

Table S1. NCBI SRA accession numbers for all the data sets used in this study.

Experiments	Cells	Accession No.	Annotation	References
WGBS	hESC	SRX006789	Replicate 1, PCR 1	<i>Lister et al., 2009</i>
WGBS	hESC	SRX006782	Replicate 1, PCR 2	<i>Lister et al., 2009</i>
WGBS	hESC	SRX006239	Replicate 2, PCR 1	<i>Lister et al., 2009</i>
WGBS	hESC	SRX006240	Replicate 2, PCR 2	<i>Lister et al., 2009</i>
WGBS	hESC	SRX006241	Replicate 2, PCR 3	<i>Lister et al., 2009</i>
WGBS	hFB	SRX006783	Replicate 1, PCR 1	<i>Lister et al., 2009</i>
WGBS	hFB	SRX006784	Replicate 1, PCR 2	<i>Lister et al., 2009</i>
WGBS	hFB	SRX006785	Replicate 1, PCR 3	<i>Lister et al., 2009</i>
WGBS	hFB	SRX006786	Replicate 2, PCR 1	<i>Lister et al., 2009</i>
WGBS	hFB	SRX006787	Replicate 2, PCR 2	<i>Lister et al., 2009</i>
WGBS	hFB	SRX006788	Replicate 2, PCR 3	<i>Lister et al., 2009</i>
WGBS	hEP	SRR202019 SRR202021 SRR202022 SRR202025 SRR202027	Replicate 1	<i>Hon et al., 2012</i>
WGBS	hEP	SRR202020 SRR202023 SRR202024 SRR202026 SRR202028	Replicate 2	<i>Hon et al., 2012</i>
WGBS	mESC	SRX080191	Replicate 1	<i>Stadler et al., 2011</i>
WGBS	mESC	SRX080192	Replicate 2	<i>Stadler et al., 2011</i>
WGBS	mFB	SRX247304	Replicate 1	<i>Mann et al., 2013</i>
WGBS	mFB	SRX247305	Replicate 2	<i>Mann et al., 2013</i>
WGBS	mFC	SRX108102	Replicate 1	<i>Xie et al., 2012</i>
ChIP-seq	hESC	SRX027857	H3K27me3, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX012368	H3K27me3, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX006874	H3K27me3, replicate 3	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX027858	H3K36me3, replicate1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX012371	H3K36me3, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX006235	H3K36me3, replicate 3	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX027861	H3K4me1, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX012373	H3K4me1, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX006236	H3K4me1, replicate 3	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX027694	H3K4me2, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX027693	H3K4me2, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX027864	H3K4me3, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX012501	H3K4me3, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>

ChIP-seq	hESC	SRX006237	H3K4me3, replicate 3	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX012366	H3K27ac, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX056722	H3K27ac, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX027874	H3K9me3, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX027876	H3K9me3, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX027877	H3K9me3, replicate 3	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX101260	H3K9me3, replicate 4	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX027870	H3K79me2, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027871	H3K79me2, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027872	H3K9ac, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX006875	H3K9ac, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX027878	H4K20me1, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX095612	H4K20me1, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX135209	H2A.Z, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX056726	H3K14ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX056727	H3K14ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027692	H3K18ac, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX027853	H3K18ac, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX056729	H3K23ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX056730	H3K23ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027860	H3K4ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027866	H3K56ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX056736	H3K56ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027867	H3K79me1, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027868	H3K79me1, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027869	H3K79me1, replicate 3	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027879	H4K5ac, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX081232	H4K5ac, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX129882	H4K8ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX135237	H4K8ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027881	H4K91ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX081233	H4K91ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027691	H2AK5ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027889	H2AK5ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX095608	H2BK120ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX095609	H2BK120ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027844	H2BK120ac, replicate 3	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027845	H2BK12ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027846	H2BK12ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027847	H2BK15ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027848	H2BK15ac, replicate 2	<i>Xie et al., 2013</i>

ChIP-seq	hESC	SRX027849	H2BK20ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027850	H2BK20ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hESC	SRX027851	H2BK5ac, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hESC	SRX027852	H2BK5ac, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017508	H3K27me3, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX012498	H3K27me3, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017511	H3K36me3, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017509	H3K36me3, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017517	H3K4me1, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017514	H3K4me1, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017516	H3K4me1, replicate 3	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017518	H3K4me2, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017519	H3K4me2, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX012500	H3K4me3, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017520	H3K4me3, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX012504	H3K9me3, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017532	H3K9me3, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017533	H3K9me3, replicate 3	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX012496	H3K27ac, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX012497	H3K27ac, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017506	H3K27ac, replicate 3	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX012503	H3K9ac, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017531	H3K9ac, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017528	H3K79me2, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017530	H3K79me2, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017534	H4K20me1, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017536	H4K20me1, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX101210	H2A.Z, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX101211	H2A.Z, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017500	H3K14ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017502	H3K14ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX012495	H3K18ac, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>

ChIP-seq	hFB	SRX017503	H3K18ac, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017504	H3K23ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017505	H3K23ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017512	H3K4ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017513	H3K4ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017521	H3K56ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017522	H3K56ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017523	H3K79me1, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017525	H3K79me1, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017526	H3K79me1, replicate 3	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017527	H3K79me1, replicate 4	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX012505	H4K5ac, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017537	H4K5ac, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX017538	H4K8ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017540	H4K8ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017541	H4K8ac, replicate 3	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017542	H4K8ac, replicate 4	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017543	H4K91ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017544	H4K91ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017485	H2AK5ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017487	H2AK5ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017488	H2BK120ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017489	H2BK120ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017490	H2BK12ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017492	H2BK12ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017493	H2BK12ac, replicate 3	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017494	H2BK15ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017496	H2BK15ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017497	H2BK15ac, replicate 3	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017498	H2BK20ac, replicate 1	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX017499	H2BK20ac, replicate 2	<i>Xie et al., 2013</i>
ChIP-seq	hFB	SRX101220	H2BK5ac, replicate 1	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX105640	H2BK5ac, replicate 2	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hFB	SRX105641	H2BK5ac, replicate 3	<i>Xie et al., 2013;</i> <i>Hawkins et al., 2010</i>
ChIP-seq	hEP	SRX038564	H3K27ac, replicate 1	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038565	H3K27ac, replicate 2	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038566	H3K27me3, replicate 1	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038567	H3K27me3, replicate 2	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038568	H3K36me3, replicate 1	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038569	H3K36me3, replicate 2	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038570	H3K4me1, replicate 1	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038571	H3K4me1, replicate 2	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038572	H3K4me2, replicate 1	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038573	H3K4me2, replicate 2	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038574	H3K4me3, replicate 1	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038575	H3K4me3, replicate 2	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038576	H3K9ac, replicate 1	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038577	H3K9ac, replicate 2	<i>Ernst et al., 2011</i>

ChIP-seq	hEP	SRX038578	H4K20me1, replicate 1	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRX038579	H4K20me1, replicate 2	<i>Ernst et al., 2011</i>
ChIP-seq	hEP	SRR568264	H3K9me3, replicate 1	<i>Gerstein et al., 2012</i>
ChIP-seq	hEP	SRR568265	H3K9me3, replicate 2	<i>Gerstein et al., 2012</i>
ChIP-seq	hEP	SRR568294	H2A.Z, replicate 1	<i>Gerstein et al., 2012</i>
ChIP-seq	hEP	SRR568295	H2A.Z, replicate 2	<i>Gerstein et al., 2012</i>
ChIP-seq	hEP	SRR568405	H3K79me2, replicate 1	<i>Gerstein et al., 2012</i>
ChIP-seq	hEP	SRR568406	H3K79me2, replicate 2	<i>Gerstein et al., 2012</i>
ChIP-seq	mESC	SRX001923	H3K4me3, replicate 1	<i>Mikkelsen et al., 2007</i>
ChIP-seq	mESC	SRX027331	H3K27ac, replicate 1	<i>Creyghton et al., 2010</i>
ChIP-seq	mESC	SRX027332	H3K27ac, replicate 2	<i>Creyghton et al., 2010</i>
ChIP-seq	mFC	SRX081810	H3K4me3, replicate 1	<i>Xie et al., 2012</i>
ChIP-seq	mFC	SRX081811	H3K4me3, replicate 2	<i>Xie et al., 2012</i>
ChIP-seq	mFC	SRX081812	H3K27ac, replicate 1	<i>Xie et al., 2012</i>
ChIP-seq	mFC	SRX081813	H3K27ac, replicate 2	<i>Xie et al., 2012</i>
mRNA-seq	hESC	SRX007165	Replicate 1	<i>Lister et al., 2009</i>
mRNA-seq	hESC	SRX159816	Replicate 2	<i>Djebali et al., 2012</i>
mRNA-seq	hESC	SRX026668	Replicate 3	<i>Djebali et al., 2012</i>
mRNA-seq	hESC	SRX026689	Replicate 4	<i>Djebali et al., 2012</i>
mRNA-seq	hFB	SRX007167	Replicate 1	<i>Lister et al., 2009</i>
mRNA-seq	hEP	SRR201985	Replicate 1	<i>Hon et al., 2012</i>
mRNA-seq	hEP	SRR201986	Replicate 2	<i>Hon et al., 2012</i>
mRNA-seq	mESC	SRX091801	Replicate 1	<i>Stadler et al., 2011</i>
mRNA-seq	mESC	SRX091802	Replicate 2	<i>Stadler et al., 2011</i>
mRNA-seq	mFB	SRX247299	Replicate 1	<i>Mann et al., 2013</i>
mRNA-seq	mFC	SRR372774	Replicate 1	<i>Xie et al., 2012</i>
		SRR372777		
mRNA-seq	mFC	SRR372775	Replicate 2	<i>Xie et al., 2012</i>
		SRR372778		
mRNA-seq	mFC	SRR372776	Replicate 3	<i>Xie et al., 2012</i>
		SRR372779		
mRNA-seq	mFC	SRR372780	Replicate 4	<i>Xie et al., 2012</i>
		SRR372783		
mRNA-seq	mFC	SRR372781	Replicate 5	<i>Xie et al., 2012</i>
		SRR372784		
mRNA-seq	mFC	SRR372782	Replicate 6	<i>Xie et al., 2012</i>
		SRR372785		

