

Table S1 Differentially methylated sites among three phenotypic groups: obese non-diabetic group, the obese type 2 diabetic and non-obese

Total number of sites detected after multiplex comparison: 5834 sites with 3129 unique sites  
 Total number of sites detected in obese non-diabetic group (ND) versus non-obese (non) : 5682 sites with 3058 unique genes  
 Total number of sites detected obese type 2 diabetic group (T2D) versus non-obese (non) : 2255 sites with 1388 unique genes

Probe ID	CHR	ADDRESS ID	MAPINFO_start	MainInfo_end	RELATION TO UCSC CPG ISLAND	SOURCE	STRAND	UCSC REFGENE GROUP	UCSC REFGENE NAME	ND-obese vs non-obese		T2D-obese vs non-obese	
										Area ND	Area non	Area T2D	Area non
cg00000024	11	23801481	2720463	2720514	island	CDC	F	Body:Body	KCNM2	0.526897	0.5810729	0.05247174	0.0555025
cg00000073	11	24652013	14166750	14168800	island	CGCCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body:Body	CHCHD4	0.1142709	0.129171	0.05846236	0.05179053
cg00000649	11	14885716	14885716	14885716	island	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body:Body	CHCHD4	0.1142709	0.129171	0.05846236	0.05179053
cg00000871	10	5268362	8608196	8608801	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	R	TSS:1500	FAM109B	0.79135	0.858258	-0.0698071	
cg00001201	10	5268362	8608196	8608801	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	R	TSS:1500	FAM109B	0.79135	0.858258	-0.0698071	
cg00001513	10	5268362	8608196	8608801	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	R	TSS:1500	FAM109B	0.79135	0.858258	-0.0698071	
cg00002036	17	64754683	7377612	7377682	island	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	R	UTR	HP3B	0.089869	0.117267	-0.027834	0.093065
cg00002578	10	5268362	8608196	8608801	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	R	TSS:1500	FAM109B	0.79135	0.858258	-0.0698071	
cg00002742	2	11852841	11852841	11852841	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	R	UTR	CPX	0.6428323	0.714729	-0.088196	0.67335
cg00002801	9	70817229	14868349	14868399	island	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	R	UTR	VPC2C	0.17884	0.152787	-0.0258426	
cg00003454	9	5968419	10337163	10337210	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	UTR	SPR2	0.5227271	0.634265	0.1116174	
cg00003536	1	51791481	17291209	17291258	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	R	Body	ORCC8	0.6221671	0.673838	-0.05147129	
cg00003826	10	5268362	8608196	8608801	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	R	TSS:1500	HR7B	0.0288203	0.7937	0.111097143	
cg00004165	17	1861464	8311838	8311886	NA	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	NA	NA	0.795043	0.842643	0.04823	
cg00004792	10	5268362	8608196	8608801	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	R	TSS:1500	HOXC2	0.683743	0.735371	-0.0994287	
cg00005154	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005207	19	1065247	1288752	1288754	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	TSS:1500	HOXC2	0.683743	0.735371	-0.0994287	
cg00005401	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9	4832398	12980192	12980192	N_Share	CGCTTCCGATTTCCCGCCGGTCTTACGCTGCTACGGCCGCTGCA	F	Body	HE2	0.793486	0.868621	-0.0737287	
cg00005524	9												

007021016	11	2580320	7674587	7674517	NA	C05C02CAAAAGTTGACCTGAGTTCGCTGAAAGATGTTG	R	TSS1500	BQ8NTE	0.7790343	0.83854	-0.0586574			
007021017	11	7554427	7674587	7674517	NA	C05C02CAAAAGTTGACCTGAGTTCGCTGAAAGATGTTG	R	TSS1500	BQ8NTE	0.6337866	0.925858	-0.03991			
007021018	14	2574411	5333122	5333122	NA	AGAGACGATTTACACCTGCTGATGATACCCAGCAGCATG	F	Body/Body	BERT	0.8779292	0.901867	-0.0243827			
007021019	14	4071746	7601332	7601332	S_Shore	TAAAGTAGCTTACCCCTGACCCAGCAGCAGCAGCAGCAGC	F	UTR	FARM2	0.8516271	0.706841	-0.0548326			
007021020	14	7871327	7601332	7601332	S_Shore	C05C1TTCAGTTCGCTGCTGCTGCTGCTGCTGCTGCTGCTG	F	Body	PEP1	0.9310814	0.873588	-0.0394877	0.8353688	0.8739486	-0.02035
007021021	14	1413789	14143799	14143799	N_Shore	GGTCTTTCCTCCAGGGCAGGCTGCTGCTGCTGCTGCTGCTG	R	TSS1500/Body	SSP1	0.8071777	0.115439	-0.0236243	0.0837444	0.1114338	-0.027799
007021022	14	5174447	13973793	13973793	N_Shore	GGTCTTTCCTCCAGGGCAGGCTGCTGCTGCTGCTGCTGCTG	R	TSS1500	Chw12	0.2877474	0.361789	-0.0274614			
007021023	14	1523629	1523629	1523629	N_Shore	CGACAGACTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	R	Body	PEP1	0.9310814	0.873588	-0.0394877	0.8052813	0.81433	-0.03699
007021024	14	4897781	4897781	4897781	NA	C05C02CAAAAGTTGACCTGAGTTCGCTGAAAGATGTTG	F	NA	NA	0.7698886	0.81147	-0.0415814			
007021025	14	3386025	3386025	3386025	NA	CTTACAGCACTGATGATGATGATGATGATGATGATGATGATG	F	TSS1500, TSS1500	NA	0.8884868	0.91257	-0.02247143			
007021026	14	20033584	20033584	20033584	Island	CGCCACCTCCAGCCAGCAGCAGCAGCAGCAGCAGCAGCAGC	R	Body	FLJ2063	0.1461743	0.10436	-0.03978286	0.0133506	0.106436	-0.026676
007021027	14	1163143	13139625	13139630	NA	GTCGTGGTTCATGAGTTCGCTGCTGCTGCTGCTGCTGCTG	R	TSS200	PL3	0.7839174	0.82797	-0.0427871	0.7966913	0.82797	-0.031279
007021028	14	11581	2574411	2574411	NA	CTGACAGACTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	R	Body	PEP1	0.9310814	0.873588	-0.0394877			
007021029	14	8189486	8189486	8189486	NA	CTGACAGACTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	R	Body	L02	0.6814371	0.01291	-0.1347287	0.7357375	0.81461	-0.07833
007021030	14	7262406	16732979	16732979	S_Shore	TATTTCTTCATGATGATGATGATGATGATGATGATGATGATG	F	Body	PEP1	0.6738806	0.752157	-0.0737917			
007021031	14	18732979	18732979	18732979	S_Shore	CTGACAGACTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	F	Body	WGAN	0.255343	0.36291	-0.0394877	0.2970938	0.36291	-0.06538
007021032	14	6180944	10100760	10100760	S_Shore	CTGACAGACTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	F	Body	WGAN	0.8576686	0.89421	-0.0394877			
007021033	14	5853253	5853253	5853253	NA	CTGACAGACTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	F	Body/Body	WGAN	0.8884868	0.91257	-0.02247143			
007021034	14	1792454	1792454	1792454	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	F	TSS1500/Body	MRS48N	0.819826	0.888243	-0.06841429			
007021035	14	1375272	5022573	5022623	S_Shore	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	NA	NA	0.8748143	0.923209	-0.04188671	0.8924263	0.923209	-0.030577
007021036	14	3206254	3206254	3206254	NA	C05C02CAAAAGTTGACCTGAGTTCGCTGAAAGATGTTG	F	Body	CNP13	0.7489343	0.806329	-0.0677871	0.7633043	0.806329	-0.043897
007021037	14	7972428	3825488	3825518	Island	C05C02CAAAAGTTGACCTGAGTTCGCTGAAAGATGTTG	R	Body	WDR88	0.0308	0.562394	-0.05879149			
007021038	14	6943917	6943917	6943917	NA	CGCCACCTCCAGCCAGCAGCAGCAGCAGCAGCAGCAGCAGC	R	TSS1500	GNE3	0.8216257	0.854291	-0.03369574			
007021039	14	12604376	10744488	10744488	NA	GATATCTTGAATTTTTCTCCAGCCAGCTCAGGCTGAGTGAAG	R	NA	NA	0.8735134	0.06297	-0.04173486	0.8928265	0.912567	-0.02241
007021040	14	1098989	1098989	1098989	S_Shelf	TGGGATGGGATGCTCCAGGAGCCAGCAGCAGCAGCAGCAGC	R	NA	NA	0.8316186	0.87491	-0.04249149	0.8407863	0.87491	-0.034124
007021041	14	4766984	4766984	4766984	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	F	Body/Body	GFA1	0.875424	0.9046	-0.03986971			
007021042	14	1073610	1073610	1073610	S_Shore	CGACAGCCCTCTCTGACAGCCAGCAGCAGCAGCAGCAGCAGC	R	NA	NA	0.7688587	0.838271	-0.06424129			
007021043	14	5402729	5402729	5402729	NA	GATATCTTGAATTTTTCTCCAGCCAGCTCAGGCTGAGTGAAG	R	Body	YTH1	0.2274742	0.19004	-0.07193426			
007021044	14	1489819	8320213	8320213	S_Shore	AATATGTCGATTTTTCTCCAGCCAGCTCAGGCTGAGTGAAG	R	TSS1500, TSS1500	CLTR	0.7444877	0.806329	-0.0677871			
007021045	14	3860434	3860434	3860434	N_Shore	CTCAGTCTGATGATGATGATGATGATGATGATGATGATGATGATG	R	Body	CNP2	0.8735134	0.06297	-0.04173486			
007021046	14	294392	294392	294392	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	1xNon-UTR	PEP2	0.4925714	0.566107	-0.07354286			
007021047	14	2938969	2938969	2938969	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	Body	CNP2	0.8735134	0.06297	-0.04173486			
007021048	14	1910459	5201282	5201282	NA	CGAGGAAAGGATTAATAACTTCTGATGATGATGATGATGATG	F	UTR	PCNTD1	0.7396114	0.800403	-0.06792857			
007021049	14	5071111	5071111	5071111	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	F	Body/Body	CNP1	0.7674	0.800403	-0.06792857			
007021050	14	2575444	2575444	2575444	N_Shore	CGCCAGCAAAAGTGGAGCTGAGCAGTCACTCAATGAATGTTGCTG	R	NA	NA	0.8905129	0.7639214	-0.07340571			
007021051	14	4073042	4073042	4073042	Island	CGCCCAAAAGTGGAGCTGAGCAGTCACTCAATGAATGTTGCTG	R	Body	ORZ21	0.8776743	0.814937	-0.03728149	0.8486838	0.814937	-0.06632
007021052	14	123232875	123232875	123232875	NA	CTTCTCTGATGATGATGATGATGATGATGATGATGATGATGATG	R	TSS1500	ORZ21	0.8776743	0.814937	-0.03728149			
007021053	14	8841510	8841510	8841510	NA	GGTCTGCTGATGATGATGATGATGATGATGATGATGATGATGATG	R	1xNon-UTR	CNP2	0.6463857	0.723387	-0.05887771			
007021054	14	3794327	3794327	3794327	S_Shelf	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	Body	ZNF132A	0.771014	0.898957	-0.08884266			
007021055	14	1449819	8320213	8320213	S_Shore	AATATGTCGATTTTTCTCCAGCCAGCTCAGGCTGAGTGAAG	R	Body	ORZ21	0.7489343	0.806329	-0.0677871			
007021056	14	1053018	1053018	1053018	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	Body	CH74	0.8804386	0.775086	-0.02962			
007021057	14	5498225	5498225	5498225	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	1xNon-UTR	CNP1	0.8735134	0.06297	-0.04173486			
007021058	14	115892913	115892913	115892913	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	UTR	IRP2	0.8061329	0.8728129	-0.06668			
007021059	14	8405871	8405871	8405871	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	NA	NA	0.8327314	0.887489	-0.0574129	0.8352113	0.887489	-0.05272
007021060	14	3794327	3794327	3794327	S_Shelf	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	Body	ZNF132A	0.771014	0.898957	-0.08884266			
007021061	14	1053018	1053018	1053018	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	Body	CH74	0.8804386	0.775086	-0.02962			
007021062	14	5498225	5498225	5498225	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	1xNon-UTR	CNP1	0.8735134	0.06297	-0.04173486			
007021063	14	115892913	115892913	115892913	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	UTR	IRP2	0.8061329	0.8728129	-0.06668			
007021064	14	8405871	8405871	8405871	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	NA	NA	0.8327314	0.887489	-0.0574129	0.8352113	0.887489	-0.05272
007021065	14	3794327	3794327	3794327	S_Shelf	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	Body	ZNF132A	0.771014	0.898957	-0.08884266			
007021066	14	1053018	1053018	1053018	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	Body	CH74	0.8804386	0.775086	-0.02962			
007021067	14	5498225	5498225	5498225	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	1xNon-UTR	CNP1	0.8735134	0.06297	-0.04173486			
007021068	14	115892913	115892913	115892913	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	UTR	IRP2	0.8061329	0.8728129	-0.06668			
007021069	14	8405871	8405871	8405871	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	NA	NA	0.8327314	0.887489	-0.0574129	0.8352113	0.887489	-0.05272
007021070	14	3794327	3794327	3794327	S_Shelf	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	Body	ZNF132A	0.771014	0.898957	-0.08884266			
007021071	14	1053018	1053018	1053018	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	Body	CH74	0.8804386	0.775086	-0.02962			
007021072	14	5498225	5498225	5498225	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	1xNon-UTR	CNP1	0.8735134	0.06297	-0.04173486			
007021073	14	115892913	115892913	115892913	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	UTR	IRP2	0.8061329	0.8728129	-0.06668			
007021074	14	8405871	8405871	8405871	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	NA	NA	0.8327314	0.887489	-0.0574129	0.8352113	0.887489	-0.05272
007021075	14	3794327	3794327	3794327	S_Shelf	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	Body	ZNF132A	0.771014	0.898957	-0.08884266			
007021076	14	1053018	1053018	1053018	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	Body	CH74	0.8804386	0.775086	-0.02962			
007021077	14	5498225	5498225	5498225	NA	CGTGTTCATGATGATGATGATGATGATGATGATGATGATGATG	R	1xNon-UTR	CNP1	0.8735134	0.06297	-0.04173486			
007021078	14	115892913	115892913	115892913											



022023607	7	4860485	279881	279881	S, Shore	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	N/A	N/A	0.869207	0.898183	-0.03696617	0.885425	0.899813	-0.014372
022023414	7	23402281	23402281	23402281	S, Shore	CATCAAGGATTTGGGAGGAGGAGGAGGAGGAGGAGGAGGAGG	F	N/A	N/A	0.869207	0.898183	-0.03696617	0.885425	0.899813	-0.014372
022023487	14	3074531	3074531	3074531	S, Shelf	AAAGCGCTGGCTGGTGTGACAGCCAGCCATGTTTCTGCTGAGC	R	TSS1500	FERS	0.738663	0.836202	-0.09615871	0.806899	0.92026	-0.13337
022023484	14	5979312	15438650	15438650	N, Shore	CGGCTGAAGGACAGGATTAAGTCAATGAGATCCGAGTTCAGCT	R	TSS1500	KAA0922	0.678371	0.775279	-0.09630714	0.806899	0.92026	-0.13337
022023451	14	7811919	7811919	7811919	N, Shore	CCGACGAGAGGAGGCTCTGAGGAGGAGGAGGAGGAGGAGGAGG	R	TSS1500	1.2144845	0.862471	-0.2862471	0.806899	0.92026	-0.13337	
022023510	14	2724646	3731066	3731066	N, Shore	CGGAGAGATATGTTGGTATGATTTAGAAAGAACTGATGTTATG	R	Body	HEATRSB	0.758629	0.816514	-0.09628751	0.816005	0.856974	-0.040606
022023947	14	4786484	4786484	4786484	N, Shore	AAAGTCAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG	F	1xEnem:UTR	MF5DL	0.734718	0.799230	-0.06494286	0.806899	0.92026	-0.13337
022023947	14	10417256	10417256	10417256	N, Shore	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	N/A	N/A	0.869207	0.898183	-0.03696617	0.885425	0.899813	-0.014372
022027163	16	7278459	7807870	7807870	N, Shore	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body/Body	ANAA	0.872697	0.920274	-0.04782268	0.905578	0.920274	-0.014749
022027163	16	598209	598209	598209	N, Shore	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body/Body	ANAA	0.868257	0.918847	-0.06825717	0.868257	0.918847	-0.068257
022027743	16	598209	598209	598209	N, Shore	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body/Body	ANAA	0.868257	0.918847	-0.06825717	0.868257	0.918847	-0.068257
022029945	6	2670450	3324759	3324759	S, Shore	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	WDR46	0.726807	0.864186	-0.04043129	0.806899	0.92026	-0.13337
022029945	6	3371749	3783169	3783169	N, Shore	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	SONF	0.825111	0.891291	-0.03696617	0.806899	0.92026	-0.13337
022029414	6	2911258	3313138	3313138	S, Shore	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	UTR:3UTR:3UTR	COL11A2	0.768157	0.818567	-0.05148071	0.785688	0.819567	-0.020897
022029414	6	2911258	3313138	3313138	S, Shore	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	UTR	CBY502	0.465557	0.542769	-0.08273123	0.745305	0.817443	-0.082109
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	UTR	TYK2	0.8462	0.886287	-0.04043129	0.806899	0.92026	-0.13337
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	UTR	VP53C	0.692771	0.815847	-0.05027	0.806899	0.92026	-0.13337
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	UTR	RKX3	0.608257	0.676122	-0.07197143	0.806899	0.92026	-0.13337
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	UTR	MOBK12A	0.922647	0.913043	-0.02924713	0.7346	0.813443	-0.078404
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	N/A	N/A	0.897087	0.945445	-0.04686871	0.914183	0.934453	-0.029271
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	N/A	N/A	0.751714	0.8202	-0.05708871	0.847375	0.903249	-0.081586
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	N/A	N/A	0.870457	0.938714	-0.06325774	0.907373	0.938714	-0.0285
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	FAM107B	0.806257	0.888797	-0.02924713	0.806257	0.888797	-0.02924713
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	MAP4	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	KCNJ1	0.851677	0.892204	-0.04694286	0.866775	0.892204	-0.026124
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	N/A	N/A	0.768743	0.832587	-0.06494286	0.806899	0.92026	-0.13337
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	TSS200	RETN	0.117228	0.770114	-0.05028871	0.716217	0.770114	-0.05498
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	PNX3	0.232824	0.321414	-0.04707162	0.863793	0.91414	-0.062248
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	UTR	0.100228	0.155829	-0.05384229	0.1201578	0.155829	-0.038425
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body:5UTR:5UTR	PLK3	0.552858	0.624278	-0.05384229	0.552858	0.624278	-0.05384229
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	N/A	N/A	0.689614	0.817543	-0.08312857	0.806899	0.92026	-0.13337
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	N/A	N/A	0.877828	0.920274	-0.04191429	0.894305	0.920274	-0.026569
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body:Body	PLK3	0.689614	0.817543	-0.08312857	0.806899	0.92026	-0.13337
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body:Body:Body	MLPL	0.714628	0.831043	-0.12012429	0.74305	0.831043	-0.082109
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body:5UTR:5UTR:Body	SEGF7	0.751714	0.8202	-0.05708871	0.847375	0.903249	-0.081586
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	N/A	N/A	0.868451	0.770114	-0.101445	0.70119	0.770114	-0.099111
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	TSS1500	CLU	0.860280	0.894477	-0.03094286	0.860280	0.894477	-0.03094286
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body:Body	ARNTL	0.608257	0.676122	-0.07197143	0.806899	0.92026	-0.13337
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	CYP2C1	0.859614	0.890757	-0.03194286	0.859614	0.890757	-0.03194286
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TNFR2	0.804729	0.848286	-0.04555714	0.804813	0.848286	-0.03807
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	TSS1500	NPW	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	KMPD	0.804729	0.848286	-0.04555714	0.804813	0.848286	-0.03807
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207	0.898183	-0.03696617	0.869207	0.898183	-0.03696617
022029414	6	2911258	3313138	3313138	S, Shelf	CGGCTCTCTCTGCAAGCCGCGTATATACCCAGCGGAGCCCAT	F	Body	TRAP2	0.869207					



























































Table\_S2 Number of significantly changed genes or CpG-sties

	Methylome	Transcriptome	Overlay	Negative correlation
ND-obese vs non-obese	Genes: 3058 ↓ 2915 + ↑ 143 metylation sites: 5682 ↓ 5485 + ↑ 197	Genes: 713 ↓ 432 + ↑ 281	mRNA genes: 36 ↓ 13 + ↑ 23 methylation sites: 46 ↓ 45 + ↑ 1	mRNA ↑ and me sites ↓ Genes: 23 methylation sites: 26 mRNA ↓ and me sites ↑ Genes: 0 methylation sites: 0
T2D-obese vs non-obese	Genes: 1388 ↓ 1259 + ↑ 129 metylation sites: 2255 ↓ 2079 + ↑ 176	Genes: 920 ↓ 510 + ↑ 410	mRNA genes: 61 ↓ 23 + ↑ 38 methylation sites: 73 ↓ 66 + ↑ 7	mRNA ↑ and me sites ↓ Genes: 33 methylation sites: 40 mRNA ↓ and me sites ↑ Genes: 2 methylation sites: 2

Table\_S3 Differentially expressed genes between any pairs of three phenotypic groups, obese non-diabetic group, obese non-diabetic group, the obese type 2 diabetic and non-obese

