Networks			Upstream Regulator		
Cancer, Cell Cycle, Cell Morphology		3	EBI23	2.81E-07	
Cancer, Gastrointestinal Disease, Neurological Disease		3	IL27	5.78E-06	
Cell Death and Survival, Cell-to-Cell Signaling and Interaction, Inflammatory Response		2	NF-κ B Complex	4.37E-04	
			IFN alpha receptor	1.30E-03	
			Networks		
			Connective Tissue Disorders, Inflammatory Disease, Organismal Injury and Abnormalities		22
			Embryonic Development, Organismal Development, Skeletal and Muscular System Development and Function		3

Table S6: Validation of DMLs – Table showing the CpG IDs, and their positions mapped from chromosome 6 of a publically-available EWAS dataset (GSE42861) as per the CpG coordinates of the 74 DMLs identified in our study. Average β -value represents the methylation difference between RA patients and healthy controls (HC). *P*-values were calculated by Mann-Whitney U test. NA= Not applicable as gene annotation was not available at that position.

Gene	CpG ID	Position	Ave β-Value (RA - Control)	<i>P</i>-Value
<i>DDX39B</i>	cg00124488	31509762	-0.004	0.11149
<i>HLA-F-AS1</i>	cg00089464	29717223	-0.1083	0.00176
<i>TNXB</i>	cg00122779	32033006	-0.2787	0.00029
<i>TAPI</i>	cg00240875	32817673	-0.0136	0.00000
<i>PPP1R10</i>	cg00320625	30584596	0.04793	0.08855
<i>HLA-F-AS1</i>	cg00346247	29716850	0.14259	0.00000
NA	cg00402668	32768079	-0.0019	0.00010
NA	cg00402668	32768079	-0.0019	0.00010
<i>ZFP57</i>	cg00539542	29644543	0.00012	0.02863
<i>TNXB</i>	cg00592944	32032715	-0.0118	0.00000
<i>C6orf10</i>	cg00738945	32340353	-0.016	0.00000
<i>DDX39B</i>	cg00916439	31509423	0.27988	0.00000
<i>PPP1R10</i>	cg00918762	30585116	0.1066	0.00001
<i>IER3</i>	cg00985729	30712558	-0.1108	0.00020
<i>PPP1R10</i>	cg00990221	30585121	0.15223	0.00000
<i>TNXB</i>	cg01054725	32023141	-0.0085	0.00003
<i>BRD2</i>	cg01105943	32940865	0.10641	0.00123
<i>DDX39B</i>	cg01138972	31509890	0.13909	0.00000
<i>TRIM40</i>	cg01190484	30104593	0.08011	0.00056
<i>TAPI</i>	cg01255458	32817846	-0.006	0.00002
NA	cg01388630	29817024	-0.0018	0.33812
NA	cg01423251	32765321	-0.0771	0.00000
NA	cg01423251	32765321	-0.0771	0.00000
NA	cg01423251	32765321	-0.0771	0.00000
NA	cg01423251	32765321	-0.0771	0.00000
<i>TRIM40</i>	cg01506341	30104708	-0.0427	0.41418
<i>HCG18</i>	cg01598009	30286161	-0.0437	0.33499
<i>BRD2</i>	cg01641778	32935591	0.19181	0.00000

<i>IER3</i>	cg01665212	30712373	0.32294	0.00000
<i>BRD2</i>	cg01845355	32940873	0.34379	0.00000
<i>PPP1R10</i>	cg01852131	30585154	0.09124	0.00001
<i>DDX39B</i>	cg02000145	31509401	0.50973	0.00000
<i>HLA-DPA1</i>	cg02286081	33043841	0.07305	0.00957
<i>TNXB</i>	cg02402501	32032279	0.00114	0.00345
<i>BRD2</i>	cg02448295	32941126	0.09352	0.10574
<i>TNXB</i>	cg02600478	32023332	0.02496	0.00000