Table S2. Hypomethylated promoters during the differentiation of hESC to hFB.

Gene ID	Gene Symbol	No. of hypomethylated CpGs in this promoter	No. of hypomethylated CpGs in this promoter	Enrichment FDR	Log2 scale fold change of gene expression (hFB/hESC)	FDR of differential gene expression	Promoter has H3K27me3 peak	Promoter has H3K9me3 peak
ENSG00000171408	PDE7B	0	8	8.13E-07	13.53	3.25E-44	No	No
ENSG00000100739	BDKRB1	0	11	2.37E-07	11.89	2.01E-27	No	Yes
ENSG00000176046	NUPR1	0	10	2.29E-05	10.19	2.42E-50	No	Yes
ENSG00000132669	RIN2	0	14	2.43E-11	9.09	5.70E-31	No	No
ENSG00000134531	EMP1	0	11	1.49E-09	9.04	2.38E-30	No	No
ENSG00000078098	FAP	0	10	1.24E-08	9.04	1.71E-26	No	No
ENSG00000163359	COL6A3	0	13	5.18E-09	8.27	8.24E-32	No	Yes
ENSG00000139278	GLIPR1	0	13	2.21E-10	8.27	4.05E-32	No	No
ENSG00000168542	COL3A1	0	11	1.49E-09	8.19	3.11E-12	No	No
ENSG00000105472	CLEC11A	0	11	4.43E-06	8.02	9.44E-27	No	No
ENSG00000179071	CCDC89	0	15	2.41E-13	7.88	1.77E-17	No	No
ENSG00000122641	INHBA	0	6	5.41E-05	7.45	4.68E-18	No	No
ENSG00000138080	EMILIN1	0	19	4.94E-15	7.37	4.54E-15	No	No
ENSG00000162630	B3GALT2	0	9	1.03E-07	7.13	2.74E-10	No	No
ENSG00000196639	HRH1	0	23	1.77E-16	6.82	2.54E-21	No	Yes
ENSG00000087589	CASS4	0	9	5.84E-05	6.69	2.85E-14	No	Yes
ENSG00000152049	KCNE4	0	19	1.54E-11	6.62	2.87E-11	No	Yes
ENSG00000160013	PTGIR	0	12	7.35E-07	6.45	1.71E-14	No	No
ENSG00000146833	TRIM4	0	14	7.45E-10	6.22	2.28E-09	No	Yes
ENSG00000117586	TNFSF4	0	12	1.92E-10	5.93	3.47E-14	No	Yes
ENSG00000175899	A2M	0	8	2.08E-05	5.89	2.34E-15	No	No
ENSG00000128606	LRRC17	0	10	1.24E-08	5.69	4.22E-23	No	No
ENSG00000115594	IL1R1	0	10	9.99E-08	5.60	9.02E-14	No	Yes
ENSG00000127863	TNFRSF19	0	9	9.39E-06	5.51	2.35E-20	Yes	No
ENSG00000176771	NCKAP5	0	12	1.70E-06	5.50	2.27E-24	No	No
ENSG00000126785	RHOJ	0	10	1.56E-06	5.39	3.30E-05	No	No
ENSG00000163661	PTX3	0	10	2.29E-05	5.39	2.98E-23	No	No
ENSG00000162733	DDR2	0	7	6.65E-06	5.23	4.87E-17	No	No
ENSG00000171291	ZNF439	0	12	9.03E-09	5.13	8.05E-12	No	No
ENSG00000139192	TAPBPL	0	9	9.39E-06	4.83	8.76E-12	No	No
ENSG00000081853	PCDHGA2	0	18	2.81E-09	4.77	1.75E-09	Yes	Yes
ENSG00000164741	DLC1	0	15	2.41E-13	4.68	1.09E-17	No	No

ENSG00000134871	COL4A2	0	11	1.49E-09	4.60	2.78E-09	No	No
ENSG00000110852	CLEC2B	0	7	3.93E-05	4.53	1.38E-05	No	No
ENSG00000176907	C8orf4	0	13	5.03E-08	4.53	1.85E-05	No	No
ENSG00000143669	LYST	0	11	1.82E-06	4.44	8.75E-12	Yes	Yes
ENSG00000182179	UBA7	0	9	7.35E-07	4.33	2.80E-07	No	No
ENSG00000177335	C8orf31	0	10	4.45E-06	4.17	1.96E-05	No	No
ENSG00000250588	IQCJ-SCHIP1	0	8	5.84E-05	4.05	8.37E-06	Yes	No
ENSG00000109743	BST1	0	23	7.99E-15	4.02	5.77E-07	Yes	No
ENSG00000180543	TSPYL5	0	20	2.44E-12	3.98	8.34E-13	Yes	Yes
ENSG00000198028	ZNF560	0	39	9.47E-31	3.96	0.004682181	No	Yes
ENSG00000111801	BTN3A3	0	7	6.65E-06	3.74	2.60E-09	No	No
ENSG00000091986	CCDC80	0	7	3.93E-05	3.73	3.94E-12	No	Yes
ENSG00000112343	TRIM38	0	9	9.39E-06	3.72	5.67E-11	No	No
ENSG00000156253	RWDD2B	0	16	5.76E-10	3.33	1.82E-08	No	No
ENSG00000189134	NKAPL	0	15	8.78E-05	3.20	0.00081848	Yes	Yes
ENSG00000180787	ZFP3	0	20	2.62E-07	3.19	0.000175169	Yes	Yes
ENSG00000109680	TBC1D19	0	8	5.35E-06	3.14	0.00016363	Yes	No
ENSG00000135828	RNASEL	1	10	4.43E-06	2.89	9.73E-06	No	Yes
ENSG00000253537	PCDHGA7	0	26	2.07E-18	2.60	0.00306214	No	Yes
ENSG00000253159	PCDHGA12	0	14	5.36E-07	2.55	0.000308182	No	Yes
ENSG00000125945	ZNF436	0	15	1.29E-05	2.53	0.000184853	No	Yes
ENSG00000198001	IRAK4	0	25	2.78E-14	2.35	0.000158498	No	No
ENSG00000172349	IL16	0	12	1.70E-06	2.30	0.025011783	Yes	Yes
ENSG00000229070	AC111170.2.1	0	11	7.35E-07	2.21	0.023105263	No	No
ENSG00000254221	PCDHGB1	0	14	3.56E-05	2.06	0.030045999	Yes	Yes
ENSG00000014914	MTMR11	0	14	8.09E-09	1.96	0.017086467	No	No
ENSG00000048342	CC2D2A	0	10	4.73E-05	1.94	0.006010925	No	No
ENSG00000152601	MBNL1	0	11	8.85E-06	1.85	0.004808727	No	No
ENSG00000182667	NTM	0	7	3.93E-05	1.40	0.024968045	Yes	No
ENSG00000249852	AC145676.2.1	0	27	5.69E-20	0	1	No	No
ENSG00000129317	PUS7L	0	27	3.72E-17	0	1	No	No
ENSG00000138587	MNS1	0	21	7.39E-17	0	1	No	No
ENSG00000140553	UNC45A	0	27	4.88E-15	0	1	No	No
ENSG00000118777	ABCG2	0	16	3.39E-13	0	1	No	No
ENSG00000113790	EHHADH	0	17	2.47E-10	0	1	No	No
ENSG00000229676	ZNF492	0	16	1.49E-09	0	1	No	No