Name	Obese non-diabetic group versus non-obese group						Obese type2 diabetic group versus non-obese group						Obese non-diabetic group versus obese type2 diabetic group											
	probe_ID	logFC	AvExpr	P.Value	FDR	B	probe_ID	logFC	AvExpr	P.Value	FDR	B	Name	probe_ID	logFC	AvExpr	P.Value	FDR	B					
PRKCE	8041763	0.885949	6.86951	2.908569	0.002959	0.311677	-2.52271	PRKCE	8041763	1.236419	6.86951	4.356631	0.000369	0.095471	0.266886	SNORA55	7915227	-1.12042	6.174885	-6.4721	0.02026	0.13382	3.649661	
RPL13	7997940	-0.17861	8.178815	-6.26888	1.94606	0.097874	4.091509	ACLY	8015460	-0.325385	7.015875	3.23275	0.000454	0.19962	-1.94936	SNHG12	7914212	-0.84869	7.771999	-5.87655	1.36605	0.168211	2.584545	
SNV	7896112	0.734514	5.693033	5.890917	2.57605	0.123468	2.780948	NRS2A2	7908597	0.052949	8.843344	-7.00991	1.039406	0.02993	5.930808	SNORD14E	7912211	-1.19041	6.672392	-5.82489	1.52605	0.162211	2.505182	
SCS8	7910046	-0.64544	6.125789	-5.80698	1.57605	0.123468	2.77755	GAS5	7970329	0.854495	6.40888	6.564718	3.74006	0.02993	4.317044	SNV	7980610	0.557174	7.219183	5.537525	2.78605	0.204247	2.055104	
RPL13	8010318	-0.74322	5.75806	-5.687808	2.02605	0.123468	2.577822	NUT19P1	7994993	-0.52452	4.018086	-6.51337	3.30676	0.02993	4.231488	BS2	8001507	0.552304	6.616208	5.50203	2.38505	0.204247	1.915551	
SNV	7982377	-0.70747	3.806939	-5.14829	2.35605	0.123468	2.577822	RPL13	7993281	0.673965	7.72016	6.53212	5.106106	0.02993	3.963782	SNUL4	8176570	-0.86528	6.318763	-5.40595	3.68605	0.204247	1.844805	
RFX5	7919971	0.492369	6.086236	5.576398	2.56605	0.123468	2.387929	CDKN1A	8118088	1.037604	6.11616	6.27491	6.63606	0.02993	3.742311	SNV	8032862	-0.46834	6.266997	-5.31307	4.02605	0.200899	1.693776	
DDP3	7941621	0.459435	6.85951	5.569645	0.62065	0.123468	2.376412	SNV	8096077	-0.6113	7.248785	-6.13967	7.98066	0.02993	3.595344	SNV	7894322	-1.1757	5.27015	-5.26127	5.02605	0.200899	1.692028	
IL2	7942828	1.434413	7.730106	5.499983	3.36605	0.130579	2.167195	FAM134B	8111136	-0.97088	7.673045	-6.13	8.05606	0.02993	3.578562	SNV	7894719	-0.80989	6.696957	-5.16526	6.18605	0.223374	1.451335	
AGK	8136614	0.400572	6.410806	5.307885	4.52605	0.130579	1.926865	SNV	7931168	-0.61398	10.1272	-6.039	0.04609	0.02993	3.480946	RPS8	7910406	-0.56914	5.125789	-5.1277	6.7105	0.223374	1.389172	
SNORD41	8034512	-0.64852	11.06296	-5.28441	4.78605	0.130579	1.88222	ALPK2	8023258	2.007309	5.646617	6.065706	9.19606	0.02993	3.466647	CLDN12	8134091	0.300003	9.09801	5.067851	7.64605	0.231302	1.289681	
UNBDL	7940621	-0.70423	4.089339	-5.28125	4.41805	0.130579	1.876673	TNRC6	8010188	-0.53906	6.466669	-6.03204	8.95606	0.02993	3.407781	RPL13	7997940	-0.53526	8.178815	-4.97343	0.00210	0.254446	1.078611	
TNRC6C	8010188	-0.47106	6.846999	-5.22719	4.92605	0.130579	1.859012	KYNU	8045339	-0.51685	8.846554	-6.0195	10.2025	0.02993	3.379562	SNV	7895841	-0.57451	7.561394	-4.93251	0.00210	0.254446	1.06271	
NUSAP1	7982889	0.42734	4.937349	5.24794	1.5065	0.130579	1.821293	CRELD2	8045339	0.70553	6.114955	5.904059	1.28E+05	0.02993	3.182265	SNV	8139887	-0.46279	6.429649	-4.91388	0.00210	0.254446	1.031257	
RAP2A	7969693	0.536908	6.644343	5.184426	5.93605	0.130579	1.706033	CDNF	7932177	-0.61859	6.64075	-5.89561	1.31E+05	0.02993	3.167281	FAM134B	8111136	0.771795	5.630405	4.873004	0.00210	0.252925	0.962079	
SNORD32E	8117746	-0.55496	5.17442	-5.13946	6.00605	0.130579	1.618268	REF	7927210	0.75329	4.313304	5.884939	1.34E+05	0.02993	3.148345	CCDC9	8029894	-0.49195	5.760045	-4.85042	0.00210	0.252925	0.923754	
PIGR	7923929	0.519416	7.662899	5.10365	7.07605	0.130579	1.526233	C4orf37	8101816	-0.33999	4.580864	-5.88082	1.35E+05	0.02993	3.141038	SNHG12	7914212	-0.68707	5.572051	-4.7737	0.00210	0.247092	0.793037	
MIR1292	7946078	0.585226	5.981893	5.072889	7.56645	0.130579	1.398245	H2AFV2	7928107	0.837605	5.157294	5.844228	1.55E+05	0.030963	3.022399	RNS5491	8068510	-0.33384	4.634801	-4.76579	0.00210	0.247092	0.779515	
SNV	8117055	-0.455244	4.87543	5.011698	8.64605	0.130579	1.398245	AJUBA	7973784	0.390244	6.251157	5.804743	1.58E+05	0.030963	3.005439	SNORA2	7920273	-1.5089	10.33362	-4.72897	0.00210	0.247092	0.713086	
ZNF69	8025968	-0.46164	6.759015	-0.99698	8.73E+05	0.130579	1.389683	SNV	7840748	0.664782	5.488189	5.76246	1.72E+05	0.01058	2.929678	BS5	7984686	0.343089	4.617662	4.704959	0.00210	0.247092	0.675252	
SNV	7892680	-0.59244	8.356215	-4.95585	8.07605	0.130579	1.376499	PPM1K	8101701	-0.94763	5.587076	-5.78246	1.02E+05	0.031058	2.887039	TRMT1L	7922870	0.29041	7.478181	4.657235	0.00210	0.247092	0.593118	
SNV	7894980	-0.53441	6.412599	-4.9887	8.99E+05	0.130579	1.374921	PLD1	8092134	-0.49978	8.549163	-5.7259	1.87E+05	0.031058	2.863945	WHAMM	7985482	0.31379	6.07118	4.631518	0.00210	0.247092	0.548739	
SNORD11E	7981994	-0.64248	5.789905	-4.9834	9.05E+05	0.130579	1.356303	C5orf24	8101863	0.401212	8.744946	5.672255	2.09E+05	0.03229	2.67115	SNV	7984929	0.517681	4.99211	4.612077	0.00210	0.247092	0.301348	
RPL13A	8030360	-0.46692	10.57052	-4.98149	9.23E+05	0.130579	1.343987	NAPEPDL	8141872	-0.79743	7.512023	-5.66114	2.14E+05	0.03229	2.747	PION	8140478	0.50246	8.163154	4.582273	0.00210	0.247092	0.645336	
TP53I3	8102017	-0.78967	6.6318	4.97374	9.41E+05	0.130579	1.327591	LMNBTL3	8101203	-0.76956	6.489783	-5.83155	2.28E+05	0.03229	2.693346	SNV	7893100	0.833219	5.186104	4.532571	0.00210	0.247092	0.305103	
SNV	7895660	-0.673786	7.340254	-4.94354	0.0001	0.134522	1.275652	CLDN12	8134091	-0.3202	9.09801	-5.60865	2.39E+05	0.03229	2.651735	SNV	8047459	-0.65762	2.15554	-5.15459	0.00210	0.247092	0.345966	
GNAI2	8137865	0.469257	6.700329	4.88942	0.00113	0.135261	1.177875	SMPD3A	8121794	-0.57539	3.444822	-5.88683	2.50E+05	0.03229	2.612004	RNS5176	8104392	-0.44193	2.61193	-5.41511	0.00210	0.247092	0.303381	
C5orf24	8101863	0.343993	8.744946	4.85761	0.00021	0.149268	1.120294	RNF50	7910590	-0.87183	5.86822	-5.5834	2.72E+05	0.03229	2.605649	SNV	7895696	0.510138	2.035539	4.48101	0.00210	0.247092	0.287443	
ULBP2	8127210	-0.33088	2.59687	-4.80453	0.00016	0.159597	1.023733	KRMO1	8056201	-0.85566	7.12728	-5.4548	2.35E+05	0.033495	2.536532	SEPECS	8099696	0.371215	8.807067	4.462024	0.00210	0.247092	0.254288	
SNV	8011258	-0.30863	6.379181	-4.79445	0.000139	0.159597	1.005383	GYS2	7961673	-0.34685	10.46994	-5.52122	2.82E+05	0.033495	2.510427	CDNF	7932177	0.466979	6.44075	4.50623	0.00210	0.247092	0.234868	
SNV	8011511	-0.35189	6.816953	-4.78989	0.000141	0.159597	1.005383	GNAI2	8137865	0.523829	6.700329	5.0678	2.78E+05	0.033495	2.505429	SNHG12	7914212	-0.68707	5.572051	-4.7737	0.00210	0.247092	0.779515	
WDR45L	8019253	-0.315849	8.195043	-4.72457	0.000162	0.174428	0.877187	RBM51P1	7964757	-0.77343	6.33267	-5.49731	3.66E+05	0.037341	2.647818	RPL13A	8030360	-0.46692	8.9233	7.82827	-4.8027	0.00210	0.247092	0.305103
VPS3A	7967240	0.487316	5.785354	4.69556	0.000173	0.179498	0.822748	MIR4800L	8098995	0.410388	6.530454	3.69522	3.98E+05	0.042059	2.124627	SCRNA2	7953383	-0.7427	8.093806	-4.37993	0.00210	0.247092	0.110522	
RET	7927120	0.597166	4.133004	4.67064	0.000183	0.179498	0.778858	ATG2B	7891192	-0.3677	9.022724	-5.36226	4.00E+05	0.042059	2.198993	SCRNA1	8102050	0.519146	6.146737	4.37977	0.00210	0.247092	0.305103	
ARNDCA	7986350	0.717193	6.64736	4.651926	0.000191	0.179498	0.744458	NCD13	7928342	0.50277	5.310278	-5.33219	4.31E+05	0.042722	2.143138	SNV	7894923	0.401774	6.280037	4.369696	0.00210	0.247092	0.305103	
LNDC00575	8101359	-0.40321	8.846601	-4.64167	0.000195	0.179498	0.724458	UTOR1F	7962344	-0.76276	6.36028	-5.32671	4.36E+05	0.042722	2.133058	SCRNA5	8049297	-0.77432	8.216163	-4.32579	0.00210	0.247092	0.305103	
PDE7A	8151074	0.288314	5.028451	4.620813	0.000204	0.179498	0.687192	HNMT	8045499	-0.38059	8.786716	-5.30108	4.61E+05	0.043861	2.085208	PEX1	8140915	0.335725	7.519196	4.320089	0.00210	0.247092	0.305103	
SNV	8084122	-0.43077	4.482891	-4.61564	0.000207	0.179498	0.677657	INHBE	7956426	1.38783	9.06172	5.27039	4.90E+05	0.045294	2.032983	SNV	7892605	0.576009	7.07588	4.318547	0.0001	0.247092		



MSN	8167965	0.604048	8.704564	0.418557	0.000784	0.197693	-0.43842	MNV	8133110	-0.33035	6.191567	-4.35099	0.000372	0.095471	0.259724	ANGTT	8128052	0.33341	6.329663	3.814609	0.001239	0.316412	-0.89452
#NV	7893327	0.587043	2.285655	0.401146	0.000785	0.197693	-0.44048	MNV	7595801	-0.61944	5.302723	-4.34994	0.000373	0.095471	0.257657	MNV	8144669	0.677331	7.166358	3.814222	0.00124	0.316412	-0.89521
SIGLE12	8003852	-0.31179	3.988818	-0.101359	0.000792	0.197693	-0.4478	MNV	8014664	-0.54833	6.78313	-4.36877	0.000376	0.095471	0.251628	CHIC2	8100638	0.235471	6.003627	3.810311	0.001251	0.316412	-0.90223
TCTA	8079746	0.380017	7.489008	0.411326	0.000793	0.197693	-0.44841	MNV	8019649	-0.54833	6.78313	-4.36877	0.000376	0.095471	0.251628	SNORA49	7960052	-0.63115	7.559655	-3.80623	0.001262	0.316412	-0.90956
#NV	7893838	-0.43833	1.409834	-0.101358	0.000796	0.197693	-0.4517	FAM1108	8146533	-0.38664	5.773252	-4.33557	0.000387	0.096976	0.225457	CDK18	7909104	-0.47793	6.64099	-3.80253	0.001273	0.316412	-0.91619
ZBTB33	8169683	0.470959	7.845789	0.400753	0.000803	0.197693	-0.45923	LOC40094	8050227	0.856076	3.959898	4.33085	0.000387	0.096976	0.224494	UHR3	8046213	0.249058	8.210763	3.798275	0.001285	0.316412	-0.92381
RLP13A //	8030366	-0.81586	6.782847	-4.00712	0.000804	0.197693	-0.46095	EPOR1	8132369	0.570504	5.476251	4.32716	0.000393	0.097246	0.212746	MIR308	8153905	0.423155	6.899938	3.795217	0.001294	0.316412	-0.92982
#NV	8147475	0.259922	2.599122	0.403881	0.000821	0.197693	-0.46628	MNV	8007228	-0.39094	6.465481	-4.32008	0.000394	0.097978	0.198889	HM1218	8133083	0.324993	6.607372	3.790399	0.001309	0.316412	-0.9386
#NV	8149627	-0.24268	2.076711	-0.40079	0.000815	0.197693	-0.47199	AKR1A1	7901110	0.284377	6.687642	4.31891	0.0004	0.098798	0.195764	SETD9	8105456	0.369529	6.583889	3.789936	0.001309	0.316412	-0.93878
#NV	7893702	0.772845	2.076713	3.995739	0.000825	0.197693	-0.48153	SNORD12C	8063435	0.291756	5.929373	4.31325	0.000405	0.098394	0.185591	HGDFR2	8024864	-0.27997	6.076792	-3.78826	0.001314	0.316412	-0.94179
#NV	7893263	-0.52998	1.06148	-0.99467	0.000827	0.197693	-0.48356	PARP2	7946201	0.28403	6.722995	4.20743	0.00041	0.099018	0.173611	RF3	7985563	0.328544	6.043501	3.780237	0.001338	0.316412	-0.95618
ANX46	8115234	0.512979	1.512915	3.990855	0.000834	0.197693	-0.49076	FAM123	7947801	-0.48422	6.512889	-4.37424	0.000429	0.098866	0.134577	MNV	8102728	0.402644	5.576339	3.770151	0.001368	0.316412	-0.97428
LAL2	8130598	-0.42007	0.128438	-0.98876	0.000838	0.197693	-0.49473	MNV	7895099	-2.24211	4.777332	-2.8447	0.000432	0.100866	0.128739	MNV	804664	0.475462	6.78313	3.769247	0.001371	0.316412	-0.97591
FAM9B	8171271	-0.60129	3.085376	-0.98575	0.00084	0.197693	-0.49701	SLC19A2	7921262	-0.63043	7.400099	-4.28447	0.000432	0.100866	0.128739	MNV	8019669	0.475462	6.78313	3.769247	0.001371	0.316412	-0.97591
#NV	7896050	0.327801	10.56574	3.983264	0.000848	0.197693	-0.50511	MNV	8119580	-0.64594	3.97217	-4.28223	0.000434	0.100866	0.124331	ZNF618	8157381	-0.37016	4.410687	-3.7684	0.001374	0.316412	-0.97742
#NV	7895857	-0.53699	7.83354	-0.98235	0.00085	0.197693	-0.50684	GOLM1	8162117	1.333075	6.357459	4.28213	0.000434	0.100866	0.12409	RNU4-7P	8130181	-0.4158	3.438394	-3.76744	0.001377	0.316412	-0.97915
LOC10050	7982020	-0.77803	3.01929	-3.97969	0.000855	0.197693	-0.51289	MPL1	8076241	0.280303	6.015479	4.279938	0.000436	0.100866	0.119803	EGFL7	8159354	-0.32186	5.713925	-3.76403	0.001387	0.316412	-0.98828
FAM98A	8051413	0.360918	7.53228	3.97068	0.000872	0.199926	-0.5289	AKO3	8075995	1.02059	6.134571	4.27445	0.000442	0.10141	0.108959	ACAD8	7945283	0.284091	7.674979	3.726823	0.001393	0.316412	-0.98241
SNORD63	8114468	-0.55417	5.371115	-3.96854	0.000877	0.199926	-0.52895	RNS5A91	8068510	0.299	6.458481	4.26845	0.000448	0.101939	0.097121	MNV	8047503	-0.29102	2.934445	-3.76099	0.001397	0.316412	-0.99073
GATL3	8075322	-0.57697	5.439917	-3.96418	0.000885	0.200519	-0.5412	ALDH6A1	7980006	-0.59098	7.759881	-4.2659	0.00045	0.101939	0.097121	MNAT	8045499	0.269434	6.786716	3.752827	0.001423	0.318444	-1.00538
#NV	8180386	0.317752	5.940233	3.958824	0.000894	0.201117	-0.54842	MNV	7993270	-0.48041	7.375885	-4.26157	0.000455	0.101939	0.098385	MMPK3	8051707	0.245612	7.46096	3.746374	0.001443	0.318444	-1.00679
RALG5P1	8159749	0.561224	1.95621	3.952741	0.000908	0.202973	-0.56283	MTX1	7995838	-0.39544	1.177958	-4.25994	0.000456	0.101939	0.080374	FAM185A	8140461	0.382178	7.217166	3.744937	0.001448	0.318444	-1.01954
#NV	7894043	-0.28178	2.706887	-0.94296	0.000915	0.2032	-0.56941	ATG2B	7981217	-0.35125	7.901307	-4.2518	0.000465	0.103121	0.064315	ALG10 ///	7954777	-0.25862	6.938194	-3.738695	0.001452	0.318444	-1.02477
SNORD11E	7981996	-0.50116	10.61273	-3.94387	0.000927	0.204311	-0.5796	HY2	8121850	-0.54476	6.147121	-4.24608	0.000471	0.103301	0.053018	C1D	8052688	0.507766	6.475387	3.737318	0.001474	0.318444	-1.03447
BAMBI	7926875	-0.51788	6.737884	-3.93568	0.000944	0.205389	-0.5951	PEV3	8061447	0.383704	7.429226	4.245104	0.000472	0.103301	0.051095	LRPP3L	8051882	0.281425	6.297828	3.735652	0.001479	0.318444	-1.03638
#NV	7917276	-0.33918	2.82336	-3.93538	0.000944	0.205389	-0.59567	KLF11	8040211	0.285410	7.103212	4.238577	0.000479	0.104136	0.038213	PEBP4	8149725	0.649556	6.490849	3.729403	0.001496	0.318444	-1.04564
SNORD11E	7987020	-0.90207	5.02516	-3.93213	0.000951	0.205389	-0.60182	FLI1	8013191	0.494004	5.310041	4.23238	0.000485	0.104589	0.025982	SH2B1	7994445	-0.31562	5.435951	-3.73042	0.001499	0.318444	-1.04741
KIAA0100	801666	0.220127	8.044027	3.929885	0.000956	0.205389	-0.60607	TMEM154	8103026	1.587159	6.131823	4.230518	0.000487	0.104589	0.022304	LOC10519	8071355	-0.4459	3.246776	-3.7277	0.001505	0.318444	-1.05049
PDHA1	8183933	0.382477	8.343663	3.919794	0.000978	0.207285	-0.62516	BLM1	8044225	0.50027	6.123542	-4.2232	0.000495	0.104589	0.007857	ACAP2	8092933	0.271382	7.126249	3.727472	0.001506	0.318444	-1.05099
PIIB	7989619	0.280539	10.60964	3.916162	0.000986	0.207285	-0.63204	MNV	8097116	-0.69832	5.824057	-4.22278	0.000496	0.104589	0.007028	C2orf72	8061129	0.309328	6.536539	3.724787	0.001515	0.318444	-1.05572
TWSG1	8020090	0.515296	8.549973	3.913049	0.000993	0.207285	-0.63793	FRMD4B	8088745	-0.38784	8.333177	-4.21259	0.000503	0.104589	-0.00656	MNV	8106516	0.281197	6.354398	3.723166	0.001521	0.318444	-1.05823
TGMB1	7989107	-0.63109	9.914981	-3.8701	0.00101	0.207285	-0.64403	HTA1	7931937	0.65206	6.28241	4.21216	0.000508	0.104589	0.001478	MNV	7955579	-0.21907	7.770432	-3.71042	0.001521	0.318444	-1.06047
LOC10050	7949955	0.48003	6.979661	3.91165	0.001006	0.207285	-0.64058	RF1	7903709	0.151836	7.899423	4.20705	0.000513	0.104589	-0.02373	MNV	8160953	0.240748	7.20234	3.70591	0.001581	0.316412	-0.98652
NIDP2T9	7951893	-0.31378	4.10848	-0.86467	0.001031	0.20829	-0.6693	RFX5	7919971	0.371793	6.086236	4.205676	0.000515	0.104589	-0.02675	TOR1AIP1	7922468	0.369697	5.411309	3.700597	0.001598	0.328511	-1.09822
TUBG1	8007502	0.376479	8.206375	3.894663	0.001035	0.20829	-0.67273	MNV	7916775	-0.77114	5.60255	-4.20553	0.000515	0.104589	-0.02704	PM21	8067017	0.390441	6.00241	3.695439	0.001618	0.330662	-1.10843
#NV	7919137	-0.33893	1.89328	-3.89108	0.001038	0.20829	-0.67573	DYNC1H1	7978768	0.26056	8.514497	4.203617	0.000517	0.104589	-0.03082	DPM3	8163107	0.630463	5.92408	3.692374	0.001629	0.330812	-1.11399
SNORD11E	7981992	-0.33429	11.22942	-3.8831	0.001062	0.20829	-0.69463	MNV	8180246	-0.61457	6.899692	-4.19926	0.000523	0.104589	-0.03942	MNV	7992756	-0.79922	2.345337	-3.68469	0.001658	0.332515	-1.12772
SNORD11E	7981986	-0.33429	11.22942	-3.8831	0.001062	0.20829	-0.69463	C1orf81	8020308	0.340309	8.600428	4.194195	0.000528	0.104589	-0.04944	OSBP1L	7965064	0.434311	7.260234	3.682785	0.001665	0.332515	-1.13175
FBXO2	7912473	0.607956	8.580583	3.882774	0.001063	0.20829	-0.69524	EPH81	8082846	-0.79536	4.351744	-4.19264	0.00053	0.104589	-0.05252	MNV	7893150	-0.37304	6.078217	-3.68249			