<i>C6orf10</i>	cg02808240	32304142	-0.2886	0.00007
<i>PPP1R10</i>	cg02809877	30584284	0.20548	0.00000
<i>MUC21</i>	cg02827154	30952059	-0.0134	0.00001
<i>HLA-DOB</i>	cg02954194	32781384	0.00039	0.88979
<i>BRD2</i>	cg02985708	32940920	0.10842	0.00006
<i>HLA-DOB</i>	cg03083146	32781234	-0.0209	0.00000
<i>HLA-F-AS1</i>	cg03150111	29718048	-0.0023	0.05701
<i>TRIM40</i>	cg03251349	30104916	-0.0053	0.18691
<i>HLA-DOB</i>	cg03530983	32781170	-0.0214	0.00000
<i>HLA-DOB</i>	cg03530983	32781170	-0.0214	0.00000
<i>BRD2</i>	cg03532223	32935857	0.15659	0.00000
<i>NA</i>	cg03639929	32765402	-0.385	0.00163
<i>NA</i>	cg03639929	32765402	-0.385	0.00163
<i>NA</i>	cg03639929	32765402	-0.385	0.00163
<i>NA</i>	cg03639929	32765402	-0.385	0.00163
<i>STK19</i>	cg03661299	31947216	-0.0025	0.00318
<i>PPP1R10</i>	cg03697115	30585027	0.084	0.00070
<i>BRD2</i>	cg03758774	32936477	0.2447	0.00016
<i>TAP1</i>	cg03807983	32817662	-0.0142	0.00014
<i>NA</i>	cg03819713	32764987	0.0991	0.00003
<i>NA</i>	cg03819713	32764987	0.0991	0.00003
<i>NA</i>	cg03819713	32764987	0.0991	0.00003
<i>NA</i>	cg03819713	32764987	0.0991	0.00003
<i>NA</i>	cg03999934	30325790	-0.0753	0.23640
<i>NA</i>	cg03999934	30325790	-0.0753	0.23640
<i>IER3</i>	cg04191142	30712865	-0.0031	0.73277
<i>DDX39B</i>	cg04211275	31508916	0.08257	0.00000
<i>MUC21</i>	cg04230397	30951917	0.04178	0.04473
<i>MICA</i>	cg04405704	31369118	0.07064	0.25212
<i>MICA</i>	cg04405704	31369118	0.07064	0.25212
<i>DDX39B</i>	cg04431990	31509495	0.15132	0.00000

<i>PPP1R10</i>	cg04513728	30584979	0.23957	0.00000
<i>BRD2</i>	cg04607679	32935802	0.19329	0.00000
<i>TNXB</i>	cg04754615	32032722	-0.0138	0.00185
<i>DDX39B</i>	cg04755523	31508664	0.02363	0.00172
<i>BRD2</i>	cg04798369	32935521	0.1232	0.00146
<i>AIF1</i>	cg04812347	31584222	-0.2541	0.04411
<i>HLA-L</i>	cg04884612	30231638	7.1E-05	0.00015
<i>IER3</i>	cg04940526	30712924	-0.0177	0.07146
<i>IER3</i>	cg04956913	30712435	0.09968	0.02491
<i>NA</i>	cg05050652	29816165	0.1931	0.00000
<i>BRD2</i>	cg05111146	32935024	-0.0106	0.56684
<i>HLA-F-AS1</i>	cg05542661	29717068	0.06995	0.00001
<i>TNXB</i>	cg05598103	32022929	-0.001	0.29411
<i>TRIM40</i>	cg05681072	30104981	0.01875	0.78767
<i>TRIM40</i>	cg05978864	30105174	0.00117	0.24305
<i>HLA-F-AS1</i>	cg06097213	29717651	-0.2188	0.00973
<i>MUC21</i>	cg06183469	30951084	0.01608	0.00010
<i>TRIM40</i>	cg06195293	30104884	-0.0064	0.63324
<i>TRIM40</i>	cg06365108	30104625	-0.0243	0.93893
<i>TNXB</i>	cg06418131	32023649	0.00824	0.16291
<i>HLA-F-AS1</i>	cg06486622	29718119	0.06096	0.00067
<i>NA</i>	cg06855286	31010596	0.06992	0.00341
<i>NA</i>	cg07056079	32765313	-0.1332	0.00107
<i>NA</i>	cg07056079	32765313	-0.1332	0.00107
<i>NA</i>	cg07056079	32765313	-0.1332	0.00107
<i>NA</i>	cg07056079	32765313	-0.1332	0.00107