ENSG00000119922	IFIT2	0	11	1.49E-09	0	1	No	No
ENSG00000213967	ZNF726	0	17	7.39E-09	0	1	No	No
ENSG00000168404	MLKL	0	15	9.04E-09	0	1	No	No
ENSG00000131023	LATS1	0	13	1.66E-08	0	1	No	No
ENSG00000183154	RP11- 863K10.7.1	0	13	5.03E-08	0	1	No	No
ENSG00000171951	SCG2	0	11	6.49E-08	0	1	No	No
ENSG00000137504	CREBZF	0	16	7.67E-08	0	1	No	No
ENSG00000151092	NGLY1	0	18	1.08E-07	0	1	No	No
ENSG00000227124	ZNF717	0	13	1.25E-07	0	1	No	No
ENSG00000228768	AC003101.1.1	0	10	4.70E-07	0	1	No	No
ENSG00000164776	PHKG1	1	11	7.35E-07	0	1	No	No
ENSG00000183662	FAM19A1	0	9	7.35E-07	0	1	No	No
ENSG00000105198	LGALS13	0	10	4.45E-06	0	1	No	No
ENSG00000154589	LY96	0	8	5.35E-06	0	1	No	No
ENSG00000205678	TECRL	0	8	5.35E-06	0	1	No	No
ENSG00000163755	HPS3	0	8	5.35E-06	0	1	No	No
ENSG00000159921	GNE	0	8	5.35E-06	0	1	No	No
ENSG00000068305	MEF2A	0	8	5.35E-06	0	1	No	No
ENSG00000224867	AC096644.1	0	7	6.65E-06	0	1	No	No
ENSG00000163554	SPTA1	0	7	6.65E-06	0	1	No	No
ENSG00000149742	SLC22A9	0	9	9.39E-06	0	1	No	No
ENSG00000197182	B.10.1	0	11	1.80E-05	0	1	No	No
ENSG00000082153	BZW1	0	8	2.08E-05	0	1	No	No
ENSG00000002016	RAD52	0	10	2.29E-05	0	1	No	No
ENSG00000205456	AC133485.1.1	0	7	3.93E-05	0	1	No	No
ENSG00000169429	IL8	0	7	3.93E-05	0	1	No	No
ENSG00000123610	TNFAIP6	0	6	5.41E-05	0	1	No	No
ENSG00000251537	RP11- 385D13.1.1	0	9	5.84E-05	0	1	No	No
ENSG00000243696	MUSTN1	0	8	5.84E-05	0	1	No	No
ENSG00000087008	ACOX3	0	8	5.84E-05	0	1	No	No
ENSG00000167555	ZNF528	0	34	3.81E-30	0	1	No	Yes
ENSG00000258405	ZNF578	0	38	1.71E-28	0	1	No	Yes
ENSG00000196226	HIST1H2BB	0	29	3.26E-24	0	1	No	Yes
ENSG00000196532	HIST1H3C	0	28	2.02E-22	0	1	No	Yes
ENSG00000257482	ZNF727	0	26	1.83E-21	0	1	No	Yes

ENSG00000255408	PCDHA3	0	24	5.79E-18	0	1	No	Yes
ENSG00000121413	ZSCAN18	0	29	7.56E-18	0	1	No	Yes
ENSG00000113211	PCDHB6	0	24	2.51E-17	0	1	No	Yes
ENSG00000254245	PCDHGA3	0	26	7.84E-17	0	1	No	Yes
ENSG00000180777	ANKRD30B	0	20	4.26E-15	0	1	No	Yes
ENSG00000120328	PCDHB12	0	18	4.97E-15	0	1	No	Yes
ENSG00000138653	NDST4	0	16	2.78E-14	0	1	No	Yes
ENSG00000253731	PCDHGA6	0	24	1.75E-13	0	1	No	Yes
ENSG00000255622	AC005754.1	0	18	3.70E-12	0	1	No	Yes
ENSG00000121931	LRIF1	0	20	6.38E-12	0	1	No	Yes
ENSG00000197360	ZNF98	0	17	2.47E-10	0	1	No	Yes
ENSG00000113212	PCDHB7	0	15	1.28E-09	0	1	No	Yes
ENSG00000081818	PCDHB4	0	18	2.81E-09	0	1	No	Yes
ENSG00000204970	PCDHA1	0	16	3.76E-09	0	1	No	Yes
ENSG00000245680	ZNF585B	0	17	7.39E-09	0	1	No	Yes
ENSG00000204961	PCDHA9	0	10	1.24E-08	0	1	No	Yes
ENSG00000146006	LRRTM2	0	13	1.66E-08	0	1	No	Yes
ENSG00000177932	ZNF354C	0	16	3.93E-08	0	1	No	Yes
ENSG00000171466	ZNF562	0	15	4.96E-08	0	1	No	Yes
ENSG00000204963	PCDHA7	0	13	5.03E-08	0	1	No	Yes
ENSG00000196350	ZNF729	0	14	5.29E-08	0	1	No	Yes
ENSG00000197134	ZNF257	0	14	5.29E-08	0	1	No	Yes
ENSG00000185962	LCE3A	0	10	9.99E-08	0	1	No	Yes
ENSG00000148948	LRRC4C	0	12	1.08E-07	0	1	No	Yes
ENSG00000124490	CRISP2	0	19	1.82E-07	0	1	No	Yes
ENSG00000106560	GIMAP2	0	9	7.35E-07	0	1	No	Yes
ENSG00000019169	MARCO	0	9	7.35E-07	0	1	No	Yes
ENSG000000091831	ESR1	0	9	7.35E-07	0	1	No	Yes
ENSG00000157330	C1orf158	0	8	8.13E-07	0	1	No	Yes
ENSG00000180347	CCDC129	0	8	8.13E-07	0	1	No	Yes
ENSG00000213185	FAM24B	0	17	1.26E-06	0	1	No	Yes
ENSG00000124610	HIST1H1A	0	14	1.82E-06	0	1	No	Yes
ENSG00000111961	SASH1	0	11	1.82E-06	0	1	No	Yes
ENSG00000166770	AC004696.1	0	15	3.55E-06	0	1	No	Yes
ENSG00000214106	AC093726.6.1	0	11	4.43E-06	0	1	No	Yes
ENSG00000213203	GIMAP1	0	8	5.35E-06	0	1	No	Yes

ENSG00000136869	TLR4	0	8	5.35E-06	0	1	No	Yes
ENSG00000204361	FAM55B	0	8	5.35E-06	0	1	No	Yes
ENSG00000166118	SPATA19	0	7	6.65E-06	0	1	No	Yes
ENSG00000253767	PCDHGA8	0	18	7.78E-06	0	1	No	Yes
ENSG00000196458	ZNF605	0	9	9.39E-06	0	1	No	Yes
ENSG00000204965	PCDHA5	0	10	1.01E-05	0	1	No	Yes
ENSG00000256073	C21orf119	0	8	2.08E-05	0	1	No	Yes
ENSG00000246223	C14orf64	0	8	2.08E-05	0	1	No	Yes
ENSG00000182352	C17orf77	0	10	2.29E-05	0	1	No	Yes
ENSG00000259202	RP11-342M21.2.1	0	9	2.56E-05	0	1	No	Yes
ENSG00000112462	OR12D3	0	7	3.93E-05	0	1	No	Yes
ENSG00000157703	SVOPL	0	7	3.93E-05	0	1	No	Yes
ENSG00000186439	TRDN	0	7	3.93E-05	0	1	No	Yes
ENSG00000237136	C4orf51	0	6	5.41E-05	0	1	No	Yes
ENSG00000127780	OR1E2	0	8	5.84E-05	0	1	No	Yes
ENSG00000147138	GPR174	0	8	5.84E-05	0	1	No	Yes
ENSG00000120322	PCDHB8	0	8	5.84E-05	0	1	No	Yes
ENSG00000133574	GIMAP4	0	8	5.84E-05	0	1	No	Yes
ENSG00000197721	CR1L	0	39	1.03E-34	0	1	Yes	No
ENSG00000155918	RAET1L	0	28	7.03E-21	0	1	Yes	No
ENSG00000136848	DAB2IP	0	19	4.94E-15	0	1	Yes	No
ENSG00000164241	C5orf63	0	19	4.14E-09	0	1	Yes	No
ENSG00000253414	RP11-150O12.6.1	0	11	1.26E-08	0	1	Yes	No
ENSG00000166603	MC4R	0	11	1.26E-08	0	1	Yes	No
ENSG00000253426	RP11-10A14.4.1	0	14	2.09E-08	0	1	Yes	No
ENSG00000197487	GALP	0	10	4.70E-07	0	1	Yes	No
ENSG00000134962	KLB	0	10	4.70E-07	0	1	Yes	No
ENSG00000185897	FFAR3	0	9	7.35E-07	0	1	Yes	No
ENSG00000183801	OLFML1	0	9	7.35E-07	0	1	Yes	No
ENSG00000164342	TLR3	0	9	7.35E-07	0	1	Yes	No
ENSG00000189332	RP11-113D6.10.1	0	15	2.06E-06	0	1	Yes	No
ENSG00000169208	OR10G3	0	8	5.35E-06	0	1	Yes	No
ENSG00000115556	PLCD4	0	8	5.35E-06	0	1	Yes	No
ENSG00000012504	NR1H4	0	8	5.35E-06	0	1	Yes	No
ENSG00000143119	CD53	0	9	9.39E-06	0	1	Yes	No