MTMR10	7987048	-0.26193	8.831583	-6.4957	0.001794	0.221643	-1.13705	PIBF1	7969390	-0.31221	6.445221	-3.90257	0.001017	0.129046	-0.62719	ULK1	7959957	-0.40484	7.078957	-3.44419	0.00284	0.351451	-1.55953
SLC16A12	7943936	-0.84692	4.256379	-6.6494	0.001794	0.221643	-1.13734	AMDH01	7957654	-0.98885	8.798245	-3.9028	0.001017	0.129046	-0.62775	ULK1	8065196	-0.41058	4.374004	-4.34704	0.002885	0.351451	-1.57235
SLC16A12	7958015	-0.51963	5.302723	-6.6494	0.001796	0.221643	-1.13705	ADADT	7970765	-0.9506	9.799298	-3.9028	0.001018	0.129046	-0.62865	GABRE ///	8056636	-0.93078	6.186229	-3.4361	0.002901	0.351451	-1.57671
SLC16A12	8006028	-0.60522	3.950711	-6.6407	0.0018	0.221643	-1.13988	CEPB3	7935011	-0.42832	6.882543	-3.89939	0.001024	0.129046	-0.6335	ULK1	8128245	-0.52352	5.294668	-3.42749	0.002947	0.351451	-1.58948
DLD	8014285	0.41835	8.124891	-3.64809	0.001806	0.221643	-1.14284	SLC25A20	8028724	0.518462	8.579656	-3.89854	0.001026	0.129046	-0.63523	KIAA0196	8152782	0.22185	7.399615	-3.42779	0.002952	0.351451	-1.59076
Clorf122	7900192	0.36451	5.182256	-3.642133	0.001824	0.221643	-1.15113	CS7B	8070701	0.43526	7.923635	-3.89747	0.001027	0.129046	-0.63636	RN5S119	8055149	-0.5111	4.855349	-3.42494	0.002964	0.351451	-1.59405
LOC10050	8008078	0.41157	6.962794	-3.64209	0.001824	0.221643	-1.15121	CS7B	8180255	0.72151	6.245055	-3.89603	0.001025	0.129046	-0.64299	UNK	7984650	-0.77374	2.754309	-3.42074	0.002996	0.351451	-1.60269
SLC11A1	8051031	0.340849	5.28498	-3.64089	0.001824	0.221643	-1.15121	CS7B	8086263	0.23151	7.249587	-3.89603	0.001025	0.129046	-0.64299	MBIP	7978566	0.322341	3.73079	-3.41987	0.003	0.351451	-1.60651
UGT1	8045090	0.364933	8.443343	-3.64007	0.001829	0.221643	-1.15371	GP88A ///	7904930	-0.38731	5.737882	-3.8916	0.001042	0.129046	-0.64894	NOSP	8038395	-0.2943	4.89343	-3.41799	0.003011	0.351451	-1.60652
SLC17A5	8127549	0.358483	7.447238	-3.64005	0.001832	0.221643	-1.15516	SULF2	8066822	-0.80851	8.181016	-3.89747	0.001046	0.129046	-0.65263	ALG10 ///	7954789	0.241229	7.005036	-3.417057	0.003017	0.351451	-1.60818
TSTA3	8153474	0.411763	7.285439	-3.639832	0.001833	0.221643	-1.15549	HNV	7944147	0.330032	3.773168	-3.89862	0.001046	0.129046	-0.65276	LAMAS	8067409	-0.5234	3.68012	-3.41694	0.003018	0.351451	-1.60839
H2AFY2	7928107	0.58766	5.157024	-3.638856	0.001838	0.221643	-1.15785	HNV	7901456	-0.62871	6.623663	-3.88457	0.001058	0.129762	-0.66291	SNORD13P	8132623	-0.49026	5.32006	-3.41654	0.00302	0.351451	-1.60911
ELOVL4	8123920	0.792387	8.808599	-3.637169	0.001844	0.221643	-1.16053	HNV	7982705	-0.5738	7.339449	-3.8893	0.00106	0.129762	-0.66418	STXBPA	8008566	0.322044	5.37095	-3.41646	0.003021	0.351451	-1.60925
C1QL4	7963061	-0.33056	3.233133	-3.63711	0.001844	0.221643	-1.16065	ART4	7929322	-0.40621	3.832305	-3.87927	0.001071	0.130162	-0.67342	UNK	7984406	-0.34621	10.44998	-3.41515	0.00303	0.351451	-1.61161
HNV	7981523	-0.43664	3.891333	-3.63624	0.001848	0.221643	-1.1623	C10orf62	7929674	-0.8343	5.896426	-3.87796	0.001074	0.130104	-0.67602	PPP1R14B	7949060	-0.24015	7.511319	-3.41489	0.003031	0.351451	-1.61206
RHOX1F	8114755	-0.22082	3.094433	-3.63655	0.00185	0.221643	-1.1634	FOU1H ///	7948258	-0.4582	8.645299	-3.87631	0.001078	0.130104	-0.6793	MMP17	7959946	-0.23353	7.282824	-3.41414	0.00306	0.351451	-1.6134
IQCI-SCHF	8083677	0.530597	7.170171	-3.632387	0.001864	0.221643	-1.16959	SGB3	8100318	0.506436	7.158806	-3.87591	0.001081	0.130104	-0.68151	UNK	7908885	0.349683	7.109666	-3.413451	0.003041	0.351451	-1.61644
8062842	-0.36927	3.820621	-3.63231	0.001864	0.221643	-1.16973	IFICE	8152323	-0.32611	5.917585	-3.87464	0.001082	0.130104	-0.68276	RNCD10B	8034986	-0.26503	4.821867	-3.4128	0.003046	0.351451	-1.6158	
VTAL	8163964	0.33476	5.352408	-3.63189	0.001866	0.221643	-1.1704	KIAA1804	7910600	-0.40638	5.538647	-3.87139	0.00109	0.130358	-0.68905	PHFE	8169969	0.28915	5.96307	-3.41223	0.003049	0.351451	-1.61665
8122348	0.297564	7.917415	-3.629213	0.001877	0.221643	-1.17156	HMO4	7987772	0.465457	5.913824	-3.868732	0.001097	0.130887	-0.69493	FAM59B	8040632	-0.26187	4.236227	-3.42117	0.00305	0.351451	-1.61693	
SPR1	8125941	0.308458	7.06191	-3.628949	0.001878	0.221643	-1.17161	HNV	7983530	0.383535	10.21835	-3.865387	0.001105	0.130413	-0.70097	UNK	7985764	0.447485	2.501407	-3.41697	0.003053	0.351451	-1.61778
SELL1	7980547	0.370454	5.110985	-3.62834	0.001881	0.221643	-1.17725	LMNR2	8032491	0.264487	5.474876	-3.85758	0.001127	0.133507	-0.71809	UNK	8119716	-0.21429	7.379875	-3.41055	0.003061	0.351451	-1.61984
HCA83	7967322	-0.53805	2.710666	-3.62679	0.001882	0.221643	-1.17793	FLJ3360	8110882	-0.73208	4.724938	-3.85707	0.001139	0.13417	-0.7274	HEY2	8121805	-0.437406	1.47121	-3.409293	0.003069	0.351451	-1.62209
ATOH	7933978	-0.55065	6.443289	-3.62765	0.001884	0.221643	-1.17856	C11orf71	7951781	-0.35431	4.797607	-3.85908	0.001141	0.13417	-0.72956	KYNU	8045539	0.29274	8.846854	-3.40735	0.003083	0.351451	-1.62557
MC7	7928318	0.28969	6.584869	-3.625803	0.001903	0.222651	-1.18721	MVP	7994659	0.459814	5.772679	-3.84982	0.001144	0.13417	-0.73186	UNK	7982832	0.519318	6.909038	-3.40369	0.003108	0.351451	-1.63212
8054866	-0.61573	7.331346	-3.62248	0.001906	0.222651	-1.18834	CYP26A1	7929322	-1.60585	6.643954	-3.84401	0.001159	0.134695	-0.7434	VT1	8122348	0.279047	7.917415	-3.403364	0.00311	0.351451	-1.63271	
HNV	8094625	0.10125	7.422276	-3.616225	0.001993	0.224632	-1.20019	HNV	7994531	-0.73197	5.930135	-3.84029	0.001162	0.134695	-0.74559	HINT2	8161147	0.29068	9.614563	-3.40101	0.00312	0.351451	-1.63514
STAT6	7964360	-0.28963	8.631733	-3.61499	0.001938	0.224632	-1.20254	HNV	8180202	-0.82108	6.09462	-3.84207	0.001164	0.134695	-0.74724	UNK	7985531	-0.68937	4.315986	-3.40176	0.003121	0.351451	-1.63536
RAE1	8063566	0.28189	6.226038	-3.613855	0.001943	0.224632	-1.20468	HNV	8190677	-0.27489	6.941042	-3.84185	0.001165	0.134695	-0.74768	SMAD6	7984353	-0.29187	6.57176	-3.40129	0.003125	0.351451	-1.63643
HNV	8192593	-0.49026	4.622439	-3.61088	0.001956	0.2247	-1.21032	METT121C	7969555	-0.82517	4.641479	-3.83666	0.001179	0.135801	-0.75797	UNK	7983079	0.417414	7.570113	-3.39882	0.003142	0.351451	-1.64091
8079939	0.932286	4.395939	-3.610631	0.001957	0.2247	-1.21078	HNV	8169000	-0.50846	8.481486	-3.82924	0.001198	0.137508	-0.77269	GNP3	7966321	0.380412	5.955434	-3.398787	0.003142	0.351451	-1.64096	
DCIF	8007917	0.44705	3.940784	-3.60856	0.001975	0.225207	-1.2185	VTG911-1	8108627	0.13813	6.001697	-3.82903	0.001202	0.137508	-0.775	UNK	7954568	0.32746	4.596977	-3.39704	0.003146	0.351451	-1.64405
HNV	7918876	-0.43061	4.000429	-3.60689	0.002	0.226005	-1.22923	LOC100132	7933261	-0.55373	4.607331	-3.82332	0.001215	0.138021	-0.78445	GIB3	7999932	-0.24449	4.68453	-3.39455	0.003172	0.351451	-1.64845
HNV	7986446	-0.64996	6.166601	-3.60602	0.002001	0.226005	-1.22974	ACSA1	7935172	0.253166	7.244018	-3.82099	0.001221	0.138272	-0.78907	GPTR8P	8081676	0.27553	5.969436	-3.39359	0.003179	0.351451	-1.65035
RCF3	8096353	0.312915	6.043501	-3.604013	0.002002	0.226005	-1.23013	COP1	7975598	0.84251	9.921335	-3.817049	0.001232	0.138397	-0.79689	FOPNL	7999718	0.290938	6.931964	-3.393333	0.003181	0.351451	-1.65068
SULF2	8066822	0.747764	6.183016	-3.597498	0.002015	0.226718	-1.23565	ZNF69	8029568	-0.3516	7.9015	-3.81342	0.001242	0.138397	-0.80408	ADAT3	8024356	-0.27479	5.413455	-3.39048	0.003201	0.351451	-1.65579
HNV	7982611	0.4674	8.090232	-3.595946	0.002022	0.226741	-1.23858	C11orf83	7949694	0.296892	4.223516	-3.81328	0.001242	0.138397	-0.80428	NSUN5 ///	8139947	-0.26539	6.583087	-3.38815	0.003218	0.351451	-1.65996
ZNF577	8038904	-0.3352	6.60833	-3.59402	0.002031	0.226956	-1.24223	ALDH5A1	8117270	-0.25409	8.89434	-3.81031	0.001251	0.138397	-0.81027	LOC100121	8017344	0.466594	6.599996	-3.387865	0.00322	0.351451	-1.66048
LOC10063	7922351	-0.51966	7.40738	-3.58665	0.002065	0.229296	-1.25618	PH4A1	8174408	-0.34153	6.409374	-3.80849	0.001256	0.138397	-0.81388	SIGLEC12	8038852	-0.26299	3.988818	-3.38539	0.003237	0.351451	-1.66649
ATP6V1B2	8144931	0.234061	8.884514	-3.586453	0.002066	0.229296	-1.25655	HAL	7966006	-0.8899	9.015643	-3.80727	0.001259	0.138397	-0.8163	UNK	7986186	0.364374	10.02907	-3.383943	0.003248	0.351451	-1.66675
HNV	8096025	-0.32879	3.934322	-3.58083	0.002092	0.229377	-1.2672	FKBP1A-SC	8064418	0.499432	5.050999	-3.806895	0.001216	0.138397	-0.81704	UNK	8066459	0.406716	3.465311	-3.383287	0.003253	0.351451	-1.66877
APC2 ///	8029547	-0.38834	6.808804	-3.58006	0.002093	0.229377	-1.26777	HNV	7985857	-0.51316	7.83354	-3.80558	0.001224	0.138397	-0.81965	ZNF42	8052834	0.320781	7.160239	-3.38273	0.003257	0.351451	-1.66987
TSST2	8018187	0.26025	5.184646	-3.58052	0.0021	0.229377	-1.26875	CFH2	7975322	0.28325	6.20585	-3.80473	0.001217	0.138397	-0.82195	CFH2	7951563	0.44061	4.36628				

MT1P	7959834	-0.36792	6.470458	-3.44013	0.00286	0.242378	-1.5331	MNV	8150214	-0.40152	5.642976	-3.61674	0.00193	0.163974	-1.19403	MNV	8165696	-0.6388	11.20708	-2.5586	0.004317	0.36437	-1.8964
PAC3IN3	7947801	-0.38849	6.512889	-4.4397	0.00268	0.242378	-1.5331	MNV	8088445	-0.42875	7.245242	-3.61459	0.00194	0.164076	-1.19828	ANOV6	7954997	0.2783	9.119777	7.325374	0.004438	0.36437	-1.9002
TPP2	7973142	-0.65046	6.037695	-3.4378	0.002875	0.242378	-1.53582	RN55S05	8076836	-0.38382	8.286675	-3.61521	0.001951	0.164076	-1.20321	BRD1	8076836	-0.31477	5.791927	-2.2535	0.004434	0.36437	-1.9006
GM2A	8109344	0.326567	8.135033	3.438035	0.002879	0.242378	-1.53707	MNV	7929664	-0.45208	7.481821	-3.61676	0.001956	0.164076	-1.20585	MKRA5	8171172	0.528711	6.023649	3.253104	0.004434	0.36437	-1.9031
MNV	7952513	0.374552	7.611679	3.437449	0.002883	0.242378	-1.53817	RAP2A	7969633	-0.37867	6.644343	-3.61086	0.001959	0.164076	-1.2072	SNORD43	8071223	-0.94739	6.058736	-2.2506	0.004434	0.36437	-1.9034
MT1P2	7952513	-0.35582	6.353396	-3.434	0.00295	0.242494	-1.54467	MNV	7909794	-0.42186	3.459817	-3.60971	0.001961	0.164076	-1.20794	ACP6	7919326	0.504296	7.254038	3.250073	0.004373	0.365865	-1.90671
MNV	7959887	-0.36805	8.007654	-3.4339	0.00295	0.242494	-1.54467	MNAV3	8051707	-0.23658	7.469065	-3.60856	0.001966	0.164076	-1.21027	ARFP2	7946201	-0.21382	6.722995	-3.24254	0.004447	0.370312	-1.92015
SEMAAG	7959887	-0.36805	8.007654	-3.43395	0.00296	0.242494	-1.54467	GM2A	8109343	0.341673	7.845793	-3.60972	0.001972	0.164076	-1.21341	SNV6	8151572	0.348923	3.178752	3.24234	0.004447	0.370312	-1.92047
AK3	8159945	0.266449	5.984354	3.432071	0.002917	0.242715	-1.54832	ZNF383	8028227	-0.41869	6.494063	-3.60674	0.001974	0.164076	-1.21382	ANGEL2	7924190	0.211729	6.570669	-3.23993	0.004473	0.370312	-1.92485
MNV	7892948	-0.35774	7.25252	-3.4117	0.00293	0.242715	-1.54996	MNV	8036989	-0.45593	7.326768	-3.60533	0.001976	0.164076	-1.21464	RNS5443	8016213	-0.67982	3.911382	-3.2393	0.004481	0.370312	-1.92622
MNV	7930915	-0.44049	9.321971	-3.4298	0.00293	0.242872	-1.55261	CENP7	8013015	-0.46685	7.116961	-3.60116	0.001999	0.165572	-1.22486	SNORD13	8145793	-0.30955	12.29964	-3.23899	0.004482	0.370312	-1.92647
NQ01	8002303	0.406208	6.034905	3.424708	0.00296	0.243668	-1.56262	YKT6	8132580	-0.41465	7.036884	-3.59885	0.002005	0.165634	-1.22739	CREBRF	8110032	0.295276	5.732701	3.236022	0.004511	0.371468	-1.93175
PDP	7942715	-0.37907	5.310045	-3.42442	0.00298	0.243668	-1.56275	MNV	8097062	-0.37102	6.387812	-3.59599	0.002022	0.166198	-1.23509	XTBP3	8905341	0.249672	6.918873	3.23289	0.004543	0.371468	-1.93731
OMH	8088384	0.280664	7.481004	3.424027	0.00297	0.243668	-1.56349	OR3A1	8011337	-0.29486	6.284096	-3.59599	0.002027	0.166198	-1.23719	MNV	7907652	0.335511	6.387812	3.23245	0.004547	0.371468	-1.93781
RFK	8161857	0.448859	6.858016	3.42381	0.002971	0.243668	-1.56374	PPPAR1	8022251	-0.30262	6.650342	-3.59479	0.002031	0.166198	-1.23888	KLIF6	8032365	-0.65736	5.869034	-2.23136	0.004558	0.371468	-1.94005
MNV	8031867	-0.76407	7.067451	-3.4216	0.002986	0.244117	-1.56807	EYS	8127391	-0.36142	6.181775	-3.59121	0.002044	0.166198	-1.24455	HP55	7946898	-0.20546	7.681166	-1.22088	0.004563	0.371468	-1.94109
MNV	7892633	-0.5588	9.301479	-3.42023	0.002995	0.244117	-1.57065	MNV	7911349	-0.25632	4.243503	-3.58972	0.002051	0.166198	-1.24749	PCMTD7	8150714	0.30395	8.398789	3.230701	0.004565	0.371468	-1.94233
HPGD	8103769	0.739077	6.100757	3.419765	0.002999	0.244117	-1.57152	SECL3	8085300	-0.24598	7.539606	-3.58903	0.002054	0.166198	-1.24876	HOXC9	7955865	-0.22844	2.869488	-3.22727	0.0046	0.371468	-1.94373
COG6	7959591	0.285253	6.289914	3.418533	0.00307	0.244192	-1.57385	HRV4M03	8110793	-0.40984	7.494847	-3.58494	0.002075	0.166198	-1.25794	NEK7	7905543	0.395227	7.801851	3.225738	0.004615	0.371468	-1.95007
CDOH	8026900	-0.62442	6.668384	-3.41728	0.003015	0.24428	-1.57621	RIC7R	8116998	-0.31222	7.699955	-3.58423	0.002076	0.166198	-1.25836	WDR74	7948894	0.52487	5.973884	-3.22509	0.004622	0.371468	-1.95122
NV	7979044	0.352013	5.910172	3.411661	0.003052	0.245781	-1.58643	GRCS	8096361	-0.6641	5.276742	-3.585	0.00208	0.166198	-1.2598	LCORL	8099581	0.250576	6.072208	3.225058	0.004622	0.371468	-1.95128
IP09	7908732	0.216746	7.968774	3.41173	0.003053	0.245781	-1.58667	MNV	7984385	0.408646	7.667171	-3.58344	0.002081	0.166198	-1.26051	MNV	7892639	-0.56036	5.78182	-2.22471	0.004626	0.371468	-1.95219
MNV	7895846	0.591743	8.883312	3.41127	0.003056	0.245781	-1.58754	NDFP2	790544	-0.31997	3.232701	-3.5822	0.002086	0.166198	-1.26238	LAG3	7953418	-0.37672	5.105622	-3.22433	0.00463	0.371468	-1.95157
BID	8074261	0.358877	7.231549	3.409149	0.00307	0.245991	-1.59154	MNV	8086181	-0.54519	4.289664	-3.58152	0.002089	0.166198	-1.26373	PP19R /	8016628	-0.32511	5.56182	-3.22092	0.00466	0.373381	-1.95864
MNV	8040415	-0.38849	4.091487	-3.40827	0.003073	0.245991	-1.59234	IHH	8059067	-0.24465	4.182923	-3.58256	0.00209	0.166198	-1.26423	FAM72A //	8039928	0.363831	3.101937	3.219438	0.004666	0.374422	-1.96396
MNV	7943193	0.243891	3.950779	3.406152	0.003091	0.246813	-1.59719	VP518	7982485	0.347456	5.906933	-3.58172	0.00209	0.166198	-1.26441	ZFP161	8022110	0.210209	7.124049	3.214998	0.0047	0.374422	-1.96474
IL3BRA2	8109348	0.612809	6.460251	3.403036	0.003111	0.247674	-1.60255	SNORA70F	8056359	-0.37624	6.131067	-3.58051	0.002094	0.166198	-1.26573	MNV	7894146	-0.42678	6.515099	-3.2122	0.004756	0.376495	-1.97419
ARF1 // NV	7910229	0.249694	10.01941	3.39987	0.003135	0.247674	-1.60902	FBXO4	8100111	-0.46197	5.545258	-3.57753	0.002108	0.166198	-1.27162	MNV	7983849	0.601439	6.579002	3.218772	0.004759	0.376495	-1.97475
MNV	8158671	-0.39157	11.78321	-3.39966	0.003136	0.247674	-1.60942	ALDH6A1	8098528	-0.35573	10.8461	-3.57522	0.002109	0.166198	-1.27223	CREG1	7922051	0.395529	8.996797	3.211771	0.00476	0.376495	-1.97495
SNORD50F	8127987	-0.47377	7.062494	-3.39864	0.003143	0.247674	-1.61134	MNV	7972932	0.904296	3.855159	-3.57959	0.002115	0.166198	-1.27477	PIAS4	8024740	-0.21975	5.873337	-3.20916	0.004788	0.377408	-1.97958
HPGFC	8093972	-0.24078	9.025604	-3.39602	0.003162	0.247674	-1.61627	COBLL1	8056343	-0.24241	9.247197	-3.57571	0.002116	0.166198	-1.27522	NKX01	7998668	-0.25275	4.036634	-3.20849	0.004795	0.377408	-1.98077
MNV	7959125	0.27591	4.236564	3.392084	0.003189	0.247674	-1.61945	LR2	8102673	-0.3056	6.195756	-3.57481	0.002121	0.166198	-1.27579	HPF25	7958158	0.198516	5.199656	-3.207431	0.004806	0.377408	-1.98265
MNV	8166249	0.231521	5.275361	3.390284	0.003202	0.247674	-1.62708	MNV	7895941	0.883601	5.543909	-3.57523	0.002119	0.166198	-1.2762	POD4 //	7998700	-0.29376	6.649377	-3.20575	0.004823	0.377408	-1.9853
SNORD114	7957816	-0.83239	3.268982	-3.38967	0.003207	0.247674	-1.62843	HN1	8018305	-0.34404	5.996023	-3.57463	0.002121	0.166198	-1.27735	TMX1	7974303	0.405868	6.60057	3.201975	0.004865	0.377408	-1.99236
OXER1	8005193	-0.62227	6.829266	-3.38882	0.003213	0.247674	-1.62983	AGRN	7989822	-0.348024	6.242405	-3.57359	0.002127	0.16628	-1.27886	SLC7A5	8003298	-0.38107	5.34422	-3.20156	0.004869	0.377408	-1.99309
SNORD42F	8051955	-0.32547	6.039702	-3.38708	0.003216	0.247674	-1.63066	MNV	7893144	-0.84372	6.626385	-3.56974	0.002145	0.167241	-1.28703	XPMPPE3	8073311	-0.231565	4.74209	3.201286	0.004872	0.377408	-1.99358
CDC99	8109830	0.416144	5.296944	3.388333	0.003216	0.247674	-1.63076	KIAA0825	8113097	-0.49869	5.676302	-3.56422	0.002171	0.16838	-1.29793	ANKS1B	7965686	-1.00187	6.895156	-3.20039	0.004882	0.377408	-1.99518
ANO10	8086467	0.395329	6.857385	3.387803	0.003218	0.247674	-1.63124	CCT6B	8041472	-0.48607	4.867404	-3.56201	0.002175	0.16838	-1.29956	STAG2	8169750	0.263829	7.44392	3.19938	0.004893	0.377408	-1.99697
MNV	8136612	-0.36274	2.480663	-3.38785	0.00322	0.247674	-1.63167	ABR	8010983	0.350553	5.988546	-3.563123	0.002177	0.16838	-1.30011	SEC61A2	7926189	0.35043	6.569813	-3.19875	0.004898	0.377408	-1.99787
CSD2	8096663	0.389438	5.995914	3.387494	0.003222	0.247674	-1.63234	WNT11	8013054	0.783535	5.098973	-3.56254	0.00218	0.16838	-1.30126	MNV	8171491	-0.37061	4.525857	-3.19601	0.004919	0.377408	-2.00137
EMC1	7913110	0.285339	7.589327	3.38639	0.00323	0.247674	-1.63442	TRIP1	7967056	0.320829	6.124604	-3.56033	0.002189	0.168752	-1.30529	SLC37A4 //	7952132	0.294438	9.378301	3.18411	0.004944	0.377408	-2.00545
MNV	8126627	-0.26029	2.33629	-3.3861	0.003232	0.247674	-1.63497	MNV	7891222	0.614852	6.22640	-3.556387	0.00221	0.168752	-1.31342	RNS544	8021043	-1.93684	7.274088	-3.19463	0.004948	0.377408	-2.00601
MNV	7993017	-0.40715	4.55434	-3.38409	0.003247	0.247674	-1.63875	MNV	7961602	-0.32953	4.11457	-3.55481	0.002218	0.168752	-1.31656	MAP3K8	8054997						