<i>BRD2</i>	cg07148032	32935353	0.06728	0.00000
<i>NA</i>	cg07180523	30325714	-0.0386	0.65190
<i>NA</i>	cg07180523	30325714	-0.0386	0.65190
<i>BRD2</i>	cg07275218	32942714	0.09882	0.42693
<i>TRIM40</i>	cg07405796	30104551	-0.0484	0.14370
<i>TNXB</i>	cg07502333	32032852	-0.004	0.00003
<i>MUC21</i>	cg07538160	30951393	-0.0197	0.00349
<i>NA</i>	cg07653289	30325733	-0.0099	0.11983
<i>NA</i>	cg07653289	30325733	-0.0099	0.11983
<i>HLA-L</i>	cg07720160	30232813	0.01035	0.30348
<i>BRD2</i>	cg07820696	32935842	0.20453	0.00000
<i>BRD2</i>	cg07837102	32940878	0.05188	0.04885
<i>TNXB</i>	cg07910408	32023249	-0.0084	0.00004

NA	cg07937542	32765150	0.0598	0.00014
NA	cg07937542	32765150	0.0598	0.00014
NA	cg07937542	32765150	0.0598	0.00014
NA	cg07937542	32765150	0.0598	0.00014
BRD2	cg07954885	32935262	0.05899	0.32430
OR2H2	cg07976328	29556415	0.03627	0.45247
TRIM40	cg08116408	30112776	-0.0132	0.88996
BRD2	cg08361185	32936068	0.17543	0.00000
HLA-DPA1	cg08405587	33043137	0.00291	0.00156
DDX39B	cg08463024	31508166	0.08096	0.95733
BRD2	cg08491668	32935235	0.08351	0.04382
NA	cg08548095	30325756	0.11272	0.00003
NA	cg08548095	30325756	0.11272	0.00003
<i>C6orf10</i>	cg08563982	32306373	-0.0157	0.00000
PPP1R10	cg08917831	30585023	0.05494	0.00299
BRD2	cg08948338	32936101	0.06545	0.00106
IER3	cg09016822	30712396	0.08251	0.00016
TNXB	cg09102573	32023251	-0.0093	0.00002
TNXB	cg09107710	32033306	-0.0383	0.00009
IER3	cg09127400	30712330	0.19457	0.00009
IER3	cg09131512	30713441	-0.0149	0.00008
TRIM40	cg09196959	30104440	0.07617	0.00213
HLA-L	cg09262446	30231689	-0.0277	0.00000
TRIM40	cg09423413	30104754	-0.0215	0.31860
DDX39B	cg09427493	31508934	0.27785	0.00000
BRD2	cg09547081	32941066	0.21998	0.00005
HLA-F-AS1	cg09567915	29717259	-0.1893	0.10828
NA	cg09625158	32764900	0.11996	0.00000
NA	cg09625158	32764900	0.11996	0.00000
NA	cg09625158	32764900	0.11996	0.00000
NA	cg09625158	32764900	0.11996	0.00000
<i>C6orf10</i>	cg09646336	32339511	-0.0146	0.00000
PPP1R10	cg09702881	30584746	0.19313	0.00000
NA	cg10012475	32764944	0.3137	0.00000
NA	cg10012475	32764944	0.3137	0.00000
NA	cg10012475	32764944	0.3137	0.00000
NA	cg10012475	32764944	0.3137	0.00000
IER3	cg10060574	30712337	0.05257	0.07413
NA	cg10141717	30099251	-0.0058	0.13967

<i>ZFP57</i>	cg10174063	29645037	0.10924	0.00001
<i>BRD2</i>	cg10211788	32936072	0.06182	0.00007
<i>NA</i>	cg10310917	29815787	0.02405	0.90483
<i>TRIM40</i>	cg10443019	30112422	0.00803	0.55277
<i>HLA-L</i>	cg10700459	30231674	0.0822	0.00000
<i>TNXB</i>	cg10750010	32023526	0.04355	0.11862
<i>TRIM40</i>	cg10848828	30104294	0.01947	0.05691
<i>TNXB</i>	cg11032077	32032727	-0.0121	0.00570
<i>MUC21</i>	cg11062798	30950665	0.01	0.05969
<i>HLA-F-AS1</i>	cg11091004	29716803	0.10708	0.00002
<i>C6orf10</i>	cg11196533	32303625	-0.0179	0.00000