ENSG00000165383	LRRRC18	0	10	1.01E-05	0	1	Yes	No
ENSG00000008118	CAMK1G	0	8	2.08E-05	0	1	Yes	No
ENSG00000105398	SULT2A1	0	9	2.56E-05	0	1	Yes	No
ENSG00000213886	UBD	0	7	3.93E-05	0	1	Yes	No
ENSG00000164691	TAGAP	0	10	4.73E-05	0	1	Yes	No
ENSG00000006074	CCL18	1	5	5.41E-05	0	1	Yes	No
ENSG00000164188	RANBP3L	0	6	5.41E-05	0	1	Yes	No
ENSG00000005102	MEOX1	0	9	5.84E-05	0	1	Yes	No
ENSG00000215009	ACSM4	0	8	5.84E-05	0	1	Yes	No
ENSG00000108671	PSMD11	0	9	5.84E-05	0	1	Yes	No
ENSG00000146038	DCDC2	0	34	3.26E-24	0	1	Yes	Yes
ENSG00000162624	LHX8	0	27	1.83E-23	0	1	Yes	Yes
ENSG00000111452	GPR133	0	24	1.30E-19	0	1	Yes	Yes
ENSG00000135577	NMBR	0	27	4.88E-15	0	1	Yes	Yes
ENSG00000162877	PM20D1	0	26	1.10E-14	0	1	Yes	Yes
ENSG00000172680	MOS	0	21	1.24E-13	0	1	Yes	Yes
ENSG00000088320	REM1	0	20	2.41E-13	0	1	Yes	Yes
ENSG00000039600	SOX30	0	20	2.41E-13	0	1	Yes	Yes
ENSG00000184860	SDR42E1	0	19	4.89E-13	0	1	Yes	Yes
ENSG00000182853	VMO1	0	21	9.94E-13	0	1	Yes	Yes
ENSG00000187658	C5orf52	0	21	2.67E-12	0	1	Yes	Yes
ENSG00000255085	AF186192.2.1	0	20	6.38E-12	0	1	Yes	Yes
ENSG00000108231	LGI1	0	15	1.95E-11	0	1	Yes	Yes
ENSG00000177354	C10orf71	0	16	1.94E-10	0	1	Yes	Yes
ENSG00000183066	WBP2NL	0	22	4.19E-10	0	1	Yes	Yes
ENSG00000204956	PCDHGA1	0	16	5.76E-10	0	1	Yes	Yes
ENSG00000124721	DNAH8	0	14	7.45E-10	0	1	Yes	Yes
ENSG00000253485	PCDHGA5	0	20	2.86E-09	0	1	Yes	Yes
ENSG00000203711	C6orf99	0	20	5.22E-09	0	1	Yes	Yes
ENSG00000041515	MYO16	0	10	9.99E-08	0	1	Yes	Yes
ENSG00000182177	ASB18	0	12	1.08E-07	0	1	Yes	Yes
ENSG00000174697	LEP	0	13	7.01E-07	0	1	Yes	Yes
ENSG00000141668	CBLN2	0	12	7.35E-07	0	1	Yes	Yes
ENSG00000107593	PKD2L1	0	8	8.13E-07	0	1	Yes	Yes
ENSG00000171476	HOPX	0	12	3.64E-06	0	1	Yes	Yes
ENSG00000187855	ASCL4	0	11	4.43E-06	0	1	Yes	Yes

ENSG00000186075	ZPBP2	0	19	8.59E-06	0	1	Yes	Yes
ENSG00000165118	C9orf64	0	15	8.59E-06	0	1	Yes	Yes
ENSG00000100628	ASB2	0	11	8.85E-06	0	1	Yes	Yes
ENSG00000091513	TF	0	12	1.23E-05	0	1	Yes	Yes
ENSG00000164418	GRIK2	0	14	1.41E-05	0	1	Yes	Yes
ENSG00000017427	IGF1	0	7	3.93E-05	0	1	Yes	Yes
ENSG00000256870	SLC5A8	0	10	4.73E-05	0	1	Yes	Yes
ENSG00000180871	CXCR2	0	6	5.41E-05	0	1	Yes	Yes
ENSG00000187626	ZKSCAN4	0	15	5.95E-05	0	1	Yes	Yes
ENSG00000099204	ABLIM1	0	11	2.37E-07	-2.18	0.009201072	No	No
ENSG00000173281	PPP1R3B	0	14	1.17E-07	-2.94	0.002987138	Yes	No
ENSG00000151846	PABPC3	0	18	1.08E-07	-2.98	0.012705341	Yes	No
ENSG00000120327	PCDHB14	0	12	6.67E-06	-3.22	0.037536572	Yes	Yes
ENSG00000113209	PCDHB5	0	15	2.09E-08	-3.49	0.00029663	No	Yes
ENSG00000132321	IQCA1	0	20	8.34E-10	-3.57	0.003156202	Yes	Yes
ENSG00000183230	CTNNA3	0	12	1.66E-09	-3.78	0.029662544	Yes	No
ENSG00000178882	FAM101A	0	13	5.03E-08	-3.91	0.003050063	Yes	Yes
ENSG00000159871	LYPD5	0	32	1.90E-17	-4.00	0.013199428	Yes	Yes
ENSG00000118407	FILIP1	0	10	9.99E-08	-4.27	8.64E-06	Yes	No
ENSG00000138161	CUZD1	0	17	1.26E-06	-4.34	6.73E-06	No	Yes
ENSG00000113205	PCDHB3	0	17	1.42E-08	-4.42	0.003788373	No	Yes
ENSG00000112137	PHACTR1	0	10	9.99E-08	-5.09	1.11E-05	Yes	Yes
ENSG00000183166	CALN1	0	10	4.45E-06	-5.41	2.63E-06	No	Yes
ENSG00000180938	ZNF572	0	16	8.73E-09	-7.46	0.039880418	No	Yes
ENSG00000111218	PRMT8	0	6	5.41E-05	-7.94	0.012609152	Yes	No
ENSG00000156475	PPP2R2B	0	9	3.25E-06	-8.28	1.32E-07	No	No
ENSG00000239389	PCDHA13	0	16	1.28E-11	-8.62	0.003197672	No	Yes
ENSG00000253910	PCDHGB2	0	20	6.38E-12	-8.99	0.004718767	Yes	Yes
ENSG00000178394	HTR1A	0	18	1.10E-08	-9.05	0.006025365	No	Yes
ENSG00000254918	RP11- 259P6.1.1	0	13	1.35E-06	-9.06	0.000489637	No	Yes
ENSG00000117091	CD48	0	9	3.25E-06	-9.49	0.02879569	No	No
ENSG00000179546	HTR1D	0	11	1.26E-08	-9.52	6.41E-05	No	Yes

Table S3. Hypomethylated promoters during the differentiation of hESC to hEP.