SNORD114	7978626	-0.64816	4.507551	-3.2846	0.004051	0.255766	-1.82574	MNV	7896641	-0.78886	2.662344	-3.45385	0.002779	0.176188	-1.51583	NQ01	8002303	0.367904	4.035906	3.101764	0.006068	0.3785	-1.27014
ATG2B	7981192	-0.22514	7.922274	-2.3849	0.004061	0.255766	-1.82782	CYBASC3	7944855	0.27554	5.385857	3.45336	0.002782	0.176188	-1.51683	RNU2-1 ///	8019631	-0.34309	11.77976	-3.1061	0.00607	0.3785	-1.2704
FBX04B	8052742	0.293651	4.952925	3.28349	0.004067	0.255766	-1.82915	PRODH	8074335	-0.8006	5.244114	-3.45214	0.002779	0.176188	-1.5192	RNU2-1 ///	8019633	-0.34309	11.77976	-3.1061	0.00607	0.3785	-1.2704
NUD1T3	7978342	-0.43265	5.310278	-3.2879	0.00407	0.255766	-1.82971	GPANK1	8124998	-0.23881	4.505455	-3.4516	0.002793	0.176188	-1.52026	RNU2-1 ///	8019635	-0.34309	11.77976	-3.1061	0.00607	0.3785	-1.2704
#NV	7981961	-0.23692	6.257289	-3.28244	0.004095	0.255766	-1.83487	MNV	8103725	-0.2943	4.330768	-3.45614	0.002794	0.176188	-1.52054	RNU2-1 ///	8019637	-0.34309	11.77976	-3.1061	0.00607	0.3785	-1.2704
SCM1	8012823	0.27618	3.85223	3.278128	0.004109	0.255766	-1.83788	FAD3B	7896961	0.294241	6.10186	3.45096	0.002802	0.176188	-1.52322	RNU2-1 ///	8019639	-0.34309	11.77976	-3.1061	0.00607	0.3785	-1.2704
TRO1	8151281	0.27549	3.852021	3.27793	0.004111	0.255766	-1.83811	ATAD3	7912473	0.295298	5.840583	3.448308	0.002814	0.176496	-1.52676	RNU2-1 ///	8019641	-0.34309	11.77976	-3.1061	0.00607	0.3785	-1.2704
RL12	8120133	0.27423	4.697202	-3.2137	0.004121	0.255766	-1.83819	TMEM161	8130023	-0.28938	9.331024	-3.44649	0.002817	0.176496	-1.52811	RNU2-1 ///	8019709	-0.34309	11.77976	-3.1061	0.00607	0.3785	-1.2704
#NV	7896430	0.528821	8.00337	3.273084	0.004156	0.255766	-1.84734	SLC3C1	7939590	0.672783	7.048292	3.446847	0.002823	0.176496	-1.52962	RNU2-1 ///	8019705	-0.34309	11.77976	-3.1061	0.00607	0.3785	-1.2704
MNV	7892738	0.418369	3.783738	3.272614	0.00416	0.255766	-1.84822	LOC10050	7982020	-0.67378	3.019329	-3.44645	0.002825	0.176496	-1.5304	RNU2-1 ///	8019707	-0.34309	11.77976	-3.1061	0.00607	0.3785	-1.2704
MNV	7894597	0.418369	3.783738	3.272614	0.00416	0.255766	-1.84822	MNV	8152415	-0.38271	3.233929	-3.44319	0.002846	0.177144	-1.53682	TRMT10A	8101916	0.325381	5.160075	3.098213	0.006097	0.379457	-1.27394
FAM20B	7907680	0.200514	7.042034	3.271894	0.004168	0.255766	-1.84977	PIPL1	8126058	0.324229	5.537911	3.443133	0.002846	0.177144	-1.53694	MNV	7892838	0.327818	8.025629	3.098213	0.006115	0.379887	-1.27635
#NV	7896160	-0.462	8.58675	-3.2717	0.004173	0.255766	-1.85092	KHLH29	8044094	0.385568	6.019472	3.440487	0.002863	0.177835	-1.54215	RAD21	8152447	0.172527	7.198372	3.103744	0.006149	0.380987	-1.28078
SLC23A2	8064808	-0.56278	9.263202	-3.27013	0.004177	0.255766	-1.85175	RAB6A ///	8045136	0.255023	0.937770	3.439182	0.002871	0.177835	-1.54472	LOC10011	8061483	-0.40301	5.310544	-3.09494	0.00616	0.380987	-1.28174
CHURCH-F1	812121	0.319161	6.858862	3.270566	0.004179	0.255766	-1.85206	MNV	8154227	-0.39244	3.751796	-3.43888	0.002873	0.177835	-1.54531	CNO77	8149475	0.278817	8.505684	3.096341	0.006178	0.380987	-1.28183
LEVO15	7979745	0.398788	1.017493	3.265623	0.004198	0.255766	-1.85589	C12orf69	9106155	-0.46823	3.848084	-3.43753	0.002882	0.17804	-1.54796	C5orf51	8105404	0.281705	7.414146	3.092614	0.006192	0.380987	-1.28425
ERGIC1	8109999	0.330104	9.376765	3.268377	0.004199	0.255766	-1.85616	MNV	7896300	0.450429	8.009373	3.437535	0.002894	0.17831	-1.55151	HBSL1	8129706	0.196855	7.713277	3.092327	0.006195	0.380987	-1.28663
#NV	7892966	0.455607	4.832201	3.266353	0.004206	0.255766	-1.85768	ZCCHC14	8003263	-0.28296	7.609137	-3.4352	0.002897	0.17831	-1.55257	NUMBL	8036923	-0.22987	5.830355	-3.09187	0.006202	0.380987	-1.28783
SNORD11E	7919558	-0.40405	9.099429	-3.267	0.004212	0.255766	-1.85874	C11orf65	7951521	-0.38002	4.224925	-3.43173	0.00292	0.179214	-1.55938	STX10	8034631	0.27157	7.42789	3.09561	0.006281	0.382283	-1.29782
SNORD11E	7919562	-0.40405	9.099429	-3.267	0.004212	0.255766	-1.85874	C1orf40	8146225	-0.26355	6.498281	-3.43017	0.00293	0.179214	-1.55246	UPLA1	8150830	0.287263	8.468474	3.08608	0.006281	0.382283	-1.29787
ESY1	7956166	0.329644	9.19394	3.266901	0.004213	0.255766	-1.85893	ZMAT3	8092230	0.680974	6.37762	3.429905	0.002932	0.179214	-1.56318	KCNJ1	8172449	-0.31346	4.54913	-3.08018	0.006295	0.382283	-1.29823
#NV	7894668	0.330118	9.02223	3.266004	0.004221	0.255766	-1.86061	RG59	8009277	0.346242	3.931818	3.429909	0.002933	0.179214	-1.56357	PLS1	8083146	0.340159	6.729487	3.082795	0.006327	0.382283	-2.20367
MNV	7892968	0.268645	10.62338	3.264647	0.004234	0.255766	-1.86315	MNV	8092920	-0.48446	4.330358	-3.42865	0.002934	0.179214	-1.56545	FEM1B	7984470	0.24641	6.929203	3.082484	0.006331	0.382283	-2.20427
SLC39A9	7912304	0.229442	8.744013	3.264332	0.004237	0.255766	-1.86374	FURIN	7986092	0.36241	9.083367	3.427984	0.002944	0.179214	-1.56677	TESK2	7915718	0.231681	1.712171	3.081802	0.00634	0.382283	-2.20543
SLC9B2	8109554	0.387443	8.614676	3.264134	0.004239	0.255766	-1.86402	SPAT2	8125247	0.33842	6.063449	3.425929	0.002962	0.17999	-1.57219	MNV	7893612	0.590636	2.98377	3.081515	0.006344	0.382283	-2.20593
CF9a	8162039	0.363282	6.67803	3.263623	0.004244	0.255766	-1.86507	ADHF1E	8146687	-0.37983	9.86029	-3.42298	0.002977	0.180564	-1.57661	MNV	7896344	0.590636	2.98377	3.081515	0.006344	0.382283	-2.20593
G1G4	8121429	0.299228	6.56402	3.263436	0.004246	0.255766	-1.86542	PNF21	8011758	0.243767	1.014698	3.421585	0.002986	0.180564	-1.57936	HMGGA1 ///	8118794	-0.24567	5.008937	-3.08119	0.006349	0.382283	-2.20903
#NV	7895135	0.53879	3.399873	3.263134	0.004248	0.255766	-1.86599	RABAC1	8030771	0.260783	7.381457	3.419479	0.003	0.180593	-1.58351	TUBE1	8128977	0.359465	6.767606	3.08023	0.006362	0.382283	-2.20982
MRAS	8082965	0.360571	5.479242	3.262313	0.004252	0.255766	-1.86664	RNU10-4P	8091855	-0.45115	3.775397	-3.41826	0.003009	0.180593	-1.58591	ORS21	7937948	-0.24567	3.214076	-3.07977	0.006369	0.382283	-2.20982
FANCI	7985829	0.355142	4.13213	3.262351	0.004256	0.255766	-1.86745	MNV	8064857	-0.26991	8.039014	-3.41735	0.003015	0.180593	-1.58777	ALFP	8049123	-0.59951	3.40532	-3.07962	0.006371	0.382283	-2.20982
PSD3	8149555	-0.43479	8.84969	-3.26184	0.004261	0.255766	-1.86841	KIA03513	7979662	0.34851	5.002613	3.416868	0.003019	0.180593	-1.589	MNV	7949019	0.320848	2.807936	3.079546	0.006372	0.382283	-2.20987
PTN21	8079741	0.32745	6.659936	3.26214	0.004263	0.255766	-1.86918	MNV	8045476	-0.35703	5.562473	-3.41659	0.00302	0.180593	-1.59119	HSD11B1	8092846	0.27745	9.85112	3.079308	0.00642	0.385165	-2.2149
TFB1M	8130438	0.336894	6.632352	3.258204	0.004295	0.255766	-1.87522	KDM8	8000411	-0.6117	5.912755	-3.415025	0.00303	0.180593	-1.59227	HPF	7947490	-0.5006	5.436444	-3.07795	0.006465	0.386464	-2.22106
CDH26	8063761	-0.3238	3.701782	-3.2657	0.004338	0.255766	-1.88372	MNV	8128695	-0.29518	3.237516	-3.41485	0.003032	0.180593	-1.59263	UPF3A	7970370	-0.33841	6.32411	-3.0705	0.0065	0.387101	-2.22538
#NV	7896348	-0.33099	3.716279	-3.2535	0.00434	0.255766	-1.88403	MNV	8163000	-0.75772	6.715748	-3.41368	0.00304	0.180593	-1.59492	EEF1B2	8047780	-0.81359	6.321314	-3.07017	0.006505	0.387101	-2.22597
SPTLC3	8095907	0.521905	8.78188	3.252781	0.004347	0.255766	-1.88538	APIP	7947490	0.555981	4.534644	3.41292	0.003045	0.180593	-1.59643	SCARN6	8049299	-0.58049	7.170644	-3.06796	0.00651	0.387101	-2.22609
FBX08	7912955	0.288246	8.017035	3.2517	0.004357	0.255766	-1.8874	MNV	7895405	0.316077	8.514917	3.41283	0.003045	0.180593	-1.59659	CNGA3	8043782	-0.24662	2.794546	-3.06622	0.006561	0.388499	-2.23294
BTRC	8097958	0.212251	6.812881	3.25074	0.004371	0.255766	-1.89007	PLP	7974035	-0.17413	6.509745	-3.41246	0.003048	0.180593	-1.59732	FOXO4L2	8161533	-0.24386	4.158332	-3.06615	0.006562	0.388499	-2.23306
MXRAS	8117112	0.528214	6.023649	3.250047	0.004373	0.255766	-1.8905	PIGN	8023605	-0.26786	5.627029	-3.41242	0.003048	0.180593	-1.5974	ZNF232	8011817	0.222841	4.25405	3.065672	0.006569	0.388499	-2.23391
CREB3	8155096	0.384289	6.888816	3.248185	0.004392	0.255766	-1.89398	MNV	8036363	0.318064	7.857374	3.411457	0.003055	0.180659	-1.59929	RNU2-1 ///	8019709	-0.34615	11.7336	-3.06439	0.006588	0.388499	-2.23417
#NV	7892955	-0.40084	8.276285	-3.24694	0.004404	0.255766	-1.89632	SCAMP1 ///	8103479	-0.324	7.149899	-3.40887	0.003072	0.181166	-1.60439	MNV	7916775	0.561724	5.60255	3.06344	0.006601	0.388499	-2.23785
NKX1	7995525	-0.34926	5.959049	-3.24599	0.004413	0.255766	-1.89859	MNV	8106774	-0.34022	5.439529	-3.40861	0.003074	0.181166	-1.6049	C16orf80	8001658	0.29367	6.00034	3.062366	0.006604	0.388499	-2.23819
ZNF32	7933116	0.313965	5.886941	3.24477	0.004417	0.255766	-1.89879	MNV	7896481	-0.4258	8.456687	-3.40632	0.00309	0.181543	-1.60941	TMEM17	8052585	0.134					