<i>TNXB</i>	cg11223361	32023102	0.05746	0.00024
<i>HLA-DOB</i>	cg11239749	32781306	0.00712	0.01169
<i>DDX39B</i>	cg11305058	31509623	0.09475	0.00000
<i>BRD2</i>	cg11439393	32942062	0.13778	0.00248
<i>C6orf10</i>	cg11478766	32305989	0.03047	0.90369
<i>DDX39B</i>	cg11489251	31508297	0.04372	0.33728
<i>HLA-F-AS1</i>	cg11497864	29717268	-0.2059	0.00000
<i>DDX39B</i>	cg11671290	31509249	-0.014	0.51436
<i>TNXB</i>	cg11815438	32023282	0.002	0.00090
<i>TRIM40</i>	cg11963400	30112769	-0.0262	0.46726
<i>NA</i>	cg11989485	29815869	0.17405	0.00000
<i>IER3</i>	cg12023692	30712919	-0.0101	0.04688
<i>HLA-F-AS1</i>	cg12035144	29718093	0.08755	0.04051
<i>STK19</i>	cg12149319	31947212	0.01352	0.06159
<i>DDX39B</i>	cg12244756	31509636	0.16684	0.00000
<i>HLA-F-AS1</i>	cg12296326	29717113	0.05736	0.00124
<i>IER3</i>	cg12325285	30712499	0.17998	0.00000
<i>HLA-DPA1</i>	cg12365667	33043976	0.17007	0.00000
<i>NA</i>	cg12385981	29821319	-0.007	0.09871
<i>NA</i>	cg12445115	32952758	-0.0467	0.37968
<i>ZFP57</i>	cg12463578	29644756	0.05254	0.00004
<i>PPP1R10</i>	cg12503292	30584720	0.18015	0.00000
<i>TRIM40</i>	cg12612406	30103458	0.01707	0.03644
<i>TRIM40</i>	cg12758147	30103696	0.01272	0.95821
<i>HCG18</i>	cg12798859	30285979	0.02515	0.03680
<i>HLA-DPA1</i>	cg12865025	33042550	-0.0085	0.03701
<i>HLA-DPA1</i>	cg12899649	33043762	0.12439	0.00000
<i>HLA-DPA1</i>	cg12939283	33044012	0.11814	0.00000

<i>TRIM40</i>	cg13044052	30103699	0.03268	0.01969
<i>PPP1R10</i>	cg13083904	30584886	0.09527	0.00000
<i>BRD2</i>	cg13096242	32941033	0.48146	0.00000
<i>TNXB</i>	cg13154622	32032709	0.03262	0.18273
<i>BRD2</i>	cg13224077	32936078	0.01247	0.36883
<i>MUC21</i>	cg13464738	30950779	0.03527	0.84257
<i>IER3</i>	cg13630962	30712680	-0.0521	0.16777
<i>HLA-F-AS1</i>	cg13819127	29717368	0.00836	0.30332
<i>IER3</i>	cg13885965	30712409	0.12616	0.03574
NA	cg13962212	30325907	-0.1297	0.09252
NA	cg13962212	30325907	-0.1297	0.09252
<i>TNXB</i>	cg14011611	32023382	-0.0009	0.08629
<i>HLA-F-AS1</i>	cg14067066	29717475	-0.0315	0.70530
<i>DDX39B</i>	cg14130272	31509426	0.08386	0.00180
<i>DDX39B</i>	cg14159895	31509604	0.07579	0.00110
<i>DDX39B</i>	cg14182431	31509577	0.02912	0.05489
<i>TNXB</i>	cg14200543	32023246	0.01213	0.86356
<i>BRD2</i>	cg14306264	32935788	0.15277	0.00000
<i>HLA-DPA1</i>	cg14356799	33044345	0.02228	0.00084
<i>BRD2</i>	cg14361162	32935737	0.37924	0.00000
NA	cg14372587	32764864	0.08004	0.00001
NA	cg14372587	32764864	0.08004	0.00001
NA	cg14372587	32764864	0.08004	0.00001
NA	cg14372587	32764864	0.08004	0.00001
<i>DDX39B</i>	cg14373189	31509243	0.28457	0.00000
<i>MUC21</i>	cg14531049	30952175	-0.0241	0.00000
<i>HLA-F-AS1</i>	cg14629287	29716767	0.05829	0.03155
<i>C6orf10</i>	cg14704780	32305106	-0.249	0.00000
<i>TRIM40</i>	cg14708905	30113074	0.04993	0.42043