Gene ID	Gene Symbol	No. of hyper-methylated CpGs in this promoter	No. of hypo-methylated CpGs in this promoter	Enrichment FDR	Log2 scale fold change of gene expression (hEP/hESC)	FDR of differential gene expression	Promoter has H3K27me3 peak	Promoter has H3K9me3 peak
ENSG00000115221	ITGB6	0	10	2.47E-07	16.42	3.65E-88	No	No
ENSG00000186081	KRT5	0	13	1.04E-09	15.67	1.59E-121	Yes	Yes
ENSG00000206075	SERPINB5	0	16	6.17E-08	15.03	5.71E-105	Yes	Yes
ENSG00000196754	S100A2	0	17	9.05E-08	14.73	2.54E-57	No	No
ENSG00000149043	SYT8	0	11	4.21E-08	13.14	1.74E-51	No	No
ENSG00000128422	KRT17	0	11	4.21E-08	11.65	9.89E-85	No	No
ENSG00000186832	KRT16	0	7	4.86E-05	11.64	7.18E-76	No	No
ENSG00000112761	WISP3	0	17	1.32E-08	11.58	5.87E-32	No	No
ENSG00000148671	C10orf116	0	15	9.27E-09	11.51	1.59E-72	No	No
ENSG00000134757	DSG3	0	11	3.34E-07	11.39	4.06E-79	No	No
ENSG00000197641	SERPINB13	0	12	6.17E-08	11.36	1.26E-29	No	No
ENSG00000167754	KLK5	0	9	9.58E-06	11.22	7.50E-87	No	No
ENSG00000099260	PALMD	0	14	4.77E-08	11.18	9.34E-28	No	No
ENSG00000121552	CSTA	0	8	5.11E-05	11.10	8.40E-78	No	No
ENSG00000131746	TNS4	0	13	1.08E-08	11.09	1.19E-82	No	Yes
ENSG00000089356	FXVD3	0	19	1.41E-14	10.92	4.37E-77	No	No
ENSG00000134531	EMP1	0	11	4.21E-08	10.84	8.39E-61	No	Yes
ENSG00000196878	LAMB3	0	9	1.46E-06	10.45	1.28E-86	No	Yes
ENSG00000078098	FAP	0	9	9.58E-06	9.72	1.41E-46	No	No
ENSG00000108244	KRT23	0	9	9.58E-06	9.42	7.51E-15	No	No
ENSG00000138271	GPR87	0	8	8.42E-06	9.06	4.59E-57	No	No
ENSG00000175793	SFN	0	23	4.46E-14	8.81	1.24E-69	No	Yes
ENSG00000181333	HEPHL1	0	9	1.46E-06	8.77	2.53E-57	No	No
ENSG00000146006	LRRTM2	0	17	5.98E-13	8.60	1.97E-10	No	No
ENSG00000155918	RAET1L	0	33	1.62E-23	8.49	4.66E-10	No	No
ENSG00000144452	ABCA12	0	7	4.86E-05	8.28	9.57E-54	No	No
ENSG00000100097	LGALS1	0	9	1.46E-06	8.28	2.46E-52	No	No
ENSG00000139278	GLIPR1	0	14	1.64E-10	8.14	1.95E-46	No	No
ENSG00000111863	C6orf105	0	13	2.43E-07	8.12	1.11E-29	No	No
ENSG00000176046	NUPR1	0	15	3.00E-10	7.84	1.31E-49	No	No
ENSG00000168497	SDPR	0	12	6.97E-09	7.45	1.40E-39	No	No

ENSG00000136869	TLR4	0	9	1.46E-06	7.35	1.01E-36	No	No
ENSG00000196917	HCAR1	0	27	4.64E-21	7.18	5.18E-32	No	No
ENSG00000165799	RNASE7	0	13	2.43E-07	7.06	4.04E-26	No	Yes
ENSG00000169908	TM4SF1	0	16	3.82E-12	6.99	1.73E-33	No	No
ENSG00000132669	RIN2	0	11	1.56E-05	6.97	1.26E-30	No	No
ENSG00000184860	SDR42E1	0	24	1.61E-15	6.80	3.78E-16	No	No
ENSG00000197956	S100A6	0	13	5.31E-06	6.54	3.15E-43	No	No
ENSG00000188039	NWD1	0	14	4.77E-08	6.19	2.13E-19	No	No
ENSG00000153029	MR1	0	9	9.58E-06	5.87	7.49E-23	No	No
ENSG00000170786	SDR16C5	0	13	2.05E-06	5.84	2.83E-16	No	No
ENSG00000136305	CIDEB	0	18	2.89E-06	5.49	1.32E-10	No	No
ENSG00000085117	CD82 CTD-	0	13	1.08E-08	5.36	1.81E-35	No	No
ENSG00000259491	2012M11.2.1	0	12	1.23E-06	5.33	6.42E-12	No	No
ENSG00000139793	MBNL2	0	8	5.11E-05	5.26	3.23E-31	No	No
ENSG00000135114	OASL	0	10	8.20E-06	5.10	1.59E-06	No	No
ENSG00000111348	ARHGDIB	0	15	3.45E-08	5.03	2.98E-14	No	No
ENSG00000167644	C19orf33	0	11	5.69E-06	4.84	1.07E-31	No	No
ENSG00000162595	DIRAS3	0	20	3.20E-11	4.79	1.76E-10	No	No
ENSG00000179598	PLD6	0	19	2.00E-13	4.71	2.08E-09	No	No
ENSG00000152601	MBNL1	0	13	2.05E-06	4.68	7.48E-26	No	No
ENSG00000115598	IL1RL2	0	11	8.72E-05	4.65	2.89E-08	No	No
ENSG00000197182	B.10.1	0	17	5.86E-11	4.62	1.60E-07	No	No
ENSG00000111816	FRK	0	11	4.21E-08	4.60	5.15E-14	No	No
ENSG00000213185	FAM24B	0	39	3.77E-27	4.23	5.44E-08	No	No
ENSG00000108439	PNPO	0	16	1.67E-06	4.04	3.76E-21	No	No
ENSG00000126785	RHOJ	0	10	2.63E-05	4.03	0.000729039	No	No
ENSG00000134765	DSC1	0	9	9.58E-06	4.02	1.57E-06	No	No
ENSG00000146833	TRIM4	0	39	7.05E-31	4.00	1.46E-05	No	No
ENSG00000164241	C5orf63	0	24	1.60E-12	3.95	6.04E-08	No	No
ENSG00000142677	IL22RA1	0	9	1.46E-06	3.68	4.49E-10	No	No
ENSG00000256073	C21orf119	0	10	2.47E-07	3.66	2.75E-06	No	No
ENSG00000115556	PLCD4	0	9	1.46E-06	3.56	3.54E-08	No	No
ENSG00000101417	PXMP4	0	18	9.85E-12	3.49	6.16E-10	No	No
ENSG00000006555	TTC22	0	10	8.20E-06	3.46	4.89E-10	No	No
ENSG00000182179	UBA7	0	8	5.11E-05	3.43	6.99E-07	No	No

ENSG00000254245	PCDHGA3	0	31	6.93E-17	3.36	2.41E-05	No	Yes
ENSG00000196502	SULT1A1	0	16	6.17E-08	3.35	1.56E-07	No	No
ENSG00000196639	HRH1	0	24	7.98E-15	3.26	2.16E-05	No	No
ENSG00000156253	RWDD2B	0	12	3.52E-06	3.20	5.67E-13	No	No
ENSG00000184363	PKP3	0	10	2.47E-07	3.20	3.40E-14	No	No
ENSG00000139926	FRMD6	0	9	1.46E-06	3.08	3.30E-15	No	No
ENSG00000093010	COMT	0	11	1.57E-06	3.01	1.55E-10	No	No
ENSG00000081853	PCDHGA2	0	20	6.47E-09	2.96	1.49E-05	No	Yes
ENSG00000173267	SNCG	0	7	4.86E-05	2.94	3.27E-05	No	No
ENSG00000171466	ZNF562	0	20	9.63E-10	2.88	0.020736033	No	Yes
ENSG00000162645	GBP2	0	7	4.86E-05	2.60	0.001655922	No	No
ENSG00000158315	RHBDL2	0	9	9.58E-06	2.53	1.06E-05	No	No
ENSG00000139192	TAPBPL	0	9	4.02E-05	2.44	0.000184794	No	No
ENSG00000175899	A2M	0	9	9.58E-06	2.40	0.001266582	No	No
ENSG00000151876	FBXO4	0	12	3.10E-07	2.38	1.75E-05	No	No
ENSG00000108602	ALDH3A1	0	13	5.31E-06	2.32	0.002070472	No	No
ENSG00000159871	LYPD5	0	41	1.44E-23	2.25	2.53E-05	No	No
ENSG00000134330	IAH1	2	16	2.38E-07	2.24	2.06E-06	No	No
ENSG00000214106	AC093726.6.1	0	18	8.88E-14	2.24	0.003434232	No	No
ENSG00000175315	CST6	0	8	5.11E-05	2.13	0.000534363	No	No
ENSG00000213903	LTB4R	0	18	2.89E-06	2.11	1.75E-05	No	No
ENSG00000108384	RAD51C	0	17	9.21E-07	1.84	7.91E-05	No	No
ENSG00000171992	SYNPO	0	10	1.81E-06	1.83	0.010044878	No	No
ENSG00000198001	IRAK4	0	31	6.93E-17	1.83	7.79E-05	No	No
ENSG00000166025	AMOTL1	0	9	1.46E-06	1.82	7.25E-05	No	No
ENSG00000003402	CFLAR	0	29	6.82E-13	1.82	0.000401453	No	No
ENSG00000164342	TLR3	0	10	2.47E-07	1.79	0.005226163	No	No
ENSG00000168404	MLKL	0	24	2.64E-17	1.67	0.000102776	No	No
ENSG00000184470	TXNRD2	0	10	1.81E-06	1.58	0.002133945	No	No
ENSG00000131023	LATS1	0	11	8.72E-05	1.43	0.000483259	No	No
ENSG00000182667	NTM	0	7	4.86E-05	1.33	0.001304575	Yes	No
ENSG00000183323	CCDC125	0	16	6.17E-08	1.20	0.014467962	No	No
ENSG00000253159	PCDHGA12	0	23	1.47E-16	1.18	0.035802018	No	Yes
ENSG00000084207	GSTP1	0	9	4.02E-05	1.14	0.005923882	No	No
ENSG00000137877	SPTBN5	0	9	9.58E-06	0.95	0.046470781	No	No
ENSG00000099204	ABLIM1	0	10	7.00E-05	0.90	0.032945157	No	No