MAPK13	8119016	-0.33202	4.959889	-1.51241	0.005428	0.275304	-0.07282	TTTT7 ///	8177048	-0.26214	3.014861	-3.31213	0.003811	0.192201	-1.79427	8789394	-0.967	5.540027	-2.98495	0.007839	0.396569	-2.37597	
ATP6VD0	8002401	0.431088	8.410249	3.151593	0.005437	0.275304	-0.07434	CEBP	7969341	0.27667	6.694736	3.10776	0.003822	0.192201	-1.79691	LYPD4	8075601	-0.21387	2.967338	-2.98489	0.007874	0.396569	-2.37670
GASS /// S	7922402	-0.41481	7.122621	-1.515628	0.005441	0.275304	-0.07495	RNS129	8027866	-0.49865	5.825695	-3.1009	0.003828	0.192201	-1.79825	SYCP3	7936800	-0.29687	3.872242	-2.98499	0.007857	0.396569	-2.37707
SNORD11E	7919988	-0.46689	6.320563	-1.51005	0.005456	0.275304	-0.07721	TOM11	8008547	-0.30764	7.656874	-3.30919	0.003836	0.192201	-1.80002	RNUGATAC	8112176	-0.5494	5.958171	-2.9827	0.007878	0.396569	-2.37893
#NV	7896440	0.551463	3.873601	3.149952	0.005457	0.275304	-0.07739	STK3	8151967	-0.28514	5.705977	-3.3064	0.00384	0.192201	-1.80111	CETN3	8133090	0.395746	4.171742	2.982314	0.007885	0.396569	-2.38006
#NV	8094732	-0.34176	7.896626	-1.4846	0.005475	0.275749	-0.08016	#NV	7895044	-0.78013	6.017428	-3.3081	0.003841	0.192201	-1.80135	#NV	7972932	-0.78459	3.855519	-2.98134	0.007901	0.396569	-2.3823
KPN2	8077974	0.64791	6.277191	3.145526	0.005511	0.275749	-0.08063	TRD3	7969341	-0.2301	6.45877	-3.3081	0.003854	0.192201	-1.80435	SNORA31	7971386	-0.48544	6.660009	-2.98073	0.007912	0.396569	-2.38389
KAT3	8078673	0.30854	5.509697	3.144556	0.005522	0.275749	-0.08143	PCV1	7895044	-0.23484	6.161153	-3.3082	0.003857	0.192201	-1.80477	SNORD32	813746	-0.3198	5.137442	-2.98225	0.007938	0.396569	-2.38598
CCDC96	8099242	-0.21715	3.117424	-1.44444	0.005524	0.275749	-0.08765	YMHAA	8027577	-0.30582	7.119733	-3.30591	0.003868	0.192201	-1.80746	SLCO3A	8041257	0.297067	8.02071	2.978469	0.007951	0.396569	-2.38734
TMD02	8095957	0.305155	11.09629	3.141138	0.005527	0.275749	-0.08721	BTFP310	8072372	-0.24764	3.906348	-3.30521	0.00387	0.192201	-1.80781	LYRM2 ///	7999752	0.404306	8.176881	2.977946	0.00796	0.396569	-2.38826
#NV	7894337	0.759623	4.607823	3.142586	0.005546	0.275749	-0.09111	#NV	7894299	-0.52572	5.656218	-3.30507	0.003871	0.192201	-1.80809	ADAMTSL5	8038229	-0.257	6.81297	-2.97781	0.007963	0.396569	-2.3885
USP5	7953483	0.269403	6.676857	3.142586	0.005555	0.275749	-0.09171	SNORD3A	8005547	1.206449	4.863336	-3.30459	0.003875	0.192201	-1.80909	SNORD62A	8188262	-0.27956	4.815515	-2.97751	0.007968	0.396569	-2.38920
CTSD	8096566	0.24228	10.81515	3.140609	0.005571	0.275749	-0.09478	SNORD3A	8003553	1.206449	4.863336	-3.30459	0.003875	0.192201	-1.80909	SNORD62A	8188262	-0.27956	4.815515	-2.97751	0.007968	0.396569	-2.38902
#NV	8186310	0.292511	7.299724	3.140489	0.005572	0.275749	-0.09785	SNORD3A	8013325	1.206449	4.863336	-3.30459	0.003875	0.192201	-1.80909	AMZ2	8000434	0.224204	7.669503	2.974262	0.008056	0.39951	-2.39788
SNX29 ///	7994576	-0.4117	7.681582	-1.3939	0.005586	0.275749	-0.09705	SNORD3A	8013325	1.206449	4.863336	-3.30459	0.003875	0.192201	-1.80909	AMZ2	8000434	0.224204	7.669503	2.974262	0.008056	0.39951	-2.39788
#NV	7894778	0.680617	3.343797	3.138772	0.005593	0.275749	-0.09820	SNORD3A	8013325	1.206449	4.863336	-3.30459	0.003875	0.192201	-1.80909	THAP4	8089274	-0.18563	6.873961	-2.97139	0.008075	0.39951	-2.39975
#NV	7895669	-0.50721	6.710496	-1.3826	0.005599	0.275749	-0.09915	F138	7923073	-0.30367	9.891021	-3.30412	0.003879	0.192201	-1.80995	THAP4	8072750	-0.18563	6.873961	-2.97139	0.008075	0.39951	-2.39975
MOB1B	8095566	0.299663	6.127361	3.138034	0.005602	0.275749	-0.09957	LOC1062	8040073	-0.50543	3.488877	-3.30149	0.003902	0.193037	-1.81509	PP1R14C	8122734	-0.15753	3.625604	-2.96838	0.008028	0.40034	-2.40073
#NV	8035792	-0.68565	5.550849	-1.3801	0.005603	0.275749	-0.09961	FAM787A	7895756	-0.28066	3.501088	-3.29954	0.003919	0.193199	-1.81891	#NV	8048116	-0.32467	6.127656	-2.96778	0.008139	0.40034	-2.40608
#NV	7973734	0.27467	5.529044	3.138013	0.005603	0.275749	-0.09961	#NV	8159846	-0.28059	2.787804	-3.29947	0.003919	0.193199	-1.81905	C2orf49	8044127	0.308841	6.321078	2.967412	0.008145	0.40034	-2.40673
#NV	7955030	0.834372	4.010266	3.136856	0.005617	0.275749	-0.10176	CYF4F2	8026424	0.709022	6.576951	3.299111	0.003922	0.193199	-1.81975	#NV	7963931	-0.4831	4.190109	-2.9678	0.008163	0.40034	-2.40855
#NV	7959597	0.834372	4.010266	3.136856	0.005617	0.275749	-0.10176	#NV	7894432	-0.55714	6.874345	-3.29709	0.00394	0.193396	-1.8237	GSTM2 ///	7919269	-0.43543	12.93262	-2.96637	0.008164	0.40034	-2.40855
SACM1L	8079346	-0.21583	7.940598	3.136717	0.005619	0.275749	-0.10276	RNUSA-4P	7970945	-0.19098	2.518683	2.96344	0.00394	0.193396	-1.82516	GSTM2 ///	7919269	-0.43543	12.93262	-2.96637	0.008164	0.40034	-2.40855
ZBT87A	8032755	-0.29242	6.531311	-1.33635	0.005623	0.275749	-0.1027	BACH1 ///	8068105	-0.27356	6.657053	-3.29605	0.003949	0.193396	-1.82574	VP35	8001149	0.287651	7.51082	2.965194	0.008185	0.400283	-2.41061
PPM1E	7942503	0.274097	6.80072	3.13467	0.005644	0.276364	-0.10582	NUDT4 ///	7917913	-0.52716	5.905572	-3.29429	0.003965	0.193396	-1.82919	SVIP	7947147	0.05809	5.797748	2.963896	0.008206	0.40123	-2.41273
ESPR	7975876	-0.22811	3.199719	-1.3363	0.005657	0.276593	-0.10776	GJA9 /// G	7915178	0.261234	2.556895	2.94156	0.003966	0.193396	-1.82944	#NV	7926539	-0.22603	3.294933	-2.96215	0.008239	0.401551	-2.41595
GCRL	8049670	0.356433	5.880173	3.132354	0.005673	0.276597	-0.11013	TSPAN3	7996020	0.432382	7.828036	3.29852	0.003969	0.193396	-1.83008	ORAN2	8188394	-0.27651	2.604288	-2.96126	0.008255	0.401551	-2.41791
LOC10050	7981992	-0.5794	4.944669	-1.3329	0.005674	0.276597	-0.11025	#NV	7990564	-0.77942	5.472436	-3.2921	0.003975	0.193396	-1.83151	HIST1HE	8117337	0.310653	11.04137	2.961182	0.008257	0.401551	-2.41764
BDP1	8013331	0.235689	6.33793	3.139201	0.0057	0.277468	-0.11414	IPO5	7969675	-0.27654	8.440543	-3.2942	0.003981	0.193396	-1.83284	MBO1	8023273	-0.18068	6.89109	-2.96096	0.008261	0.401551	-2.41803
ZNF3	8071260	-0.22662	6.854416	-1.1254	0.00576	0.27898	-0.12306	LSG1	8029905	0.251318	7.311427	3.29147	0.003985	0.193396	-1.83376	MEXD3	8032265	-0.17476	6.133002	-2.96017	0.008275	0.401653	-2.41981
BCAT1	7907619	-0.33268	3.18897	-1.24258	0.005772	0.27898	-0.12468	IRF7	7945462	-0.42953	5.704007	-3.29127	0.003992	0.193396	-1.83519	CDKN2B	8004763	-0.19687	3.716266	-2.95936	0.008289	0.401776	-2.42042
#NV	7892176	-0.37129	6.528489	-1.2378	0.005781	0.27898	-0.12576	SYT12	7932774	-0.37465	8.293788	-3.29127	0.004004	0.193396	-1.83714	#NV	8048116	-0.32467	6.127656	-2.96778	0.008139	0.40034	-2.40608
#NV	7896445	-0.42671	7.320236	-1.23204	0.00579	0.27898	-0.12744	CNBE8	7962150	0.3156	7.242641	-3.28942	0.004008	0.193396	-1.8387	DDF2	8158249	-0.23717	6.52066	-2.9557	0.008356	0.402348	-2.42723
#NV	8086125	-0.23579	6.96834	-1.23245	0.005798	0.27898	-0.12854	#NV	8092922	-0.59839	3.02086	-3.2881	0.004019	0.193396	-1.84128	#NV	7895153	0.495439	6.77698	2.955155	0.008366	0.402348	-2.42819
NR3C2	8103904	-0.2941	6.805903	-1.23243	0.005798	0.27898	-0.12858	INPP4A	8043791	0.166726	6.627767	2.87813	0.004022	0.193396	-1.84185	KIF11	7929258	0.268713	3.107165	2.95837	0.008372	0.402348	-2.42875
RN193	7921840	-0.29433	9.534539	-1.1244	0.005811	0.27898	-0.13045	#NV	7892982	0.267736	4.009746	2.86931	0.004003	0.193396	-1.84358	FAM171A2	8016033	-0.37037	4.551185	-2.95439	0.008387	0.402348	-2.43023
LGSN	8122780	-0.50799	5.249966	-1.2141	0.005811	0.27898	-0.13047	#NV	7892555	-0.3142	6.879703	-3.28599	0.004038	0.193396	-1.84542	ITGA1	8105229	0.226802	7.75854	2.953458	0.008397	0.402348	-2.43116
PDE7B	8173322	-0.44658	6.721057	-1.2089	0.005818	0.27898	-0.13144	MIR30B	8153065	-0.36636	6.998838	-3.2853	0.00404	0.193396	-1.84572	#NV	7999430	0.346802	3.886793	2.952544	0.008414	0.402348	-2.43276
LOC14688	8016761	-0.24968	6.432811	-1.2085	0.005818	0.27898	-0.13151	KPNA2	8009417	0.694218	6.519137	3.28535	0.004044	0.193396	-1.8466	#NV	8013013	0.326229	4.264162	-2.952109	0.008422	0.402348	-2.43352
SNX29P1 / GAPDH	7993825	-0.42001	7.565819	-1.2041	0.005824	0.27898	-0.13234	SEMA5A	8110932	-0.35431	7.538587	-3.28449	0.004052	0.193396	-1.84835	#NV	8078153	0.506342	2.978153	2.951621	0.008431	0.402348	-2.43438
#NV	7953385	0.300356	11.78162	3.119533	0.005835	0.27898	-0.13396	ZC3H6	8044450	-0.4441	6.883932	-3.2842	0.004061	0.193396	-1.85043	#NV	8169000	0.391648	4.851486	2.949511	0.00847	0.402348	-2.43807
#NV	8122314	-0.3508	5.540845	-1.31918	0.00584	0.27898	-0.13462	FGD4	8094229	-0.40225	8.201001	-3.2827	0.004068	0.193396	-1.85185	TPGS1	8023948	-0.22797	4.97369	-2.94716	0.008513	0.402348	-2.44219
#NV	7895994	-0.37485	6.05455	-1.31789	0.005857	0.27898	-0.13702	LOC100478	8067932	-0.34617	6.448821	-3.28233	0.004071</										

BICAP31	8175835	0.204295	8.073378	3.044408	0.066883	0.290836	-2.273116	#NV	8068214	-0.30732	2.925711	-3.20831	0.004797	0.20231	-1.99697	KBTBD11	8144317	-0.35643	4.619788	-2.88467	0.009752	0.410206	-2.5512
TES	8135576	0.37804	6.60296	3.043671	0.066894	0.290938	-2.27452	#NV	8013013	-0.3545	4.264162	-3.20797	0.004801	0.20231	-1.99763	HERCS	8096361	0.534549	5.276242	2.884457	0.009756	0.410206	-2.55157
LAR036	7990080	0.274289	8.537953	3.043564	0.066926	0.291579	-2.27842	NR3C2	8103904	-0.3021	6.805903	-3.20375	0.004807	0.20231	-1.99884	SLC30A3	8051050	-0.24671	4.002094	-2.88409	0.009764	0.410206	-2.55221
DSCR3	8072629	0.315049	8.282628	3.041236	0.066931	0.291579	-2.27902	CCBL2	7917482	-0.34072	7.445044	-3.20688	0.004812	0.20231	-1.99976	SLC35F5	8054771	0.190972	8.512474	2.883598	0.009774	0.410206	-2.55307
#NV	7893939	-0.47007	7.612077	-3.00126	0.066935	0.291579	-2.27958	SCARNAS	8160295	0.54645	4.997418	3.206608	0.004821	0.20231	-2.00133	#NV	7892771	0.328349	8.293798	2.883537	0.009776	0.410206	-2.55377
TAF4B	8032007	-0.29705	7.252118	-3.0397	0.066954	0.291666	-2.28186	EXL	8145624	0.250235	6.528482	3.20514	0.004831	0.202578	-2.00314	GLCC1	8131496	0.225889	7.042415	2.883248	0.009782	0.410206	-2.55388
NR0782	-0.28627	4.629469	-3.0374	0.066955	0.291666	-2.28195	CAT	8117132	-0.28035	9.497634	-3.2041	0.004842	0.202787	-2.00516	TNDC15	8108166	0.19576	6.750128	2.88247	0.009798	0.410382	-2.55503	
TSK3	785790	0.30142	8.159662	3.0374	0.066989	0.292634	-2.2861	ABCN11	8095388	-0.351	9.053693	-3.20281	0.004856	0.202787	-2.00767	#NV	8014749	-0.24288	6.251268	-2.88122	0.009825	0.410391	-2.5572
CRED2	8079349	0.293487	8.114595	3.036989	0.066996	0.292634	-2.28686	TMT1C	7962058	-0.67904	6.576305	-3.2013	0.004872	0.203537	-2.01061	TSMXN ///	7910550	0.309312	8.327712	2.880871	0.009832	0.410391	-2.55781
SMARCA1	8048175	0.18982	6.746521	3.03565	0.07013	0.29276	-2.28892	MFSDD2A	7900365	1.198806	8.37938	3.198082	0.004907	0.204733	-2.01687	ZP3	8133728	0.307109	6.36218	2.87947	0.009862	0.410391	-2.56025
LNOC047E	8067932	-0.32016	6.448521	-3.03565	0.07016	0.29276	-2.28934	#NV	7895362	-0.53423	7.156963	-3.19664	0.004922	0.205129	-2.01967	CLECIA	7961111	0.290238	3.166267	2.879246	0.009867	0.410391	-2.56064
PNC1	8042381	0.223837	4.968889	3.034769	0.07003	0.292811	-2.29097	#NV	7895714	-0.29146	10.34487	-3.1964	0.004929	0.205129	-2.02092	MRF533	8143433	0.345244	5.294478	2.878447	0.009876	0.410391	-2.56133
RHG	7906163	-1.15708	6.503403	-3.03443	0.070035	0.292811	-2.2916	ALG13	8169419	-0.36069	6.002038	-3.19183	0.004975	0.206807	-2.02904	OR3A1	8011337	0.23604	2.824096	2.877786	0.009898	0.410391	-2.56317
FAM129B	8164217	0.370197	8.590549	3.032836	0.07006	0.293466	-2.29354	ZF585A	8036373	-0.35031	9.498711	-3.19125	0.004981	0.206811	-2.03015	SLC10A3	8176109	-0.28227	10.22455	-2.87759	0.009903	0.410391	-2.56352
MIR205	7909422	-0.32424	3.151959	-3.03218	0.07007	0.293499	-2.29574	MYO18	8047127	-0.25503	10.09777	-3.18944	0.005001	0.207383	-2.03368	MTTP	8096580	0.225257	10.22455	-2.876544	0.009925	0.410391	-2.56533
PSMD10	8174379	0.35652	7.543031	3.031648	0.070078	0.293499	-2.29673	CD6C	8007071	0.685365	3.299927	3.188427	0.005013	0.207421	-2.03565	ZNF219	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
MEI52	7987385	-0.33102	6.327301	-3.03041	0.070097	0.293733	-2.299	#NV	7902474	-0.45584	4.780233	-3.18823	0.005015	0.207421	-2.03603	WASL	8142671	0.174948	8.296281	2.87573	0.009943	0.410391	-2.56673
COPE54	8096908	0.247112	6.350656	3.030147	0.070101	0.293733	-2.2995	#NV	7996403	-0.44583	6.254087	-3.18716	0.005027	0.207656	-2.03811	#NV	7896458	-0.27047	11.14697	-2.87531	0.009947	0.410391	-2.56715
INGS	8049956	-0.29291	5.727603	-3.02871	0.070124	0.294297	-2.30216	RAMD564	7971246	-0.22812	8.945494	-3.18644	0.005038	0.207765	-2.04009	GSN	8178442	-0.22292	4.067193	-2.87498	0.009959	0.410391	-2.56806
#NV	8140127	-0.2568	2.487895	-3.02684	0.07016	0.294211	-2.30641	HEATR5B	8051464	-0.20625	7.868867	-3.18558	0.005042	0.207765	-2.04076	ORS2E2	7946019	-0.20306	2.717155	-2.87495	0.009959	0.410391	-2.5681
CALR	8021606	0.292623	10.69075	3.025509	0.070174	0.295631	-2.30805	#NV	7896499	0.736532	5.242094	3.184662	0.005052	0.207765	-2.04257	PPPR2	8092959	0.251327	7.099488	2.874406	0.009971	0.410391	-2.56905
#NV	7894464	-0.46711	7.283079	-3.02412	0.070196	0.296165	-2.31062	CAMK2D	8102415	-0.27909	7.721468	-3.18435	0.005058	0.207765	-2.04357	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
KIF5B	7932911	0.234021	8.177614	3.020818	0.070248	0.297209	-2.31671	#NV	8022247	0.232506	5.240203	3.184123	0.00506	0.207765	-2.04401	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
SNORD11E	7982000	-0.5458	6.805184	-3.01987	0.070263	0.297209	-2.31846	PP1R14B	7949060	0.223871	7.511319	3.183355	0.005069	0.207861	-2.0455	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
PC	7949719	-0.30421	8.649778	-3.01923	0.070273	0.297209	-2.31963	FLJ13197	8099817	-0.49156	5.681908	-3.18276	0.005076	0.207879	-2.04666	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
#NV	8101285	-0.24146	4.055192	-3.01921	0.070274	0.297209	-2.31968	C8orf46	8146703	-0.70543	6.663361	-3.18151	0.00509	0.207992	-2.04908	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
OTOP2	8009705	-0.27697	3.647427	-3.01905	0.070276	0.297209	-2.31996	PIK3R2	8026954	0.404123	6.327187	3.181402	0.005091	0.207992	-2.0493	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
#NV	7894725	0.249149	10.28339	3.018591	0.070283	0.297209	-2.32081	PDD2A	8175860	0.322229	3.529775	3.179582	0.005111	0.20833	-2.05283	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
#NV	7893258	0.748988	7.158325	3.018579	0.070284	0.297209	-2.32084	#NV	7988410	-0.52592	4.037165	-3.17956	0.005112	0.20833	-2.05288	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
PRR25	7992121	0.24733	3.458513	3.017264	0.070305	0.297701	-2.32326	BBS2	8001507	-0.32259	6.616028	-3.17819	0.005127	0.208706	-2.05555	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
SARDH	8164940	-0.30519	8.888085	-3.0163	0.07032	0.29783	-2.32504	CE53	7996361	0.363123	8.286936	3.174822	0.005165	0.209826	-2.06208	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
#NV	8157144	-0.30149	3.313566	-3.015912	0.070384	0.298276	-2.32735	POU1F11L1E	7971177	-0.359833	8.855983	-3.17463	0.00517	0.210322	-2.06288	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
BLMH	8101408	-0.35712	11.23542	-3.01474	0.070345	0.29783	-2.32792	BAC1	7961829	0.337959	3.18997	3.174105	0.005174	0.209826	-2.06347	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
SNORD11S	7982054	-0.3523	2.944708	-3.01415	0.070355	0.29783	-2.329	RM14	7941707	0.243256	6.986593	3.173337	0.005182	0.209927	-2.06496	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
MAG1I	8088602	-0.22614	8.323196	-3.01346	0.070366	0.29783	-2.33027	MFN1	8084045	-0.21952	6.8485	-3.17038	0.005216	0.211048	-2.07071	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
#NV	7937508	0.525188	9.140524	3.013381	0.070367	0.29783	-2.33042	#NV	7895908	1.001205	5.309846	3.168992	0.005232	0.211436	-2.0734	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
TMEM74	8152335	0.369259	3.71563	3.013168	0.07037	0.29783	-2.33081	UPF1	8027074	0.207289	7.746149	3.168388	0.005239	0.211462	-2.07457	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
#NV	7961602	-0.27919	4.11457	-3.01173	0.070394	0.29812	-2.33346	C4orf36 //	8101616	-0.25212	3.257811	-3.16779	0.005246	0.211483	-2.07573	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
ZNF804A	8046815	0.254672	2.899832	3.011588	0.070396	0.29812	-2.33372	EGRF	8132860	-0.27413	8.705534	-3.16716	0.005254	0.211521	-2.07691	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
ABC2	8101675	-0.43906	7.029523	-3.01079	0.070409	0.29812	-2.33519	MYADM1	8051422	0.225357	3.676816	3.165587	0.005272	0.212003	-2.08005	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
#NV	8180286	0.30292	6.827515	3.010299	0.070417	0.29812	-2.3361	MCE	8052934	-0.25874	6.021363	-3.16088	0.005327	0.212972	-2.08915	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
#NV	8154979	-0.38114	3.970477	-3.00996	0.070422	0.29812	-2.33673	ZEB1	7929619	-0.30634	7.087143	-3.16073	0.005329	0.212972	-2.08944	#NV	7977646	-0.22074	5.109145	-2.876544	0.009926	0.410391	-2.56538
#NV	8168627	-0.38364	4.941866	-3.00875	0.070442	0.298268	-2.34296	NOTDL	8101228	-0.28569	6.375201	-3.15983											