NA	cg15027295	31153947	0.02192	0.00010
<i>MUC21</i>	cg15167736	30950713	0.00044	0.00008
NA	cg15185936	32764950	0.15089	0.00000
NA	cg15185936	32764950	0.15089	0.00000
NA	cg15185936	32764950	0.15089	0.00000
NA	cg15185936	32764950	0.15089	0.00000
<i>BRD2</i>	cg15266497	32936346	0.02264	0.43825
NA	cg15279832	32952242	-0.0294	0.07830
<i>TNXB</i>	cg15281225	32032889	0.01566	0.00997
<i>BRD2</i>	cg15315493	32941388	0.11142	0.00000

<i>MUC21</i>	cg15442792	30951376	-0.002	0.48967
<i>PPP1R10</i>	cg15677497	30585191	0.04159	0.00004
<i>HCG18</i>	cg15695731	30285905	-0.0465	0.00000
<i>C6orf10</i>	cg15744124	32306088	-0.2138	0.00000
<i>NA</i>	cg15835500	32952707	0.2311	0.00000
<i>HLA-L</i>	cg16055914	30231886	0.01171	0.42333
<i>NA</i>	cg16284213	32952568	0.08369	0.00000
<i>NA</i>	cg16398511	31010700	0.01906	0.02823
<i>BRD2</i>	cg16416715	32942358	0.09207	0.22691
<i>BRD2</i>	cg16416806	32935897	0.22506	0.00000
<i>NA</i>	cg16516959	32765109	0.42854	0.00000
<i>NA</i>	cg16516959	32765109	0.42854	0.00000
<i>NA</i>	cg16516959	32765109	0.42854	0.00000
<i>NA</i>	cg16516959	32765109	0.42854	0.00000
<i>C6orf10</i>	cg16564946	32304275	-0.1329	0.00000
<i>TNXB</i>	cg16651678	32023408	-0.0063	0.00006
<i>BRD2</i>	cg16801540	32936415	0.13368	0.00000
<i>BRD2</i>	cg16944926	32940976	0.08092	0.00036
<i>DDX39B</i>	cg16981259	31509433	0.26884	0.00000
<i>IER3</i>	cg17067528	30712517	-0.147	0.00128
<i>HLA-F-AS1</i>	cg17105013	29716711	0.09753	0.00984
<i>IER3</i>	cg17266690	30713243	-0.0233	0.00002
<i>BRD2</i>	cg17451586	32942808	0.13173	0.01601
<i>BRD2</i>	cg17451945	32936362	0.04058	0.01359
<i>BRD2</i>	cg17478371	32941824	0.12965	0.00000
<i>DDX39B</i>	cg17489752	31509945	0.21268	0.00000
<i>HLA-F-AS1</i>	cg17514431	29717656	-0.054	0.04971
<i>BRD2</i>	cg17674495	32935917	0.11951	0.00000
<i>HLA-F-AS1</i>	cg17748329	29717057	0.24252	0.00000
<i>TNXB</i>	cg17806757	32070387	-0.0241	0.00000
<i>HLA-F-AS1</i>	cg17825311	29717187	0.06866	0.00000
<i>BRD2</i>	cg17840326	32935852	0.14972	0.00000
<i>HLA-DOB</i>	cg18073883	32780860	0.00454	0.33740
<i>HLA-DOB</i>	cg18073883	32780860	0.00454	0.33740
<i>HLA-DOB</i>	cg18073883	32780860	0.00454	0.33740
<i>DDX39B</i>	cg18091165	31509351	0.09659	0.02334
<i>BRD2</i>	cg18098714	32935403	0.03497	0.03058
<i>AIF1</i>	cg18113826	31583941	-0.3159	0.42514
<i>IER3</i>	cg18361467	30713294	-0.0132	0.37773

<i>PPP1R10</i>	cg18561902	30584760	0.23349	0.00000
NA	cg18595780	31010742	0.03629	0.01855
<i>BRD2</i>	cg18782846	32941079	0.17182	0.00000
<i>DDX39B</i>	cg18821320	31509875	0.03015	0.03165
<i>HLA-DPA1</i>	cg18827221	33043093	0.02094	0.01894
<i>TRIM40</i>	cg18835549	30112581	-0.0071	0.00090
NA	cg18890461	31010837	0.05407	0.03259
<i>BRD2</i>	cg18918417	32942205	0.26844	0.00000
<i>MUC21</i>	cg18921025	30952063	0.03188	0.00002