ENSG00000157211	CDCP2	3	12	3.45E-08	0	1	No	No
ENSG00000164776	PHKG1	2	14	3.29E-10	0	1	No	No
ENSG00000005421	PON1	1	23	1.39E-11	0	1	No	No
ENSG00000105852	PON3	1	23	1.39E-11	0	1	No	No
ENSG00000142661	MYOM3	0	21	5.60E-15	0	1	No	No
ENSG00000227124	ZNF717	0	15	7.08E-07	0	1	No	No
ENSG00000204344	STK19	0	16	6.40E-06	0	1	No	No
ENSG00000241973	PI4KA	0	12	3.10E-07	0	1	No	No
ENSG00000134871	COL4A2	0	9	4.02E-05	0	1	No	No
ENSG00000108671	PSMD11	0	14	1.64E-10	0	1	No	No
ENSG00000108771	DHX58	0	13	1.04E-09	0	1	No	No
ENSG0000017260	ATP2C1	0	13	1.08E-08	0	1	No	No
ENSG00000163026	C2orf44	0	14	1.29E-06	0	1	No	No
ENSG00000167925	GHDC	0	13	2.05E-06	0	1	No	No
ENSG00000100802	C14orf93	0	14	7.79E-05	0	1	No	No
ENSG00000106526	ACTR3C	0	13	1.08E-08	0	1	No	No
ENSG00000178741	COX5A	0	10	2.63E-05	0	1	No	No
ENSG00000088298	EDEM2	0	13	2.43E-07	0	1	No	No
ENSG00000165118	C9orf64	0	18	3.49E-05	0	1	No	No
ENSG00000105472	CLEC11A	0	11	8.72E-05	0	1	No	No
ENSG00000141627	DYM	0	11	3.34E-07	0	1	No	No
ENSG00000122862	SRGN	0	8	5.11E-05	0	1	No	No
ENSG00000159403	C1R	0	11	8.72E-05	0	1	No	No
ENSG00000174456	C12orf76	0	15	3.00E-10	0	1	No	No
ENSG00000203711	C6orf99	0	34	6.37E-21	0	1	No	No
ENSG00000205710	C17orf107	0	14	2.43E-05	0	1	No	No
ENSG00000196532	HIST1H3C	0	45	2.29E-35	0	1	No	No
ENSG00000113790	EHHADH	0	24	3.71E-14	0	1	No	No
ENSG00000151092	NGLY1	0	25	1.10E-10	0	1	No	No
ENSG00000105327	BBC3	0	15	1.90E-09	0	1	No	No
ENSG00000170088	TMEM192	0	15	3.28E-06	0	1	No	No
ENSG00000119922	IFIT2	0	11	4.21E-08	0	1	No	No
ENSG00000120675	DNAJC15	0	18	1.10E-07	0	1	No	No
ENSG00000169220	RGS14	0	12	1.23E-06	0	1	No	No
ENSG00000189046	ALKBH2	0	12	4.69E-05	0	1	No	No
ENSG00000255150	EID3	0	23	9.51E-08	0	1	No	No

ENSG00000129317	PUS7L	0	31	2.21E-17	0	1	No	No
ENSG00000090530	LEPREL1	0	10	8.20E-06	0	1	No	No
ENSG00000103479	RBL2	0	14	2.88E-06	0	1	No	No
ENSG00000196226	HIST1H2BB	0	34	2.25E-25	0	1	No	No
ENSG00000113448	PDE4D	0	15	3.45E-08	0	1	No	No
ENSG00000229676	ZNF492	0	26	5.05E-17	0	1	No	No
ENSG00000183066	WBP2NL	0	31	2.03E-15	0	1	No	No
ENSG00000039600	SOX30	0	27	3.98E-15	0	1	No	No
ENSG00000125888	BANF2	0	21	5.60E-15	0	1	No	No
ENSG00000231880	AC104942.1	0	16	4.96E-11	0	1	No	No
ENSG00000187658	C5orf52 RP11-	0	25	1.10E-10	0	1	No	No
ENSG00000183154	863K10.7.1	0	16	3.29E-10	0	1	No	No
ENSG00000135577	NMBR AP001631.10.	0	26	5.10E-10	0	1	No	No
ENSG00000228120	1	0	13	1.04E-09	0	1	No	No
ENSG00000111452	GPR133	0	19	1.64E-09	0	1	No	No
ENSG00000165188	RNF183	0	21	7.59E-09	0	1	No	No
ENSG00000196979	AL360004.1	0	18	8.10E-09	0	1	No	No
ENSG00000140795	MYLK3	0	13	1.08E-08	0	1	No	No
ENSG00000240720	LRRD1	0	17	9.05E-08	0	1	No	No
ENSG00000228768	AC003101.1.1	0	11	3.34E-07	0	1	No	No
ENSG00000135960	EDAR	0	12	1.23E-06	0	1	No	No
ENSG00000162630	B3GALT2	0	9	1.46E-06	0	1	No	No
ENSG00000170276	HSPB2.1	0	9	1.46E-06	0	1	No	No
ENSG00000205456	AC133485.1.1	0	9	1.46E-06	0	1	No	No
ENSG00000246223	C14orf64	0	9	1.46E-06	0	1	No	No
ENSG00000173557	C2orf70	0	15	1.54E-06	0	1	No	No
ENSG00000178734	AL359392.1	0	15	1.54E-06	0	1	No	No
ENSG00000169085	C8orf46	0	11	1.57E-06	0	1	No	No
ENSG00000183778	B3GALT5	0	11	1.57E-06	0	1	No	No
ENSG00000189320	FAM180A	0	15	3.28E-06	0	1	No	No
ENSG00000204653	ASPDH	0	15	3.28E-06	0	1	No	No
ENSG00000159173	TNNI1	0	11	5.69E-06	0	1	No	No
ENSG00000135094	SDS	0	8	8.42E-06	0	1	No	No
ENSG00000141977	CIB3 RP4-	0	8	8.42E-06	0	1	No	No
ENSG00000185290	725G10.1.1	0	12	9.11E-06	0	1	No	No