VIEWF3	8027213	-0.2684	5.755457	-2.95433	0.008381	0.302059	-2.43898	ZCCHC8	7967287	-0.25138	6.962385	-3.10611	0.00601	0.216536	-2.19519
	7895362	-0.49364	7.156663	-2.95373	0.008392	0.302059	-2.44007	BAZ28	8056060	-0.27611	7.572145	-3.10611	0.00601	0.216536	-2.1952
CMTM8	8078397	-0.28423	6.877245	-2.9536	0.008395	0.302059	-2.44033	STX4	7995017	0.248874	7.160396	-3.10566	0.00601	0.216536	-2.19547
ALG1	7993071	0.255953	7.002775	-2.95324	0.008396	0.302059	-2.44046	FNIP1	8113914	-0.21522	7.699603	-3.10545	0.00601	0.216536	-2.19647
CASP14	8026398	-0.23622	7.804139	-2.95336	0.008399	0.302059	-2.44075	MOGAT3	8141676	0.768303	6.861926	-3.105305	0.006021	0.216536	-2.19675
PNPLR8	8142307	0.305584	6.530992	-2.95282	0.008409	0.302059	-2.44175		7895440	-0.30152	9.685641	-3.10524	0.00602	0.216536	-2.19688
HGD	8089951	-0.36239	11.26647	-2.95215	0.008421	0.302059	-2.44287	GCV111	7966938	0.214235	7.488282	-3.10329	0.006048	0.216598	-2.20064
HSD	8043728	-0.95123	11.25647	-2.95215	0.009423	0.302059	-2.44287		7993054	0.647739	7.095937	-3.10289	0.006053	0.216598	-2.20141
LOC10050	7982084	-0.77853	7.778157	-2.95196	0.008425	0.302059	-2.44333		7987282	-0.31428	10.56344	-3.10288	0.006053	0.216598	-2.20143
SIGMAR1	8160857	0.289066	6.028893	-2.951793	0.008428	0.302059	-2.44363		8156339	-0.28856	2.678131	-3.10107	0.006077	0.217474	-2.20494
ANAPC15	7950128	0.32106	6.837543	-2.950267	0.008456	0.302776	-2.44643		7894282	0.171672	10.50796	-3.100102	0.00609	0.217474	-2.2068
SEC6A1	8082408	0.369119	9.851948	-2.948073	0.008496	0.302776	-2.45045		8145685	-0.68109	5.673704	-3.09986	0.006094	0.217474	-2.20728
LYRM2 ///	7999752	0.435795	7.816881	-2.947434	0.008508	0.302776	-2.45162	NANOG	7987365	-0.38988	5.408491	-3.09943	0.006099	0.217474	-2.2081
DPYSL2	8145470	0.401392	7.958623	-2.947246	0.008511	0.302776	-2.45197	TBC1D22B	8119169	0.226757	6.079057	-3.099365	0.0061	0.217474	-2.20822
CAMK2G	7934477	0.212471	7.633156	-2.946843	0.008519	0.302776	-2.4527	FAM59A	8022803	-0.33917	6.676395	-3.09887	0.006107	0.217477	-2.20918
	7919160	0.397915	4.002433	-2.946794	0.00852	0.302776	-2.45279	TTCC40	7937112	-0.24897	3.071979	-3.09712	0.00613	0.218083	-2.21256
	7919166	0.397915	4.002433	-2.946794	0.00852	0.302776	-2.45279		7892615	0.668639	6.48823	-3.094673	0.00614	0.21878	-2.21278
	7957536	-0.50474	5.81491	-2.94677	0.00852	0.302776	-2.45284	FABP5 ///	8147049	0.45551	4.702001	-3.094142	0.006171	0.21878	-2.21831
FRK030	8130032	0.279422	7.151905	-2.945118	0.008551	0.303544	-2.45687	DSG1	8020774	-0.55945	7.367165	-3.09332	0.006182	0.21878	-2.21989
	7893514	-0.77113	5.215833	-2.94359	0.008579	0.303578	-2.45866		7893570	-1.22218	3.655849	-3.09308	0.006185	0.21878	-2.22035
MAGEA4	8170531	-0.25569	2.187296	-2.9425	0.008581	0.303578	-2.45883	CENPC1	8100603	-0.50749	7.388889	-3.0928	0.006189	0.21878	-2.22089
	8109303	0.27456	2.384237	-2.94283	0.008594	0.303578	-2.46006		7892898	-0.54023	5.566705	-3.09262	0.006191	0.21878	-2.22125
	7893253	-0.47782	4.560832	-2.94271	0.008596	0.303578	-2.46029	ODF2	8158269	0.248124	6.52066	-3.092282	0.006196	0.21878	-2.2219
YWHAB	8062880	0.255716	6.731866	-2.942626	0.008598	0.303578	-2.46043	FAM160A1	8097801	-0.54243	6.684559	-3.09146	0.006207	0.218828	-2.22348
HARS	8114628	0.255789	7.437574	-2.940739	0.008633	0.303979	-2.46389	VIPR2	8144213	-0.56076	3.356046	-3.09094	0.006214	0.218828	-2.22449
	7893127	-0.97133	3.684063	-2.94057	0.008636	0.303979	-2.46419		7895917	-0.41714	8.445625	-3.09018	0.006225	0.218828	-2.22595
CMAS	7954407	0.380451	7.329814	-2.940561	0.008636	0.303979	-2.46421	ZNF347	8039054	-0.35151	4.678369	-3.09005	0.006226	0.218828	-2.2262
	7960898	-0.23984	5.024254	-2.9393	0.00866	0.304311	-2.46652	CYP2C19	7929478	-1.10367	10.15104	-3.08875	0.006244	0.218828	-2.22872
TRH	8082574	-0.21692	3.97469	-2.93909	0.008664	0.304311	-2.46691		7892879	0.571824	2.809583	-3.088601	0.006246	0.218828	-2.229
AMPD3	7938396	0.374947	4.334543	-2.936041	0.008722	0.306015	-2.47249	MYD88	8078729	0.283731	7.589438	-3.088368	0.00625	0.218828	-2.22945
RIKC2	8113286	0.265851	5.823547	-2.935107	0.008739	0.306315	-2.4742	PHF7	8080306	-0.27427	5.651098	-3.08834	0.00625	0.218828	-2.22951
	8025588	-0.49423	5.179862	-2.934	0.008753	0.306322	-2.47623		8014749	0.259973	6.251264	-3.08939	0.006311	0.220304	-2.23
	7895839	0.768812	3.620343	-2.93398	0.008761	0.306422	-2.47626		8030352	0.414091	2.987098	-3.083304	0.00632	0.220304	-2.23922
ECT2	8083941	0.30801	4.13455	-2.933346	0.008773	0.306523	-2.47742	GATSL3	8075322	-0.29318	5.439917	-3.08307	0.006323	0.220304	-2.23968
EXT2	7939524	0.234622	6.186396	-2.932658	0.008786	0.30666	-2.47868	RBM14-RB	7941709	0.242605	7.579698	-3.082976	0.006324	0.220304	-2.23986
SIRT7	8019296	-0.26053	5.346043	-2.93182	0.008802	0.3069	-2.48022	PAN3	7968274	-0.25231	7.856845	-3.08265	0.006329	0.220304	-2.24049
SNX16	8151572	0.316114	3.778752	-2.928941	0.008858	0.308271	-2.48548		7952225	0.254565	5.203027	-3.082421	0.006332	0.220304	-2.24093
	7947127	-0.28018	2.70009	-2.92881	0.008876	0.308271	-2.48572		7893949	-0.39162	8.686978	-3.08015	0.006364	0.221176	-2.24531
SCLT17A	8132503	0.344908	5.9214	-2.927858	0.008878	0.308587	-2.48746	BHLHE40	8077441	0.458876	8.201148	-3.079344	0.006375	0.221304	-2.24686
ANKH	8111101	0.227209	8.299628	-2.925872	0.008917	0.3096	-2.4911	GPR89A //	7904853	-0.35501	7.058676	-3.07894	0.006381	0.221304	-2.24765
IPK2	8087201	0.245284	7.070275	-2.92502	0.008928	0.309661	-2.49214	OCLM	7908347	-0.52496	5.933311	-3.0784	0.006388	0.221335	-2.24868
HAND1	8115391	-0.23227	7.821425	-2.92467	0.00894	0.309761	-2.49328	MTIP2	7925413	-0.31891	6.335336	-3.07772	0.006398	0.221435	-2.24999
RRP1B	8068902	0.285244	6.578573	-2.923653	0.008966	0.310323	-2.49568		8096391	-0.28065	5.401794	-3.07604	0.006421	0.22202	-2.25323
SNORA16	7952021	0.289573	7.926678	-2.922732	0.008978	0.310427	-2.49667	SPS1A	7993320	-0.45596	5.363222	-3.07454	0.006403	0.22202	-2.25436
SNORD11C	7981963	-0.26185	5.896312	-2.92205	0.009014	0.310945	-2.50017	SMARCA1	8174985	-0.21522	6.933745	-3.07483	0.006428	0.22202	-2.25556
MYR1	7895562	0.462184	6.300673	-2.920408	0.009023	0.310945	-2.50109		7893705	-0.55665	7.411078	-3.07463	0.006441	0.22202	-2.25595
PTPLB	8086689	-0.3181	3.902738	-2.9196	0.009039	0.310945	-2.50257		7892903	-0.63179	6.364589	-3.07234	0.006474	0.222644	-2.26037
NRNP	7908779	0.290682	7.953021	-2.919434	0.009043	0.310945	-2.50286		7895178	-0.34309	6.61515	-3.07158	0.006484	0.222644	-2.26183
PEX3	8122409	0.306834	6.789429	-2.919259	0.009046	0.310945	-2.50319	SLCOA41	8063923	0.367973	3.809293	-3.070777	0.006496	0.222644	-2.26337
	7928489	-0.3928	5.869571	-2.91904	0.00905	0.310945	-2.50358		7895576	-0.78061	6.238863	-3.07057	0.006499	0.222644	-2.26378
CBOR17	8148463	-0.29182	8.120498	-2.91854	0.00906	0.310945	-2.50451	CAMK1D	7926223	0.401176	7.271769	-3.069733	0.006511	0.222644	-2.26538
SCL27A4	8158224	0.305314	6.85862	-2.91793	0.009072	0.310945	-2.50561		7907462	-0.238	2.760083	-3.06874	0.006525	0.222644	-2.26731
PRSS8	8001007	0.600937	5.983997	-2.917232	0.009086	0.310945	-2.50689	MYOT	8108256	-0.41326	3.604505	-3.06729	0.006546	0.222644	-2.2701
ZNF141	8093336	-0.19867	7.486013	-2.91699	0.009101	0.310945	-2.50734	MSI2	8008682	0.2158	6.171259	-3.067175	0.006547	0.222644	-2.27031
	8117656	-0.3514	10.27739	-2.91622	0.009106	0.310945	-2.50875	RRBP6	7994161	-0.20666	7.714326	-3.06693	0.006551	0.222644	-2.27078
SNX5	8054923	-0.49423	5.179862	-2.91594	0.009113	0.310945	-2.50948		7894353	-0.47248	6.121094	-3.06694	0.006559	0.222644	-2.27195
CHD1L	7904883	0.391279	6.484175	-2.915797	0.009114	0.310945	-2.50951	SPRYD3	7963577	0.30545	5.952943	-3.066406	0.006559	0.222644	-2.27179
MYL113A	8124531	0.442369	6.145969	-2.915172	0.009127	0.311049	-2.51065	CDH15	7997880	0.947715	6.010485	-3.06546	0.006572	0.222644	-2.27362
C19orf53	8026193	0.193828	8.312879	-2.913452	0.009161	0.311581	-2.5138		7895919	-0.49965	8.591146	-3.06477	0.006582	0.222644	-2.27495
	7895143	-0.53766	5.896012	-2.91345	0.009161	0.311581	-2.51381	TBC1D23	8081256	-0.22044	7.570864	-3.06466	0.006584	0.222644	-2.27515
	7894745	-0.52277	2.45211	-2.91282	0.009174	0.311677	-2.51495	SPP1	8096301	0.103731	6.763019	-3.064418	0.006587	0.222644	-2.27562
	8143984	-0.28408	3.428084	-2.91166	0.009197	0.311677	-2.51707		7894428	0.306579	7.292115	-3.063641	0.006598	0.222644	-2.27712
ZWILCH	7984330	0.301709	5.800866	-2.910901	0.009212	0.311677	-2.51845		7893838	-0.33467	10.49834	-3.06278	0.006611	0.222644	-2.27878
ABC8	8140752	0.440577	9.691714	-2.910837	0.009213	0.311677	-2.51857	BAAT	8162870	-0.33887	11.68716	-3.06243	0.006616		

UNC119B	7959212	0.271538	5.853134	3.017763	0.007297	0.230466	-2.3653
ANXAS	8102619	0.440955	8.602816	3.017684	0.007298	0.230466	-2.36545
FLI45079	8018818	-0.19834	2.652971	-0.10741	0.007302	0.230466	-2.36596
#NV	8161737	-0.41852	5.530209	-0.1681	0.007312	0.230553	-2.36713
RN7SKP1	7971075	0.223446	2.095273	3.01572	0.007329	0.230792	-2.36921
#NV	7993974	-0.27255	7.378743	-0.1479	0.007344	0.230792	-2.371
#NV	8091885	-0.20406	2.180667	-0.1439	0.007351	0.230792	-2.37177
POIG	7991258	0.185785	6.155724	3.014324	0.007352	0.230792	-2.37189
PION	8140478	-0.33051	8.163154	-0.1418	0.007354	0.230792	-2.37217
#NV	7895332	-0.70258	4.538412	-0.1178	0.007393	0.231771	-2.37676
#NV	7994570	-0.56296	5.000217	-0.1138	0.007399	0.231771	-2.37753
#NV	7896240	0.344506	8.223079	3.008551	0.007445	0.232529	-2.38296
#NV	7894830	0.457978	6.198987	3.00816	0.007452	0.232529	-2.38371
#NV	8180390	0.291174	6.47678	3.007125	0.007468	0.232529	-2.38569
#NV	7933929	-0.50924	3.076398	-0.00705	0.00747	0.232529	-2.38584
ZMYND12	7915425	-0.3323	5.449726	-0.00674	0.007475	0.232529	-2.38643
RAP2B	8083457	0.309155	6.187474	3.00653	0.007478	0.232529	-2.38683
PLGLA ///	8044149	-0.19427	8.861755	-0.00646	0.007479	0.232529	-2.38696
DNMT1	8033912	0.332735	6.150795	3.005696	0.007492	0.232529	-2.38843
#NV	7894570	-1.27523	3.582526	-3.00555	0.007494	0.232529	-2.38897
HMCN1	7908204	0.596872	6.992084	3.005469	0.007496	0.232529	-2.38886
RS5	8146685	0.241013	5.206216	3.004029	0.007519	0.232529	-2.39162
ZNF141	8093336	-0.20456	7.486013	-0.00334	0.007531	0.232529	-2.39295
ARHGAP5	7973840	-0.1981	7.515647	-0.00284	0.007539	0.232529	-2.3939
TAOK2	7994692	0.176734	6.968891	3.002821	0.007539	0.232529	-2.39394
SLCO1A2	7961626	-1.0064	5.43882	-0.0019	0.007554	0.232529	-2.39569
XAGE-4	8173176	0.41287	3.749163	3.00189	0.007554	0.232529	-2.39572
GABRE ///	8175666	0.813462	6.186229	3.001709	0.007557	0.232529	-2.39607
PRAMEF10	7912561	0.611151	3.728909	3.001538	0.00756	0.232529	-2.39639
#NV	7899322	-0.40827	7.50106	-0.00135	0.007563	0.232529	-2.39675
MTOR	7912412	0.241495	8.130458	3.000942	0.00757	0.232529	-2.39753
KPNA2	8013977	0.617831	6.277191	3.000047	0.007585	0.232529	-2.39929
DSG3	8020762	0.208135	2.495803	2.999458	0.007595	0.232529	-2.40038
MTMR4	8017019	-0.22548	9.430489	-2.9993	0.007597	0.232529	-2.40067
FEM1A	8024898	0.47294	4.523553	2.99913	0.0076	0.232529	-2.401
SNORD115	7982070	-0.68782	5.035176	-2.99821	0.007615	0.232529	-2.40276
#NV	8180206	-0.20473	6.152655	-2.99597	0.007653	0.232529	-2.40705
FCFAB4B	7960381	-0.39822	5.697534	-2.99542	0.007662	0.232529	-2.40811
#NV	7894731	-0.45875	5.50091	-2.99498	0.007669	0.232529	-2.40895
#NV	7894935	-0.45875	5.50091	-2.99498	0.007669	0.232529	-2.40895
#NV	7894918	-1.13749	3.296845	-2.99482	0.007672	0.232529	-2.40925
#NV	7896214	-1.13749	3.296845	-2.99482	0.007672	0.232529	-2.40925
KCNQ1	8172493	0.304287	4.454913	2.994804	0.007672	0.232529	-2.40929
#NV	810681	-0.458288	4.81318	-2.99466	0.007675	0.232529	-2.40956
#NV	8019910	0.223219	2.77244	2.994353	0.00768	0.232529	-2.41015
C6orf25	8179313	0.234193	4.341404	2.993644	0.007692	0.232529	-2.41151
TRAF7	7992529	0.235243	7.001472	2.993617	0.007692	0.232529	-2.41156
POLR3B	7958275	-0.25203	6.763283	-2.99358	0.007693	0.232529	-2.41163
LRRCS8	8089830	-0.21969	7.340514	-2.99311	0.007701	0.232529	-2.41253
FOX2	8135544	-0.35369	6.138001	-2.99303	0.007702	0.232529	-2.41269
#NV	8115677	-0.17097	1.997033	-2.993	0.007703	0.232529	-2.41274
FKBP1B	8040530	0.391574	5.974593	2.992541	0.00771	0.232529	-2.41362
HSF4	7996430	0.387515	6.144565	2.990736	0.007741	0.233258	-2.41707
SNORA55	7915227	0.51745	6.174885	2.989041	0.00777	0.233912	-2.42031
#NV	7996805	-0.58733	4.021186	-2.98861	0.007777	0.233919	-2.42113
ZC3HC11	7915415	-0.20944	7.388767	-2.98735	0.007798	0.234352	-2.42354
SNORD115	7982060	-0.35235	2.314553	-2.98677	0.007808	0.234439	-2.42466
NADK	7911600	0.333842	7.345943	2.986293	0.007816	0.234473	-2.42557
LOC10065	8007976	-0.22174	8.420021	-2.98354	0.007864	0.235677	-2.43085
CBR4	8103622	-0.35242	7.791335	-2.98288	0.007875	0.235801	-2.43209
GNB2	8134890	0.199344	7.65133	2.981068	0.007906	0.236314	-2.43556
PARK2	8130645	-0.33065	5.709999	-2.98071	0.007912	0.236314	-2.43624
ZNF808	8030946	-0.38931	7.617566	-2.98065	0.007913	0.236314	-2.43635
CCT3	7920984	0.258736	8.212432	2.980077	0.007923	0.2364	-2.43746
METTL20	7954701	-0.37336	5.634403	-2.9788	0.007945	0.236846	-2.43989
SNORA57	7940667	0.701546	7.113458	2.977346	0.007971	0.237388	-2.44268
#NV	8078497	-0.32684	3.559217	-2.97515	0.008009	0.238132	-2.44687
UBRN7	8093312	-0.21736	7.901647	-2.97509	0.008001	0.238132	-2.44698
TSSK3	7899790	-0.29505	4.155686	-2.97248	0.008056	0.239097	-2.45197
RN7SKP8	7972442	-0.26166	3.604323	-2.97226	0.00806	0.239097	-2.4524
PTPN4	8044849	-0.22254	6.009865	-2.97192	0.008066	0.239097	-2.45304
RPL10 ///	8170863	0.251577	9.14646	2.970668	0.008088	0.239097	-2.45543
#NV	7893491	-0.33949	9.205566	-2.97059	0.008089	0.239097	-2.45558
FAM185A	8140461	-0.30315	7.217166	-2.97052	0.00809	0.239097	-2.45572
LRRC40	7916910	-0.30848	6.957444	-2.96877	0.008121	0.239097	-2.45906
HIST1H4A	7961483	0.324184	8.657473	2.968734	0.008122	0.239097	-2.45913
NAP1L2	8173600	0.218913	2.844046	2.968559	0.008125	0.239097	-2.45946
SFXN2	7930148	-0.35586	7.99519	-2.96813	0.008133	0.239097	-2.46029
#NV	8056823	0.245862	2.38667	2.967769	0.008139	0.239097	-2.46097
FOXN3	7990680	-0.26707	8.655795	-2.96773	0.00814	0.239097	-2.46105
WASL	8132671	-0.18054	8.296281	-2.96759	0.008142	0.239097	-2.4613
#NV	8078384	-0.18553	1.896241	-2.96733	0.008147	0.239097	-2.46181
CDH26	8063761	-0.29528	3.701782	-2.96713	0.00815	0.239097	-2.46218
SLC26A6	8087119	0.32062	5.460669	2.966742	0.008157	0.239097	-2.46293
#NV	7895946	-0.50904	7.921987	-2.96615	0.008168	0.239196	-2.46406
DNAJB11	8084634	0.375172	7.303156	2.965014	0.008188	0.239404	-2.46623
PI4K2A	7929677	0.38164	6.27656	2.964945	0.008189	0.239404	-2.46636
ATPB04	7987369	-0.31537	6.574893	-2.96419	0.008203	0.239586	-2.4678
#NV	7894828	-0.39505	1.946143	-2.96334	0.008218	0.239703	-2.46941
#NV	7895538	-0.54485	6.970315	-2.9631	0.008222	0.239703	-2.46987
SNORD115	7982088	-0.64573	2.378537	-2.96277	0.008228	0.239703	-2.47052
#NV	7893726	-0.38708	5.876254	-2.96212	0.00824	0.239788	-2.47175
CYP2A13	8028973	-0.37882	11.32222	-2.96147	0.008252	0.239788	-2.47208
WEI1	7938448	-0.22523	6.215707	-2.9614	0.008253	0.239788	-2.47312
NEK8	8005959	0.248009	4.662067	2.959735	0.008283	0.240183	-2.4763
PHC3	8092035	-0.22408	9.176166	-2.95948	0.008288	0.240183	-2.47679
PCBP1	8042515	0.243942	8.701592	2.959447	0.008288	0.240183	-2.47685
GAPDHP27	7919049	-0.30346	3.821864	-2.95809	0.008313	0.240391	-2.47944
ZNF254	8027368	-0.36974	7.018581	-2.95775	0.008319	0.240391	-2.4801
ACTB /// U	8137979	0.230186	11.87195	2.957288	0.008327	0.240391	-2.48097
ENFP1	8122099	-0.24109	10.23621	-2.9569	0.008334	0.240391	-2.48171
#NV	7894960	-0.42093	8.598866	-2.95676	0.008337	0.240391	-2.48197
NLRP14	7938195	-0.4215	3.91463	-2.95648	0.008342	0.240391	-2.48251
#NV	8058693	0.24631	2.48082	2.955877	0.008353	0.240391	-2.48366
HTR5A	8137517	0.23726	3.536764	2.955866	0.008353	0.240391	-2.48368
ESRRB	7975876	-0.21498	3.197919	-2.95325	0.008401	0.24062	-2.48866
TTL8 /// T	8076882	0.182343	3.414379	2.953238	0.008401	0.24062	-2.48869
#NV	7924551	-0.28454	6.69429	-2.95307	0.008404	0.24062	-2.48901
#NV	7925523	-0.28454	6.69429	-2.95307	0.008404	0.24062	-2.48901
#NV	8132690	-0.28454	6.69429	-2.95307	0.008404	0.24062	-2.48901
KLKB1	8098654	-0.1803	11.15619	-2.95274	0.00841	0.24062	-2.48964
ZFH4	8147000	-0.30066	7.894217	-2.95242	0.008416	0.24062	-2.49025
TOR1AIP2	7922637	-0.25763	8.749988	-2.95223	0.00842	0.24062	-2.49061
BOP1	8153664	0.224467	5.875129	2.950276	0.008455	0.24062	-2.49434
TRIM16 ///	8005475	-0.26304	6.669353	-2.95009	0.008459	0.24062	-2.49469
#NV	7895084	0.398042	8.067585	2.950013	0.00846	0.24062	-2.49484
ZC3HC1C	7975772	0.32326	4.507995	2.949464	0.00847	0.24062	-2.49589
LRG1	7964602	-0.2802	7.375761	-2.94939	0.008473	0.24062	-2.49614
CCDC144A	8013479	-0.55623	5.851612	-2.94874	0.008484	0.24062	-2.49727
ABCF1	8117929	0.271885	7.379436	2.948736	0.008484	0.24062	-2.49727
ABCF1	8177797	0.271885	7.379436	2.948736	0.008484	0.24062	-2.49727
ABCF1	8179112	0.271885	7.379436	2.948736	0.008484	0.24062	-2.49727
FAM50A	8170906	0.229289	7.246598	2.947948	0.008498	0.240829	-2.49877
PDIA6	8050278	0.267431	9.661318				