NA	cg19167507	32764866	0.04637	0.00349
NA	cg19167507	32764866	0.04637	0.00349
NA	cg19167507	32764866	0.04637	0.00349
NA	cg19167507	32764866	0.04637	0.00349
<i>PPP1R10</i>	cg19182468	30584270	0.00599	0.10707
<i>DDX39B</i>	cg19234301	31509894	0.12193	0.00002
<i>HLA-F-AS1</i>	cg19352507	29717261	-0.1777	0.00495
<i>AIF1</i>	cg19563932	31583915	-0.305	0.03059
NA	cg19642505	30224156	0.00673	0.12669
<i>HLA-F-AS1</i>	cg19766164	29716938	0.06518	0.00727
<i>HLA-DPA1</i>	cg19921353	33043574	0.06026	0.00003
<i>C6orf10</i>	cg19988162	32303790	-0.0237	0.00000
NA	cg20067471	32765281	0.12819	0.00000
NA	cg20067471	32765281	0.12819	0.00000
NA	cg20067471	32765281	0.12819	0.00000
NA	cg20067471	32765281	0.12819	0.00000
<i>IER3</i>	cg20284982	30713245	0.03209	0.01599
<i>BRD2</i>	cg20471890	32936107	0.0326	0.11091
<i>C6orf10</i>	cg20636526	32305144	-0.3057	0.00000
<i>IER3</i>	cg20650802	30712307	0.19123	0.00001
NA	cg20713893	32952783	0.11675	0.00000
NA	cg20751345	30066428	-0.037	0.01212
<i>MUC21</i>	cg20759486	30951225	0.04385	0.01368
<i>TNXB</i>	cg20928974	32022642	0.06298	0.90030
<i>TRIM40</i>	cg20958486	30105197	0.01647	0.16244
<i>MICA</i>	cg21001008	31368502	0.12363	0.00008
<i>MICA</i>	cg21001008	31368502	0.12363	0.00008
<i>DDX39B</i>	cg21024122	31509146	0.40694	0.00000
<i>HLA-DPA1</i>	cg21151963	33043220	0.01577	0.00002
<i>DDX39B</i>	cg21179831	31508137	0.06975	0.01316

<i>TNXB</i>	cg21189146	32069841	-0.0127	0.00001
<i>C6orf10</i>	cg21195277	32339207	-0.009	0.36092
<i>PPP1R10</i>	cg21424801	30584892	0.55883	0.00000
<i>AIF1</i>	cg21440587	31583457	-0.2473	0.00142
<i>TNXB</i>	cg21624533	32022542	0.01599	0.13932
<i>TNXB</i>	cg21754201	32032816	0.01853	0.03735
<i>HLA-DOB</i>	cg22016094	32781260	-0.009	0.00006
NA	cg22050330	32765022	0.09931	0.00000
NA	cg22050330	32765022	0.09931	0.00000
NA	cg22050330	32765022	0.09931	0.00000
NA	cg22050330	32765022	0.09931	0.00000
<i>HLA-F-AS1</i>	cg22124493	29717031	0.08132	0.00039
NA	cg22366909	30565189	0.06364	0.05177
<i>HLA-DPA1</i>	cg22483030	33043848	0.10279	0.00003
<i>TNXB</i>	cg22501666	32070101	-0.0358	0.00000
NA	cg22550059	32765007	0.27501	0.00000
NA	cg22550059	32765007	0.27501	0.00000
NA	cg22550059	32765007	0.27501	0.00000
NA	cg22550059	32765007	0.27501	0.00000
<i>TRIM40</i>	cg22692281	30104899	0.00091	0.24998
NA	cg22862357	32774788	0.14276	0.13445
<i>C6orf10</i>	cg22863148	32339553	-0.0012	0.00000
<i>HLA-L</i>	cg23071690	30232014	0.00266	0.12859
NA	cg23090653	32765352	-0.3364	0.00810
NA	cg23090653	32765352	-0.3364	0.00810
NA	cg23090653	32765352	-0.3364	0.00810
NA	cg23090653	32765352	-0.3364	0.00810
NA	cg23163653	30565385	0.05955	0.36156
NA	cg23314071	32765117	0.46187	0.00000
NA	cg23314071	32765117	0.46187	0.00000
NA	cg23314071	32765117	0.46187	0.00000
NA	cg23314071	32765117	0.46187	0.00000