ENSG00000124455	L34079.1 CTD-	0	13	1.13E-05	0	1	No	No
ENSG00000245888	3203P2.2.1	0	18	1.32E-05	0	1	No	No
ENSG00000113525	IL5	0	11	4.02E-05	0	1	No	No
ENSG00000169507	SLC38A11	0	12	4.69E-05	0	1	No	No
ENSG00000174500	GCET2	0	7	4.86E-05	0	1	No	No
ENSG00000204577	LILRB3	0	7	4.86E-05	0	1	No	No
ENSG00000244482	LILRA6	0	7	4.86E-05	0	1	No	No
ENSG00000121577	POPDC2 AE000662.92.	0	8	5.11E-05	0	1	No	No
ENSG00000259003	1 RP11-	0	8	5.11E-05	0	1	No	No
ENSG00000251537	385D13.1.1	0	10	7.00E-05	0	1	No	No
ENSG00000116783	FPGT-TNNI3K	0	11	8.72E-05	0	1	No	No
ENSG00000198106	SNX29P2	0	11	8.72E-05	0	1	No	No
ENSG00000189134	NKAPL	1	20	1.70E-06	0	1	No	Yes
ENSG00000187626	ZKSCAN4	1	19	3.46E-06	0	1	No	Yes
ENSG00000121931	LRIF1	0	23	7.57E-13	0	1	No	Yes
ENSG00000253767	PCDHGA8	0	34	2.09E-17	0	1	No	Yes
ENSG00000180787	ZFP3	0	41	7.93E-25	0	1	No	Yes
ENSG00000159692	CTBP1	0	12	4.69E-05	0	1	No	Yes
ENSG00000177932	ZNF354C	0	25	7.02E-15	0	1	No	Yes
ENSG00000204956	PCDHGA1	0	16	6.17E-08	0	1	No	Yes
ENSG00000253537	PCDHGA7	0	26	6.54E-14	0	1	No	Yes
ENSG00000182606	TRAK1	0	15	1.90E-09	0	1	No	Yes
ENSG00000159228	CBR1	0	10	2.47E-07	0	1	No	Yes
ENSG00000253731	PCDHGA6	0	28	2.57E-14	0	1	No	Yes
ENSG00000149531	FRG1B	0	26	5.10E-10	0	1	No	Yes
ENSG00000180938	ZNF572	0	21	2.01E-10	0	1	No	Yes
ENSG00000198028	ZNF560	0	41	5.51E-27	0	1	No	Yes
ENSG00000257482	ZNF727	0	30	3.37E-22	0	1	No	Yes
ENSG00000167555	ZNF528	0	37	3.06E-23	0	1	No	Yes
ENSG00000245680	ZNF585B	0	21	6.84E-11	0	1	No	Yes
ENSG00000197360	ZNF98	0	21	6.84E-11	0	1	No	Yes
ENSG00000228459	CXorf28	0	14	1.80E-09	0	1	No	Yes
ENSG00000186431	FCAR	0	11	4.21E-08	0	1	No	Yes
ENSG00000196350	ZNF729	0	17	2.11E-07	0	1	No	Yes
ENSG00000197134	ZNF257	0	15	2.78E-07	0	1	No	Yes

ENSG00000100427	MLC1	0	13	5.31E-06	0	1	No	Yes
ENSG00000215912	TTC34	0	11	5.69E-06	0	1	No	Yes
ENSG00000180777	ANKRD30B	0	14	2.43E-05	0	1	No	Yes
ENSG00000182591	KRTAP11-1	0	10	7.00E-05	0	1	No	Yes
ENSG00000184350	MRGPRE	1	13	1.21E-05	0	1	Yes	No
ENSG00000109743	BST1	0	27	4.17E-14	0	1	Yes	No
ENSG00000132321	IQCA1	0	28	7.93E-16	0	1	Yes	No
ENSG00000146038	DCDC2	0	48	2.69E-35	0	1	Yes	No
ENSG00000197721	CR1L	0	45	6.45E-32	0	1	Yes	No
ENSG00000242173	ARHGDIG	0	25	4.24E-17	0	1	Yes	No
ENSG00000164283	ESM1	0	23	1.47E-16	0	1	Yes	No
ENSG00000088320	REM1	0	26	2.73E-16	0	1	Yes	No
ENSG00000253426	RP11- 10A14.4.1	0	20	2.30E-15	0	1	Yes	No
ENSG00000172680	MOS	0	26	1.95E-14	0	1	Yes	No
ENSG00000091513	TF	0	19	4.44E-11	0	1	Yes	No
ENSG00000171476	HOPX	0	17	1.23E-09	0	1	Yes	No
ENSG00000124490	CRISP2	0	22	1.95E-07	0	1	Yes	No
ENSG00000166603	MC4R	0	11	3.34E-07	0	1	Yes	No
ENSG00000080166	DCT	0	9	1.46E-06	0	1	Yes	No
ENSG00000165953	SERPINA12	0	11	1.57E-06	0	1	Yes	No
ENSG00000134115	CNTN6	0	8	5.11E-05	0	1	Yes	No
ENSG00000148948	LRRRC4C	0	11	8.72E-05	0	1	Yes	No
ENSG00000010379	SLC6A13	0	10	8.20E-06	0	1	Yes	No
ENSG00000145936	KCNMB1	0	10	8.20E-06	0	1	Yes	No
ENSG00000149635	C20orf123	0	8	8.42E-06	0	1	Yes	No
ENSG00000185028	LRRRC14B	0	8	8.42E-06	0	1	Yes	No
ENSG00000147488	ST18	0	13	1.13E-05	0	1	Yes	No
ENSG00000184601	C14orf180	0	12	2.17E-05	0	1	Yes	No
ENSG00000102468	HTR2A	0	10	2.63E-05	0	1	Yes	No
ENSG00000105398	SULT2A1	0	10	2.63E-05	0	1	Yes	No
ENSG00000127249	ATP13A4	0	9	4.02E-05	0	1	Yes	No
ENSG00000138653	NDST4	0	11	4.02E-05	0	1	Yes	No
ENSG00000186919	ZACN	0	11	4.02E-05	0	1	Yes	No
ENSG00000256870	SLC5A8	0	11	8.72E-05	0	1	Yes	No
ENSG00000102466	FGF14	0	12	9.19E-05	0	1	Yes	No

ENSG00000196357	ZNF565	0	14	1.67E-07	0	1	Yes	Yes
ENSG00000180543	TSPYL5	0	34	2.09E-17	0	1	Yes	Yes
ENSG00000089876	DHX32	0	38	8.48E-06	0	1	Yes	Yes
ENSG00000113211	PCDHB6	0	23	7.57E-13	0	1	Yes	Yes
ENSG00000203780	FANK1	0	36	1.67E-05	0	1	Yes	Yes
ENSG00000182177	ASB18	0	11	4.02E-05	0	1	Yes	Yes
ENSG00000187855	ASCL4	0	16	4.96E-11	0	1	Yes	Yes
ENSG00000171291	ZNF439	0	18	1.21E-12	0	1	Yes	Yes
ENSG00000157119	KBTBD5	0	15	1.04E-07	0	1	Yes	Yes
ENSG00000162877	PM20D1	0	19	1.68E-05	0	1	Yes	Yes
ENSG00000149269	PAK1	0	14	4.68E-07	-1.15	0.014446226	Yes	No
ENSG00000140553	UNC45A	0	42	3.00E-33	-1.28	0.005896884	No	No
ENSG00000174080	CTSF	0	16	8.58E-07	-1.38	0.021071454	Yes	No
ENSG00000167460	TPM4	0	28	1.70E-19	-1.40	0.008324622	No	No
ENSG00000173281	PPP1R3B	0	22	5.86E-17	-1.42	0.012619245	Yes	No
ENSG00000156508	EEF1A1	0	15	1.04E-07	-1.44	0.010561851	No	No
ENSG00000166704	ZNF606	0	16	8.58E-07	-1.58	0.006266028	No	Yes
ENSG00000161939	C17orf49	0	17	2.11E-07	-1.73	0.000198683	No	No
ENSG00000171471	MAP1LC3B2	0	22	9.51E-16	-1.73	0.013899435	No	No
ENSG00000179271	GADD45GIP1	0	16	6.17E-08	-1.90	0.00033212	No	No
ENSG00000253910	PCDHGB2	0	17	9.21E-07	-1.91	0.045033867	No	Yes
ENSG00000168268	NT5DC2	0	15	1.20E-05	-1.92	0.000518567	No	No
ENSG00000163755	HPS3	0	9	1.46E-06	-1.97	0.000203026	No	No
ENSG00000197701	ZNF595	0	27	1.13E-07	-1.97	0.006125443	Yes	Yes
ENSG00000166770	AC004696.1	0	21	3.62E-07	-2.00	0.002238806	Yes	Yes
ENSG00000121413	ZSCAN18	0	48	7.93E-25	-2.08	9.02E-05	No	Yes
ENSG00000253485	PCDHGA5	0	34	6.84E-18	-2.14	0.019643658	Yes	Yes
ENSG00000179546	HTR1D	0	12	6.97E-09	-2.54	0.00026992	No	No
ENSG00000253873	PCDHGA11	2	19	3.34E-05	-2.81	0.00031046	Yes	Yes
ENSG00000258405	ZNF578	0	34	1.33E-19	-3.16	0.000247301	No	Yes
ENSG00000138587	MNS1	0	22	7.98E-15	-3.39	3.45E-08	No	No
ENSG00000036448	MYOM2	0	21	5.86E-12	-3.59	0.007401617	Yes	No
ENSG00000173114	LRRN3	0	10	8.20E-06	-3.74	0.000273845	No	No
ENSG00000154556	SORBS2	0	11	4.02E-05	-3.96	5.64E-12	Yes	No
ENSG00000185306	C12orf56	0	16	1.95E-05	-4.10	0.003697749	No	No
ENSG00000127399	LRRRC61	0	23	1.43E-15	-4.13	8.17E-06	No	No