SCN2A	8046020	-0.2749	3.106751	-2.94023	0.008643	0.242844	-2.51347
OSGEP11	8057689	-0.28987	5.867877	-2.93822	0.00868	0.243411	-2.5173
FAM59B	8040632	0.225455	4.233627	2.937642	0.008691	0.243411	-2.5184
SH3D19	8103166	-0.21009	8.057231	-2.93757	0.008693	0.243411	-2.51855
#NV	7893123	-0.47516	6.978402	-2.93695	0.008705	0.243411	-2.51972
EGFL7	8159354	0.251081	5.713925	2.936301	0.008717	0.243411	-2.52095
#NV	7901852	-0.38066	4.977944	-2.9363	0.008717	0.243411	-2.52096
#NV	7895990	-0.62008	5.208603	-2.93583	0.008726	0.243411	-2.52185
TNAP	7971159	-0.3247	3.000595	-2.93562	0.00873	0.243411	-2.52226
VKORC1	8000998	0.482209	10.52004	2.935332	0.008735	0.243411	-2.5228
LOC10050	8056426	-0.38092	6.547488	-2.9353	0.008736	0.243411	-2.52286
#NV	8070755	-0.26868	2.553565	-2.93485	0.008744	0.243445	-2.52371
ARF1 /// N	7910229	0.215399	10.01941	2.93291	0.008781	0.244202	-2.52741
MYO9B	8026638	0.249351	7.325513	2.932209	0.008795	0.244202	-2.52874
EIF2AK3	8053668	0.351567	6.457683	2.931659	0.008805	0.244202	-2.52979
DCUN1D1	8092321	-0.3324	8.28249	-2.93112	0.008816	0.244202	-2.5308
#NV	7942912	-0.45417	5.924706	-2.93083	0.008821	0.244202	-2.53137
SND1	8135876	0.292915	8.846291	2.930052	0.008836	0.244202	-2.53284
#NV	7917050	-0.46008	6.908174	-2.92963	0.008844	0.244202	-2.53364
FBXL4	7960280	-0.29843	5.311185	-2.92963	0.008844	0.244202	-2.53365
C7orf49 //	8143065	0.298132	6.760068	2.928792	0.00886	0.244202	-2.53524
PIK3C2G	7954208	-0.30056	8.528425	-2.92841	0.008868	0.244202	-2.53597
KATR	7995055	0.145857	6.663424	2.928384	0.008868	0.244202	-2.53602
#NV	8068733	0.245901	2.246958	2.928333	0.008869	0.244202	-2.53611
SPTSSA	7978553	0.600858	5.626497	2.927672	0.008882	0.244202	-2.53737
#NV	7894613	-0.3602	10.2024	-2.92745	0.008886	0.244202	-2.53779
PLEKHO2	7984217	0.252693	5.938278	2.927242	0.00889	0.244202	-2.53819
WIP1	8017850	0.381355	6.127574	2.926884	0.008897	0.244202	-2.53887
WPXDC1	8123678	0.466264	8.799164	2.926563	0.008903	0.244202	-2.53948
PTFRK	8129418	-0.19244	8.365974	-2.92656	0.008904	0.244202	-2.53948
MLLT4	8123407	-0.20937	8.249173	-2.92578	0.008919	0.244229	-2.54097
CARD11	8137874	0.249322	4.480979	2.925495	0.008924	0.244229	-2.54154
#NV	7896251	0.794494	4.759009	2.925376	0.008927	0.244229	-2.54173
GPC5	7969596	-0.50951	5.075856	-2.92378	0.008958	0.24475	-2.54476
KCTD15	8027584	0.382804	8.563564	2.923641	0.00896	0.24475	-2.54503
#NV	8090934	-0.27974	5.520329	-2.92212	0.00899	0.245358	-2.54792
#NV	7982292	-0.20058	2.259445	-2.9202	0.009028	0.246186	-2.55158
RFC5	7959052	-0.26089	7.010704	-2.9179	0.009073	0.246404	-2.55593
#NV	7982533	-0.22201	2.603546	-2.91781	0.009075	0.246404	-2.55612
FPG5	8158123	-0.23646	7.047735	-2.91753	0.00908	0.246404	-2.55664
RS124D1P:	8021374	-0.28442	2.88504	-2.91711	0.009088	0.246404	-2.55745
#NV	8097947	-0.22511	2.718974	-2.91692	0.009092	0.246404	-2.55781
#NV	8123340	-0.24103	3.806861	-2.91599	0.009111	0.246404	-2.55956
RANGAP1	8076307	0.269766	7.04126	2.915409	0.009122	0.246404	-2.56007
#NV	7894178	0.679315	4.293788	2.915362	0.009123	0.246404	-2.56076
#NV	7896145	0.679315	4.293788	2.915362	0.009123	0.246404	-2.56076
SNORD115	7982040	-0.51853	3.376602	-2.91513	0.009128	0.246404	-2.5612
SNORD115	7982042	-0.51853	3.376602	-2.91513	0.009128	0.246404	-2.5612
SNORD115	7982044	-0.51853	3.376602	-2.91513	0.009128	0.246404	-2.5612
ST3GAL2	8002370	0.301401	6.528438	2.914616	0.009138	0.246404	-2.56218
SLC9A3R1	8009685	0.233109	8.952812	2.913494	0.00916	0.246404	-2.56431
#NV	8111913	-0.28926	4.00573	-2.91332	0.009164	0.246404	-2.56465
#NV	7895004	-0.34434	8.365555	-2.91288	0.009172	0.246404	-2.56547
FBXO17 //	8036676	0.390568	8.221484	2.912431	0.009181	0.246404	-2.56633
#NV	7896418	-0.61884	6.327449	-2.91242	0.009182	0.246404	-2.56635
DAPK3	8032718	-0.299943	5.446162	-2.912363	0.009183	0.246404	-2.56646
C15orf52	7987511	0.236434	4.47539	2.910965	0.009211	0.246404	-2.56911
RPS6KA1	7899192	0.377526	6.28841	2.910828	0.009213	0.246404	-2.56937
PDPK1 ///	7998825	0.208181	9.227292	2.910635	0.009217	0.246404	-2.56974
PNN	7974066	0.260139	8.298073	2.910206	0.009226	0.246404	-2.57055
ST3GAL1	8153021	-0.24662	9.15566	-2.91016	0.009227	0.246404	-2.57064
DMRTB1	7901557	0.223996	3.986622	2.909849	0.009233	0.246404	-2.57123
LOC10013:	7958724	-0.25623	3.525926	-2.90956	0.009239	0.246404	-2.57178
STK32C	7937089	0.230283	4.339462	2.909289	0.009244	0.246404	-2.57229
IRGQ	8037352	0.234018	4.206897	2.909176	0.009247	0.246404	-2.57251
APIG2	7978066	0.453397	6.512624	2.908989	0.00925	0.246404	-2.57286
#NV	7892501	-0.72928	2.861398	-2.90816	0.009267	0.24665	-2.57443
#NV	8130470	0.274729	5.230008	2.907245	0.009285	0.246654	-2.57617
#NV	7896574	-0.56053	6.217453	-2.90724	0.009286	0.246654	-2.57619
ARMGAP5:	7978538	-0.36983	4.849341	-2.90698	0.009291	0.246654	-2.57667
BMP2K	8096004	-0.21876	6.962776	-2.90636	0.009303	0.246654	-2.57786
KLHDC1	7974214	-0.30971	7.053742	-2.90632	0.009304	0.246654	-2.57793
CTBP1	8098880	0.1717	8.402547	2.905531	0.00932	0.246803	-2.57942
GORASP1	8086317	0.185604	5.689932	2.905121	0.009328	0.246803	-2.5802
MBNL3	8175177	-0.2983	9.160786	-2.90471	0.009337	0.246803	-2.58099
#NV	7892734	-0.56287	5.449261	-2.90439	0.009343	0.246803	-2.58159
LYPLAL1	7909801	-0.30943	5.95147	-2.90407	0.00935	0.246803	-2.5822
PHF3	8120441	-0.21424	8.279413	-2.90385	0.009354	0.246803	-2.58262
WTF1-AS	7939131	-0.41861	3.09269	-2.90308	0.00937	0.246896	-2.58407
#NV	8097805	-0.35971	5.366995	-2.90256	0.00938	0.246896	-2.58507
RALGAP1	7978653	-0.28385	7.818001	-2.90216	0.009389	0.246896	-2.58582
#NV	7923179	-0.39387	3.899991	-2.90194	0.009393	0.246896	-2.58624
NR4A2	8055952	-0.38473	4.462699	-2.90185	0.009395	0.246896	-2.5864
PSEN2	7910146	0.317893	5.859383	2.901	0.009412	0.247158	-2.58802
#NV	8113346	0.533522	3.395499	2.900364	0.009425	0.247305	-2.58922
KIAA2026	8160011	-0.29197	9.03745	-2.89987	0.009435	0.247374	-2.59016
MANEAL	7900183	0.313592	5.813396	2.89963	0.009496	0.248763	-2.59573
#NV	7893610	-0.56576	3.92529	-2.89481	0.00954	0.249285	-2.59976
#NV	7893298	-0.56341	9.711731	-2.89475	0.009541	0.249285	-2.59987
NTSE	8120967	-0.42023	7.818171	-2.89458	0.009544	0.249285	-2.60019
#NV	8163714	-0.27034	8.374792	-2.89451	0.009546	0.249285	-2.60032
#NV	7916851	-0.22696	3.165461	-2.89416	0.009553	0.249285	-2.60099
#NV	7892968	0.240097	7.267824	2.893597	0.009565	0.24932	-2.60026
#NV	7894094	0.543512	5.32246	2.893152	0.009574	0.24932	-2.60289
#NV	8167893	-0.35004	4.103263	-2.8927	0.009583	0.24932	-2.60375
PABPC3	7968128	-0.15955	4.435676	-2.89265	0.009584	0.24932	-2.60385
E2F4	7996455	0.22265	6.747396	2.890946	0.00962	0.249744	-2.60707
NOMO1 //	7993371	0.245138	9.720163	2.890428	0.009631	0.249744	-2.60805
NOMO1 //	7993511	0.245138	9.720163	2.890428	0.009631	0.249744	-2.60805
NOMO1 //	7999791	0.245138	9.720163	2.890428	0.009631	0.249744	-2.60805
GZMA	8105340	0.4657	4.539075	2.889725	0.009645	0.24993	-2.60938
#NV	8038343	-0.47057	6.476754	-2.8888	0.009665	0.250176	-2.61114
#NV	7895604	0.446017	8.063978	2.888419	0.009673	0.250176	-2.61186
#NV	7895302	-0.77771	5.851282	-2.8882	0.009677	0.250176	-2.61228
RHOQ /// I	8045289	0.333717	7.180952	2.887016	0.009702	0.250482	-2.61451
#NV	8071817	-0.24857	2.667434	-2.88668	0.009709	0.250482	-2.61515
FASTK	8143863	0.286545	6.138808	2.886401	0.009715	0.250482	-2.61568
#NV	7896107	-0.44419	7.346207	-2.88604	0.009723	0.250482	-2.61637
USP53	8097098	-0.26376	7.464312	-2.88548	0.009735	0.250482	-2.61742
FICD	7958410	0.675188	5.695471	2.885097	0.009743	0.250482	-2.61815
PAH	7965884	-0.18347	12.26052	-2.88449	0.009747	0.250482	-2.61852
SWSAP1	8025888	-0.19225	5.179986	-2.88478	0.009749	0.250482	-2.61875
ZNF334	8066745	-0.53223	5.198506	-2.8831	0.009785	0.250918	-2.62193
#NV	8154221	-0.29953	2.254082	-2.88297	0.009788	0.250918	-2.62217
C19orf10	8032863	0.264961	7.632907	2.882772	0.009792	0.250918	-2.62255
CNKSRI2	8166355	-0.43884	5.257172	-2.88224	0.009803	0.250918	-2.62356
SNORA45	7952823	0.396704	5.738318	2.882059	0.009807	0.250918	-2.62394
SNORA70B	8053524	-0.30844	4.396393	-2.88083	0.009823	0.250918	-2.62612
#NV	7896247	0.438738	10.36099	2.880406	0.009842	0.250918	-2.62703
GPR148	8045216	-0.24443	3.75864	-2.88033	0.009844	0.250918	-2.62717
TXNDC16	7979158	-0.33971	4.43798	-2.87997	0.009852	0.250918	-2.62786
GPDI	7955348	0.441134	8.797955	2.879676	0.009858	0.250918	-2.62841
DPYSL2	8145470	0.392077	7.958623	2.878847	0.009876	0.250918	-2.62998
#NV	8111796	-0.21346</					

STK17A	8132503	0.338735	5.9214	2.875456	0.009948	0.25152	-2.63639
NPM1P8	8166659	-0.25148	2.127608	-2.87357	0.009989	0.252361	-2.63996



**Table S5 Target genes of the top 3 active and inactive transcription factors in non-obese liver**

**filtered target genes of AACACUG in non-obese liver**

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_T UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	ND-non
chr8_+_17354562	0.446	SLC7A2	SLC7A2	8144786	-0.4366	0.002735	0.237132	cg02786378	N/A Body;Body;5'UTR	SLC7A2	-6.50E-02
chr9_+_90112754	0.456	DAPK1	DAPK1	8156199	-0.39404	0.000735	0.197693	cg14286732	N/A Body	DAPK1	-8.45E-02

**filtered target genes of AAGGCAC in non-obese liver**

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_T UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	ND-non
chr9_-_130331350	1.183	FAM129B	FAM129B	8164217	0.370197	0.00706	0.293466	cg14409919	N/A Body;Body	FAM129B	-2.53E-02
chr6_-_134496006	2.152	SGK1	SGK1	8129677	0.795798	0.004794	0.261671	cg21078322	N/A 3'UTR;3'UTR;3'UTR;3'UTR	SGK1	-9.01E-02

**filtered target genes of IKZF2 in non-obese liver**

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_T UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	ND-non
chr8_-_18541441	1.7	PSD3	PSD3	8149555	-0.43479	0.004261	0.255766	cg12082271	N/A Body;Body	PSD3	-5.96E-02

**filtered target genes of RBPJ in non-obese liver**

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_T UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	ND-non
chr8_-_18541441	0.638	PSD3	PSD3	8149555	-0.43479	0.004261	0.255766	cg12082271	N/A Body;Body	PSD3	-5.96E-02
chr10_-_105437908	0.522	SH3PXD2A	SH3PXD2A	7936115	-0.51315	0.005999	0.280566	cg12569119	N/A Body	SH3PXD2A	-5.34E-02
chr10_-_105437908	0.522	SH3PXD2A	SH3PXD2A	7936115	-0.51315	0.005999	0.280566	cg20241299	Island Body	SH3PXD2A	-3.45E-02

**filtered target genes of UUGGUCC in non-obese liver**

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_T UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	T2D-non
chr6_+_143382030	0.968	AIG1	AIG1	8122396	-0.24073	0.005884	0.216536	cg21234032	N/A Body	AIG1	-2.44E-02

**filtered target genes of UUGGUCC in non-obese liver**

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_T UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	ND-non
chr6_-_134496006	1.448	SGK1	SGK1	8129677	0.795798	0.004794	0.261671	cg21078322	N/A 3'UTR;3'UTR;3'UTR;3'UTR	SGK1	-9.01E-02

**filtered target genes of UUGGUCC in non-obese liver**

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_T UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	T2D-non
chr12_-_49177876	0.555	ADCY6	ADCY6	7962842	0.327264	0.006701	0.222644	cg00160359	S_Shore 5'UTR;TSS1500	ADCY6	-0.0247
chr19_+_34287662	0.568	KCTD15	KCTD15	8027584	0.382804	0.00896	0.24475	cg04566826	S_Shore 5'UTR;5'UTR;5'UTR	KCTD15	-3.09E-02
chr16_+_58059281	0.89	MMP15	MMP15	7996185	0.337665	0.005773	0.216441	cg05517218	S_Shore 3'UTR	MMP15	-3.31E-02
chr16_+_58059281	0.89	MMP15	MMP15	7996185	0.337665	0.005773	0.216441	cg05521581	N_Shore Body	MMP15	-4.17E-02
chr12_-_49177876	0.555	ADCY6	ADCY6	7962842	0.327264	0.006701	0.222644	cg24092939	N_Shore 5'UTR	ADCY6	-0.05374

**filtered target genes of TP53 in non-obese liver**

Position	Score	Gene Name	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_T UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	T2D-non
chr11_+_45826640	1.584	SLC35C1	SLC35C1	7939590	0.762783	0.002823	0.176496	cg17066254	N_Shore TSS1500;TSS1500	SLC35C1	-2.11E-02

Table S6 Target genes of the top 3 active and inactive transcription factors in ND-obese liver

filtered target genes of HMX1 in ND-obese liver

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_TO_UCSC_CPG	UCSC_REFGENE_GROUP	UCSC_REFGENE	ND-non
chr9_-1303:	0.58	FAM129B	FAM129B	8164217	0.370197	0.00706	0.293466	cg1440991	N/A	Body;Body	FAM129B	-0.02526
chr9_-1303:	0.327	FAM129B	FAM129B	8164217	0.370197	0.00706	0.293466	cg1440991	N/A	Body;Body	FAM129B	-0.02526

filtered target genes of MAFB in ND-obese liver

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_TO_UCSC_CPG	UCSC_REFGENE_GROUP	UCSC_REFGENE	ND-non
chr12_-404:	0.794	SLC2A13	SLC2A13	7962327	0.44039	0.000411	0.183282	cg0264194	N/A	Body	SLC2A13	-0.10166
chr7_-2883:	0.544	GNA12	GNA12	8137865	0.469257	0.000113	0.144561	cg0893327	N/A	3'UTR	GNA12	-0.04248
chr11_-613:	1.256	SYT7	SYT7	7948588	0.924832	0.002107	0.229377	cg1339585	N/A	Body	SYT7	-0.04829
chr13+_980	0.711	RAP2A	RAP2A	7969693	0.536908	5.93E-05	0.130579	cg1928329	S_Shelf	Body	RAP2A	-0.09815
chr13+_980	0.799	RAP2A	RAP2A	7969693	0.536908	5.93E-05	0.130579	cg1928329	S_Shelf	Body	RAP2A	-0.09815
chr11_-613:	1.256	SYT7	SYT7	7948588	0.924832	0.002107	0.229377	cg2391784	N/A	Body	SYT7	-0.06545
chr3_-1952:	0.49	PPP1R2	PPP1R2	8092959	0.336147	0.001158	0.210565	cg2723053	N_Shelf	Body	PPP1R2	-0.06141

filtered target genes of NKX2-3, NKX2-5 in ND-obese liver

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_TO_UCSC_CPG	UCSC_REFGENE_GROUP	UCSC_REFGENE	ND-non
chr8_-1757:	0.762	MTUS1	MTUS1	8149500	-0.31468	0.00047	0.184307	cg0012138	N/A	Body;TSS200;Body;Body;Bod	MTUS1	-0.17207
chr3_-7117:	0.286	FOXP1	FOXP1	8088776	-0.29018	0.003497	0.250433	cg0097075	N/A	Body	FOXP1	-0.06017
chr3_-7117:	0.297	FOXP1	FOXP1	8088776	-0.29018	0.003497	0.250433	cg0097075	N/A	Body	FOXP1	-0.06017
chr3_-7117:	0.286	FOXP1	FOXP1	8088776	-0.29018	0.003497	0.250433	cg0736885	N/A	5'UTR;5'UTR	FOXP1	-0.09083
chr3_-7117:	0.297	FOXP1	FOXP1	8088776	-0.29018	0.003497	0.250433	cg0736885	N/A	5'UTR;5'UTR	FOXP1	-0.09083
chr10_-105:	0.297	SH3PXD2A	SH3PXD2A	7936115	-0.51315	0.005999	0.280566	cg1256911	N/A	Body	SH3PXD2A	-0.05335
chr3_-7117:	0.286	FOXP1	FOXP1	8088776	-0.29018	0.003497	0.250433	cg1547288	N/A	Body	FOXP1	-0.03368
chr3_-7117:	0.297	FOXP1	FOXP1	8088776	-0.29018	0.003497	0.250433	cg1547288	N/A	Body	FOXP1	-0.03368
chr6+_1361	0.676	PDE7B	PDE7B	8122222	-0.44658	0.005818	0.27898	cg1714850	N/A	Body	PDE7B	-0.04140
chr17+_378	0.258	GRB7	GRB7	8006940	-0.4159	0.009987	0.317595	cg1735571	N/A	TSS1500;TSS1500	GRB7	0.07341
chr10_-105:	0.297	SH3PXD2A	SH3PXD2A	7936115	-0.51315	0.005999	0.280566	cg2024129	Island	Body	SH3PXD2A	-0.03453
chr17+_378	0.258	GRB7	GRB7	8006940	-0.4159	0.009987	0.317595	cg2567621	N/A	Body;Body	GRB7	-0.03880

filtered target genes of PAX2 in ND-obese liver

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_TO_UCSC_CPG	UCSC_REFGENE_GROUP	UCSC_REFGENE	ND-non
chr6_-5321:	1.121	ELOVL5	ELOVL5	8127145	0.398788	0.004198	0.255766	cg1174835	N/A	5'UTR	ELOVL5	-0.07295
chr6_-5321:	0.753	ELOVL5	ELOVL5	8127145	0.398788	0.004198	0.255766	cg1174835	N/A	5'UTR	ELOVL5	-0.07295
chr6_-5321:	0.983	ELOVL5	ELOVL5	8127145	0.398788	0.004198	0.255766	cg1174835	N/A	5'UTR	ELOVL5	-0.07295
chr17_-269:	0.937	ALDOC	ALDOC	8013660	0.650618	0.006585	0.289152	cg1569223	N/A	TSS200	ALDOC	0.02484
chr17_-269:	0.938	ALDOC	ALDOC	8013660	0.650618	0.006585	0.289152	cg1569223	N/A	TSS200	ALDOC	0.02484
chr6_-1344:	1.182	SGK1	SGK1	8129677	0.795798	0.004794	0.261671	cg2107832	N/A	3'UTR;3'UTR;3'UTR;3'UTR	SGK1	-0.09014