<i>IER3</i>	cg23338650	30712303	0.09521	0.00002
<i>TRIM40</i>	cg23481243	30112492	-0.0019	0.03098
<i>HLA-F-AS1</i>	cg23606396	29717916	0.04742	0.20670
NA	cg23663942	32778026	0.02207	0.63699
NA	cg23663942	32778026	0.02207	0.63699
<i>TNXB</i>	cg23711760	32032787	0.0302	0.06829
<i>HLA-F-AS1</i>	cg23727007	29716795	0.18307	0.00000

<i>HLA-DPA1</i>	cg23750365	33043071	0.005	0.00000
<i>IER3</i>	cg23756354	30713097	-0.007	0.00322
<i>IER3</i>	cg24053148	30713318	0.04164	0.00002
<i>DDX39B</i>	cg24124954	31508105	0.11268	0.03185
<i>BRD2</i>	cg24182083	32941162	0.05645	0.00004
<i>HLA-F-AS1</i>	cg24217789	29717384	-0.0628	0.25718
<i>BRD2</i>	cg24275356	32942541	0.10919	0.28970
<i>DDX39B</i>	cg24294399	31508923	0.15338	0.00000
<i>MUC21</i>	cg24311704	30951604	0.02682	0.36421
<i>PPP1R10</i>	cg24330922	30584244	0.24082	0.00000
<i>DDX39B</i>	cg24332685	31508125	0.03522	0.50735
<i>TNXB</i>	cg24336152	32070784	-0.0187	0.00000
<i>IER3</i>	cg24363824	30713025	-0.0176	0.00817
<i>HLA-F-AS1</i>	cg24438313	29717009	0.26525	0.00000
<i>BRD2</i>	cg24489398	32936051	-0.0312	0.32538
<i>DDX39B</i>	cg24631162	31508318	0.04768	0.89372
<i>C6orf10</i>	cg24640182	32305067	-0.079	0.00002
<i>PPP1R10</i>	cg24657127	30585058	0.01064	0.78556
<i>HLA-F-AS1</i>	cg24710480	29717135	0.16982	0.00000
NA	cg24955682	29815804	-0.0108	0.14658
<i>C6orf10</i>	cg25145195	32340954	-0.0291	0.00001
<i>BRD2</i>	cg25158622	32942428	0.11674	0.41471
<i>TNXB</i>	cg25270367	32022898	-0.1647	0.00964
<i>TNXB</i>	cg25355006	32032689	0.05456	0.58794
<i>AIF1</i>	cg25403205	31584214	-0.2248	0.07673
NA	cg25435686	32952826	0.18081	0.00000
<i>HLA-F-AS1</i>	cg25456960	29717018	0.03322	0.18048
<i>C6orf10</i>	cg25457674	32303820	-0.0196	0.00000
NA	cg25585873	32764880	0.08556	0.00087
NA	cg25585873	32764880	0.08556	0.00087
NA	cg25585873	32764880	0.08556	0.00087
NA	cg25585873	32764880	0.08556	0.00087
NA	cg25701100	29815902	0.08829	0.00000
<i>DDX39B</i>	cg25984249	31509765	0.0911	0.00000
<i>ZFP57</i>	cg26021304	29645117	-0.233	0.00111
<i>BRD2</i>	cg26059973	32935912	0.06674	0.00003
<i>TRIM40</i>	cg26091747	30113696	0.01205	0.55866
<i>C6orf10</i>	cg26263563	32306039	0.0095	0.00073
<i>BRD2</i>	cg26264318	32942399	0.13068	0.01883

<i>NA</i>	cg26273120	32764965	0.09537	0.00007
<i>NA</i>	cg26273120	32764965	0.09537	0.00007
<i>NA</i>	cg26273120	32764965	0.09537	0.00007
<i>NA</i>	cg26273120	32764965	0.09537	0.00007
<i>HLA-DPA1</i>	cg26350754	33043867	0.04226	0.10851
<i>IER3</i>	cg26376168	30712438	0.08286	0.08986
<i>BRD2</i>	cg26406907	32941108	0.35189	0.00000
<i>DDX39B</i>	cg26696685	31509196	0.04442	0.00063
<i>PPP1R10</i>	cg26813794	30584951	0.30298	0.00001
<i>BRD2</i>	cg26953232	32942494	0.11601	0.47891
<i>TNXB</i>	cg26977256	32022469	0.00735	0.00005
<i>BRD2</i>	cg27395200	32942710	0.09387	0.38955