filtered target genes of UUUUUGC in ND-obese liver

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_TO_UCSC_CPG	UCSC_REFGENE_GROUP	UCSC_REFGENE	ND-non
chr7_-1217:	1.337	AASS	AASS	8142554	-0.73651	0.00119	0.211413	cg1168548	N/A	Body	AASS	-0.03429
chr7_-1217:	1.337	AASS	AASS	8142554	-0.73651	0.00119	0.211413	cg1173878	N/A	Body	AASS	-0.05801

filtered target genes of ZNF423 in ND-obese liver

No results found

Table S7 Target genes of the top 3 active and inactive transcription factors in T2D-obese liver

filtered target genes of ACAGUAI in T2D-obese liver

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_TO_UCSC_CPG_ISL	UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	T2D-non
chr4_+_126237566	0.53	FAT4	FAT4	8097288	-0.38904	0.000594	0.107867	cg04171487	N/A	Body	FAT4	-2.73E-02

filtered target genes of CUUUGGU in T2D-obese liver

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_TO_UCSC_CPG_ISL	UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	T2D-non
chr7_-_121784236	0.542	AASS	AASS	8142554	-0.90496	0.000168	0.0762	cg11738782	N/A	Body	AASS	-3.13E-02
chr7_+_114055048	0.439	FOXP2	FOXP2	8135544	-0.35369	0.007702	0.232529	cg17356750	N/A	Body;Body;Body	FOXP2	-3.72E-02

filtered target genes of AGCUGCC in T2D-obese liver

Position	Score	Gene Name	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_TO_UCSC_CPG_ISL	UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	T2D-non
chr12_-_49177876	0.381	ADCY6	ADCY6	7962842	0.327264	0.006701	0.222644	cg00160359	S_Shore	5'UTR;TSS1500	ADCY6	-0.0247
chr12_-_49177876	0.381	ADCY6	ADCY6	7962842	0.327264	0.006701	0.222644	cg24092939	N_Shore	5'UTR	ADCY6	-0.05374

filtered target genes of PATZ1 in T2D-obese liver

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_TO_UCSC_CPG_ISL	UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	T2D-non
chr12_-_49182718	1.228	ADCY6	ADCY6	7962842	0.327264	0.006701	0.222644	cg00160359	S_Shore	5'UTR;TSS1500	ADCY6	-0.0247
chr11_+_69455837	0.831	CCND1	CCND1	7942123	0.647451	0.005353	0.212972	cg00248856	S_Shelf	Body	CCND1	-2.92E-02
chr11_+_69455938	0.85	CCND1	CCND1	7942123	0.647451	0.005353	0.212972	cg00248856	S_Shelf	Body	CCND1	-2.92E-02
chr1_+_9352931	0.904	SPSB1	SPSB1	7897449	0.566254	0.00643	0.22202	cg00890054	N/A	5'UTR	SPSB1	-5.23E-02
chr1_+_9352955	0.974	SPSB1	SPSB1	7897449	0.566254	0.00643	0.22202	cg00890054	N/A	5'UTR	SPSB1	-5.23E-02
chr17_-_1083008	0.901	ABR	ABR	8010983	0.530553	0.002177	0.16838	cg05633070	Island	Body;Body;Body	ABR	-5.63E-02
chr1_+_9352931	0.904	SPSB1	SPSB1	7897449	0.566254	0.00643	0.22202	cg06943197	N_Shore	5'UTR	SPSB1	-1.52E-02
chr1_+_9352955	0.974	SPSB1	SPSB1	7897449	0.566254	0.00643	0.22202	cg06943197	N_Shore	5'UTR	SPSB1	-1.52E-02
chr2_+_45878912	1.746	PRKCE	PRKCE	8041763	1.326419	0.000369	0.095471	cg08203192	S_Shore	Body	PRKCE	-2.86E-02
chr11_+_129685732	0.955	TMEM45B	TMEM45B	7945169	1.363032	0.000986	0.129046	cg08809251	N/A	Body	TMEM45B	-3.76E-02
chr5_-_1523908	0.913	LPCAT1	LPCAT1	8110841	0.339133	0.001373	0.14027	cg11576486	N/A	Body	LPCAT1	-3.58E-02
chr17_-_1083008	0.901	ABR	ABR	8010983	0.530553	0.002177	0.16838	cg14236443	N/A	Body;Body;Body	ABR	-5.41E-02
chr1_+_955609	1.203	AGRN	AGRN	7896822	0.348024	0.002127	0.16628	cg22379708	N_Shore	Body	AGRN	-3.14E-02
chr1_+_955468	1.067	AGRN	AGRN	7896822	0.348024	0.002127	0.16628	cg22379708	N_Shore	Body	AGRN	-3.14E-02
chr12_-_49182718	1.228	ADCY6	ADCY6	7962842	0.327264	0.006701	0.222644	cg24092939	N_Shore	5'UTR	ADCY6	-0.05374
chr1_-_11714738	1.377	FBXO2	FBXO2	7912473	0.539928	0.002814	0.176496	cg25276694	Island	Body	FBXO2	2.93E-02
chr1_-_11714471	1.341	FBXO2	FBXO2	7912473	0.539928	0.002814	0.176496	cg25276694	Island	Body	FBXO2	2.93E-02
chr1_-_11714396	0.955	FBXO2	FBXO2	7912473	0.539928	0.002814	0.176496	cg25276694	Island	Body	FBXO2	2.93E-02

filtered target genes of PRRX1 in T2D-obese liver

Promoter	Score	Gene Symbol	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_TO_UCSC_CPG_ISL	UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	T2D-non
chr14_+_32798478	1.587	AKAP6	AKAP6	7973850	-0.35931	0.005923	0.216536	cg10359332	N/A	5'UTR	AKAP6	-2.93E-02
chr7_+_114066554	3.421	FOXP2	FOXP2	8135544	-0.35369	0.007702	0.232529	cg17356750	N/A	Body;Body;Body	FOXP2	-3.72E-02

filtered target genes of TP53 in T2D-obese liver

Position	Score	Gene Name	Name	probe_ID	logFC	PValue	FDR	Probe ID	RELATION_TO_UCSC_CPG_ISL	UCSC_REFGENE_GROUP	UCSC_REFGENE_NAME	T2D-non
chr11_+_45826640	1.584	SLC35C1	SLC35C1	7939590	0.762783	0.002823	0.176496	cg17066254	N_Shore	TSS1500;TSS1500	SLC35C1	-2.11E-02

**Table S8 Hypomethylation of glycolytic and lipogenic genes.**

gene name	total # probes	Obese versus Non-Obese		Type 2 diabetic versus Non-Obese	
		hypomethylated	hypermethylated	hypomethylated	hypermethylated
<i>GCK</i>	25	14	2	9	0
<i>PFKL</i>	31	11	2	6	1
<i>ACACA</i>	48	20	0	10	1
<i>ACLY</i>	22	2	1	1	1
<i>FASN</i>	55	14	2	7	1
<i>PRKCE</i>	61	26	2	12	1
<i>ATF6</i>	25	5	2	5	1

CpG-methylation measured using an Illumina Infinium 450k Bead Chip. Column entitled *total # probes* describes total number of probes per gene measured by the Bead Chip. Remaining columns describe number of probes per gene hypo- or hypermethylated. Hypomethylation was assumed when  $M\text{-value}_{\text{obese}} - M\text{-value}_{\text{non-obese}} \leq 0.25$ . Hypermethylation was assumed when  $M\text{-value}_{\text{obese}} - M\text{-value}_{\text{non-obese}} \geq 0.25$ . This table is related to Figure 4.

**Table S9 Correlation between ATF-motif methylation and clinical parameters**

		Correlations				
Parameter		FASN_ATF	PRKCE_ATF	PFKL_ATF	ACLY_ATF	ACACA_ATF
<b>Age</b>	<i>r</i>	-.032	-.072	-.042	.167	-.112
	P-value	.868	.722	.827	.378	.587
<b>Height</b>	<i>r</i>	.199	-.154	-.131	.038	-.204
	P-value	.259	.399	.461	.829	.272
<b>Weight</b>	<i>r</i>	-.215	-.273	<b>-.597**</b>	-.032	<b>-.487**</b>
	P-value	.223	.130	<b>.000</b>	.855	<b>.005</b>
<b>BMI</b>	<i>r</i>	-.311	-.259	<b>-.619**</b>	-.050	<b>-.459**</b>
	P-value	.073	.152	<b>.000</b>	.777	<b>.009</b>
<b>Waist</b>	<i>r</i>	-.201	-.234	<b>-.641**</b>	-.054	<b>-.411*</b>
	P-value	.296	.240	<b>.000</b>	.778	<b>.037</b>
<b>HDL</b>	<i>r</i>	.034	.312	.089	.199	.224
	P-value	.873	.158	.679	.339	.329
<b>LDL</b>	<i>r</i>	.095	.241	.087	.013	.103
	P-value	.667	.280	.692	.952	.656
<b>Cholesterol</b>	<i>r</i>	.300	.209	.069	-.005	.081
	P-value	.154	.351	.748	.980	.727
<b>Triglycerides</b>	<i>r</i>	<b>-.408*</b>	<b>-.443*</b>	-.225	-.085	-.340
	P-value	<b>.048</b>	<b>.039</b>	.290	.686	.132
<b>HbA<sub>1c</sub></b>	<i>r</i>	<b>-.557**</b>	-.306	-.236	.062	-.413
	P-value	<b>.005</b>	.166	.268	.767	.063
<b>Glucose</b>	<i>r</i>	<b>-.640**</b>	-.110	-.239	.009	<b>-.516*</b>
	P-value	<b>.000</b>	.609	.240	.966	<b>.012</b>
<b>Insulin</b>	<i>r</i>	-.217	<b>-.554**</b>	<b>-.588**</b>	-.140	<b>-.648**</b>
	P-value	.277	<b>.004</b>	<b>.001</b>	.477	<b>.001</b>
<b>HOMA-IR</b>	<i>r</i>	-.377	<b>-.520*</b>	<b>-.588**</b>	-.103	<b>-.713**</b>
	P-value	.076	<b>.016</b>	<b>.003</b>	.631	<b>.000</b>

Pearson correlation coefficients (*r*) between ATF-motif methylation and clinical parameters studied. Significant relationships are highlighted in bold font. \*\*P<0.01 (2-tailed). \*P<0.05 (2-tailed). This table is related to Figure 4.





Table S10 Comparison of MBD4 Chip ENCODE data with DNA methylation (Infinium 450k) in liver from T2D-obese and non-diabetic obese men

Comparison of MBD4 Chip ENCODE data with DNA methylation (Infinium 450k) in liver from non-diabetic obese versus non-obese men

Chromosome	MBD4_ENCF002CKQ_Start	MBD4_ENCF002CKQ_End	MBD4_ENCF002CKQ	ND-non_Start	ND-non_End	ND-non_450K_Name	ND-non_GeneName	ND-non M-value
chr14	102701517	102702081	ENCODE_MBD4_333	102702045	102702095	cg02022488	NLRG1	-0.757933929
chr8	132915493	132916057	ENCODE_MBD4_400	132915715	132915765	cg07665487	RFR3A	-0.743278571
chr11	82611614	82612178	ENCODE_MBD4_445	82612022	82612072	cg03602013	C11orf82	-0.6579375
chr6	44225252	44225816	ENCODE_MBD4_452	44225648	44225698	cg11699666	SLC35B2	-0.639560714
chr11	64007783	64008347	ENCODE_MBD4_588	64007813	64007863	cg12423493	FKBP2	-0.633054821
chr2	21231099	21231663	ENCODE_MBD4_149	21231605	21231655	cg05961176	APOB	-0.60185
chr6	26594815	26595379	ENCODE_MBD4_457	26595280	26595330	cg26478107	N/A	-0.581525714
chr3	128399898	128400462	ENCODE_MBD4_380	128400220	128400270	cg02610898	N/A	-0.508798214
chr10	81965285	81965849	ENCODE_MBD4_279	81965490	81965540	cg15186042	ANXA11	-0.494023214
chr7	138818153	138818717	ENCODE_MBD4_321	138818388	138818438	cg04662241	TTC26	-0.457928571
chr15	38746039	38746603	ENCODE_MBD4_428	38746242	38746292	cg05843574	FAM98B	-0.413928571
chr6	155816112	155816676	ENCODE_MBD4_350	155816164	155816214	cg16095551	N/A	-0.409040714
chr4	84376928	84377492	ENCODE_MBD4_221	84377292	84377342	cg22541143	HELQ	-0.391464286
chr5	33440514	33441078	ENCODE_MBD4_399	33440737	33440787	cg06484562	TARS	-0.360903571
chr16	67260774	67261338	ENCODE_MBD4_447	67260827	67260877	cg22834154	LRRC29	-0.3544125
chr11	119039023	119039587	ENCODE_MBD4_300	119039171	119039221	cg05169666	NLRX1	-0.351985714
chr7	94286670	94287234	ENCODE_MBD4_318	94286669	94286719	cg20041873	SGCE	-0.341902929
chr9	136218911	136219475	ENCODE_MBD4_453	136219331	136219381	cg13454524	SURF1	-0.336157143
chr6	52860000	52860564	ENCODE_MBD4_274	52860082	52860132	cg25760338	GSTA4	-0.3346875
chr7	94286670	94287234	ENCODE_MBD4_318	94286679	94286843	cg05509218	SGCE	-0.306770563
chr13	103497959	103498523	ENCODE_MBD4_191	103497991	103497991	cg20374041	ERCC5	-0.297808929
chr2	192542647	192543211	ENCODE_MBD4_558	192542877	192542927	cg19839149	OBFC2A	-0.2941875
chr6	126307900	126308464	ENCODE_MBD4_470	126307897	126307947	cg12199684	TRMT11	0.276058929
chr3	142297403	142297967	ENCODE_MBD4_379	142297747	142297797	cg00969988	ATR	0.280758929
chr2	95830964	95831528	ENCODE_MBD4_571	95831296	95831346	cg17995403	ZNF2	0.296353571
chr12	32111664	32112228	ENCODE_MBD4_460	32112207	32112257	cg17281556	C12orf35	0.298735714
chr14	24616079	24616643	ENCODE_MBD4_537	24616618	24616668	cg12590010	PSME2	0.3497875
chr5	112196496	112197060	ENCODE_MBD4_546	112197007	112197057	cg10484990	SRP19	0.357289286
chr17	80476681	80477245	ENCODE_MBD4_351	80477010	80477060	cg01137065	FOXK2	0.373189286
chr4	103940479	103941043	ENCODE_MBD4_478	103941039	103941089	cg06618713	NHEDC1	0.397458929
chr6	148663144	148663708	ENCODE_MBD4_396	148663626	148663676	cg01452444	SASH1	0.421192857
chr12	81471064	81471628	ENCODE_MBD4_551	81471419	81471469	cg00354572	ACSS3	0.438119643
chr12	81471366	81471930	ENCODE_MBD4_528	81471419	81471469	cg00354572	ACSS3	0.438119643
chr10	5726157	5726721	ENCODE_MBD4_106	5726466	5726516	cg20676401	C10orf18	0.45003571
chr10	116286163	116286727	ENCODE_MBD4_137	116286605	116286655	cg01449818	ABUM1	0.471242857
chr3	57541526	57542090	ENCODE_MBD4_315	57541798	57541848	cg07317755	PDE12	0.542855357

Comparison of MBD4 Chip ENCODE data with DNA methylation (Infinium 450k) in liver from T2-diabetic obese versus non-obese men

Chromosome	MBD4_ENCF002CKQ_Start	MBD4_ENCF002CKQ_End	MBD4_ENCF002CKQ	T2D-non_Start	T2D-non_End	T2D-non_450K_Name	T2D-non_GeneName	T2D-non M-value
chr7	11012820	11013384	ENCODE_MBD4_573	11013340	11013390	cg07287563	PHF14	-0.670432143
chr5	74162556	74163120	ENCODE_MBD4_382	74162851	74162901	cg06460691	FAM169A	-0.532806143
chr6	27447138	27447702	ENCODE_MBD4_238	27447492	27447542	cg27226147	N/A	-1.126012857
chr6	87864882	87865446	ENCODE_MBD4_577	87865314	87865364	cg03098356	ZNF292	-0.40785
chr6	143771597	14377721	ENCODE_MBD4_345	143771552	143771602	cg08452146	ADAT2	0.408916071
chr10	75935830	75936394	ENCODE_MBD4_412	75936028	75936078	cg16088251	ADK	-0.7512625
chr10	121484607	121485171	ENCODE_MBD4_268	121485064	121485114	cg19004007	INPP5F	-0.832216071
chr11	16759866	16760430	ENCODE_MBD4_319	16760230	16760280	cg25556987	C11orf58	-0.4267625
chr4	103940479	103941043	ENCODE_MBD4_478	103941039	103941089	cg06618713	NHEDC1	0.439883929
chr12	57482027	57482591	ENCODE_MBD4_144	57482528	57482578	cg06200494	NAB2	-0.254073214
chr1	235814038	235814602	ENCODE_MBD4_238	235814009	235814059	cg17816394	GNMG4	0.646419643
chr2	15701265	15701829	ENCODE_MBD4_111	15701450	15701500	cg04222876	NBAS	0.309708929
chr2	20646601	20647165	ENCODE_MBD4_354	20646743	20646793	cg19594691	RHOB	0.378032143
chr14	24630104	24630668	ENCODE_MBD4_146	24630380	24630430	cg11065693	IRF9	0.276928571
chr14	24630368	24630932	ENCODE_MBD4_467	24630380	24630430	cg11065693	IRF9	0.276928571
chr15	38746039	38746603	ENCODE_MBD4_428	38746242	38746292	cg05843574	FAM98B	-0.649541071
chr17	79476223	79476787	ENCODE_MBD4_125	79476521	79476571	cg22098511	N/A	-0.4889
chr17	79476223	79476787	ENCODE_MBD4_125	79476186	79476236	cg02500691	N/A	-0.535840375
chr17	80225376	80225940	ENCODE_MBD4_314	80225377	80225427	cg04428071	CSNK1D	0.323494286

Comparison of MBD4 Chip ENCODE data with DNA methylation (Infinium 450k) in liver from ND-obese versus T2D-obese men

Chromosome	MBD4_ENCF002CKQ_Start	MBD4_ENCF002CKQ_End	MBD4_ENCF002CKQ	ND-T2D_Start	ND-T2D_End	ND-T2D_450K_Name	ND-T2D_GeneName	ND-T2D M-value
chr7	138818153	138818717	ENCODE_MBD4_321	138818388	138818438	cg04662241	TTC26	-0.40085
chr3	57541526	57542090	ENCODE_MBD4_315	57541798	57541848	cg07317755	PDE12	0.5383
chr11	65769412	65769976	ENCODE_MBD4_456	65769428	65769478	cg09783858	E1F1AD	0.3677125
chr11	75946401	75946965	ENCODE_MBD4_189	75946452	75946502	cg08868379	N/A	-1.48969125
chr12	32111664	32112228	ENCODE_MBD4_460	32112207	32112257	cg17281556	C12orf35	0.4857125
chr12	57482027	57482591	ENCODE_MBD4_144	57482528	57482578	cg06200494	NAB2	0.326125
chr1	93810820	93811384	ENCODE_MBD4_527	93810826	93810876	cg02421543	DR1	-0.521225
chr20	3800427	3800991	ENCODE_MBD4_361	3800838	3800888	cg10780647	C20orf29	0.250975
chr20	3800626	3801190	ENCODE_MBD4_491	3800838	3800888	cg10780647	C20orf29	0.250975
chr20	35724220	35724784	ENCODE_MBD4_421	35724590	35724640	cg16239906	RBL1	0.4400375
chr16	29984483	29985047	ENCODE_MBD4_114	29984665	29984715	cg10316764	TAOK2	-0.473952625
chr17	80476681	80477245	ENCODE_MBD4_351	80477010	80477060	cg01137065	FOXK2	0.5166375

**Table S11 Primer sequences for bisulfite PCR pyrosequencing and Luciferase Assays**

<b>Gene</b>	<b>Forward Primer</b>	<b>Reverse Primer</b>	<b>Sequencing Primer</b>
<b>GCK_ATF</b>	GTTATATGGAGGAGATGTAGAATGT	[Btm]ACACCAAAACCACCAAAACCTAAATTATA	AATGTGGAGTTGGT
<b>PFKL_ATF</b>	GGGTTTTAGGGAGTAGTTGTATTT	[Btm]CCTCCCTTTCTACCCTAACAAT	TGAGTTTGGAGGAGG
<b>ACLY_ATF</b>	TTTGTAGTTGGTAGGGTAGATAGA	[Btm]AACATCAAAACCAAAATTACACAATCACT	TTGGTAGGGTAGATAGATTA
<b>ACACA_ATF</b>	AAGGTAGTAGTGAATGGAGATTGTATTA	[Btm]ACCCACCTCCATATATTTTCTCTA	ATTGTATTGGAGTGGTAT
<b>FASN_ATF</b>	GGAGTTTTGGAAGGTTGAGA	[Btm]CCCTTCCTCATATAACCAATTCC	TTTGGGAAGGTTGAGATTT
<b>PRKCE_ATF</b>	AGATTGGTATATAGAGTATTATGATGTAGG	[Btm]ATTATAAAATACACTAAACCCACAACA	GTATATAGAGTATTATGATGTAGGA
<b>PFKL_Luci</b>	TTAATGCATCAGAGGGTCGAGAGGCAGA	TTAGGATCCTCGGTCTCCCTGCTGAAGG	
<b>ACACA_Luci</b>	TTAATGCATTGGCCTGCGTCACAAATCAA	TTAGGATCCCGCACTTCTAATTAAGCCAAGTGA	
<b>FASN_Luci</b>	TTAATGCATCAGGACAAGGCCCAAGGTAG	TTAGGATCCACCACGTCAGCCACTGTG	
<b>PRKCE_Luci</b>	TTAATGCATATATTCCCCGGAGAGCAATTATTC	TTAGGATCCCCTAAACCCACAGCAAAATAGCC	

Primer sequences are in 5' to 3' orientation. Primers for pyrosequencing of the common ATF motif (Primer name\_ATF) were generated using the PyroMark Assay Design Software (Qiagen) and are designed to bind to human bisulfite-treated DNA. Primers to amplify human genomic DNA for the Luciferase-Assay (primer name\_Luci) were generated using Primer3. This table is related to the information provided in Experimental Procedures.