ENSG00000204963	PCDHA7	0	13	4.78E-05	-4.24	0.00187902	No	No
ENSG00000138161	CUZD1	0	39	3.77E-27	-5.92	3.18E-20	No	No
ENSG00000124610	HIST1H1A	1	16	2.11E-07	-6.87	0.002810572	No	Yes
ENSG00000129204	USP6	0	16	8.70E-05	-6.88	0.005767821	Yes	Yes
ENSG00000162624	LHX8	0	24	7.98E-15	-6.97	0.002902129	Yes	Yes
ENSG00000255408	PCDHA3	0	23	2.00E-13	-7.16	0.001811224	No	Yes
ENSG00000155926	SLA	0	12	9.11E-06	-7.23	0.000921397	Yes	No
ENSG00000074803	SLC12A1	0	18	8.42E-06	-7.28	0.001160629	Yes	No
ENSG00000152583	SPARCL1	0	7	4.86E-05	-7.37	0.001170457	No	No
ENSG00000113209	PCDHB5	0	14	1.21E-05	-7.37	2.55E-18	No	Yes
ENSG00000127903	ZNF835	0	14	1.21E-05	-7.68	0.015439264	No	Yes
ENSG00000176654	NANOGP1	0	17	1.63E-05	-7.96	2.64E-05	Yes	No
ENSG00000255085	AF186192.2.1	0	39	2.73E-26	-8.24	3.15E-05	Yes	Yes
ENSG00000204969	PCDHA2	0	14	6.33E-06	-8.25	6.56E-06	No	Yes
ENSG00000183908	LRRRC55	0	9	4.02E-05	-8.43	5.94E-06	Yes	Yes
ENSG00000239389	PCDHA13	0	14	4.68E-07	-8.81	4.59E-07	No	Yes
ENSG00000136160	EDNRB	0	14	4.50E-05	-9.08	2.59E-24	Yes	No
ENSG00000178394	HTR1A	0	16	5.23E-05	-9.24	3.78E-06	Yes	No
ENSG00000111879	FAM184A	0	9	9.58E-06	-9.67	3.32E-28	No	No
ENSG00000112137	PHACTR1	0	11	4.21E-08	-11.41	2.54E-17	Yes	No
ENSG00000168542	COL3A1	0	10	1.81E-06	-11.67	3.57E-08	Yes	No

Table S4. Hypomethylated promoters during the differentiation of mESC to mFB.

Gene ID	Gene Symbol	No. of hyper-methylated CpGs in this promoter	No. of hypo-methylated CpGs in this promoter	Enrichment FDR	Log2 scale fold change of gene expression (mFB/mESC)	FDR of differential gene expression
ENSMUSG00000048126	Col6a3	0	6	1.08E-05	17.41	2.95E-84
ENSMUSG00000039883	Lrrc17	0	17	5.81E-22	14.87	4.06E-64
ENSMUSG00000060572	Mfap2	0	6	1.80E-06	14.36	1.58E-61
ENSMUSG00000035258	Abi3bp	0	6	8.53E-08	13.73	1.09E-55
ENSMUSG00000027750	Postn	0	5	7.68E-05	13.46	3.77E-94
ENSMUSG00000047330	Kcne4	0	6	8.53E-08	13.25	3.40E-51
ENSMUSG00000074207	Adh1	0	8	1.66E-08	13.18	3.52E-51
ENSMUSG00000001506	Col1a1	0	14	8.90E-18	13.03	2.85E-97
ENSMUSG00000063727	Tnfrsf11b	0	11	1.02E-14	12.63	5.34E-44
ENSMUSG00000026043	Col3a1	0	6	8.53E-08	12.61	4.90E-98
ENSMUSG00000033544	Angpt1	0	6	1.08E-05	11.97	2.06E-36
ENSMUSG00000000392	Fap	0	16	6.65E-19	11.84	5.49E-35
ENSMUSG00000041797	Abca9	0	13	6.07E-15	11.78	2.65E-34
ENSMUSG00000022860	Chodl	0	14	4.19E-15	11.55	2.64E-60
ENSMUSG00000074971	Fibin	0	14	8.22E-14	11.55	4.97E-61
ENSMUSG00000001119	Col6a1	0	6	1.08E-05	11.52	4.35E-81
ENSMUSG00000045871	Slitrk6	0	5	1.03E-05	11.26	1.40E-28
ENSMUSG00000032271	Nnmt	0	7	2.46E-08	11.13	3.56E-27
ENSMUSG00000029919	Hpgds	0	7	8.65E-05	11.04	4.39E-26
ENSMUSG00000028036	Ptgr	0	13	2.44E-11	10.91	1.13E-24
ENSMUSG00000027832	Ptx3	0	16	1.15E-17	10.64	5.44E-64
ENSMUSG00000021624	Cd180	0	6	4.06E-05	10.60	3.37E-22
ENSMUSG00000028864	Hgf	0	10	2.48E-13	10.44	2.00E-20
ENSMUSG00000032243	Itga11	0	8	5.99E-06	10.35	1.05E-68
ENSMUSG00000020241	Col6a2	0	18	2.02E-22	10.30	7.10E-72
ENSMUSG00000026042	Col5a2	0	13	1.73E-17	10.22	1.09E-69
ENSMUSG00000036295	Lrrn3	0	13	1.29E-15	10.16	4.06E-18
ENSMUSG00000027962	Vcam1	0	11	1.02E-14	10.09	1.66E-47
ENSMUSG00000030249	Abcc9	0	11	1.02E-14	10.04	4.03E-17
ENSMUSG00000061535	C1qtnf7	0	6	1.08E-05	9.92	3.38E-16
ENSMUSG00000039706	Ldb2	0	7	2.85E-07	9.70	1.98E-43

ENSMUSG00000036040	Adamtsl2	0	10	1.19E-11	9.63	2.92E-42
ENSMUSG00000046768	Rhoj	0	8	3.86E-06	9.51	1.20E-40
ENSMUSG00000050666	E130203B14Rik	0	11	2.19E-07	9.34	9.20E-39
ENSMUSG00000029321	Slc10a6	0	11	5.91E-11	9.31	1.51E-12
ENSMUSG00000028201	Lhx8	0	8	9.23E-06	9.31	1.97E-12
ENSMUSG00000063297	Luzp2	0	8	5.99E-06	9.26	4.43E-12
ENSMUSG00000027208	Fgf7	0	10	3.89E-10	9.23	5.10E-36
ENSMUSG00000032334	Loxl1	0	17	5.95E-14	9.22	9.51E-63
ENSMUSG00000051498	Tlr6	0	16	2.93E-16	9.20	1.08E-11
ENSMUSG00000003617	Cp	0	7	9.52E-08	9.19	1.33E-11
ENSMUSG00000028111	Ctsk	0	9	2.48E-10	9.16	8.47E-55
ENSMUSG00000019990	Pde7b	0	15	3.62E-19	9.08	4.30E-11
ENSMUSG00000034997	Htr2a	0	13	1.98E-16	9.07	5.94E-11
ENSMUSG00000054675	Tmem119	0	9	2.04E-07	8.95	1.08E-55
ENSMUSG00000026589	Sec16b	0	5	1.03E-05	8.91	7.36E-33
ENSMUSG00000020120	Plek	0	14	8.22E-14	8.90	5.82E-43
ENSMUSG00000026674	Ddr2	0	12	8.87E-12	8.85	8.98E-49
ENSMUSG00000028883	Sema3a	0	10	9.34E-09	8.82	2.69E-33
ENSMUSG00000070942	Il1rl2	0	12	4.47E-11	8.79	6.50E-33
ENSMUSG00000024620	Pdgfrb	0	7	2.85E-07	8.76	1.09E-56
ENSMUSG00000030621	Me3	0	16	1.23E-11	8.68	1.11E-09
ENSMUSG00000027188	Pamr1	0	10	3.13E-07	8.66	1.73E-40
ENSMUSG00000039747	Orai2	0	11	4.83E-08	8.52	4.62E-09
ENSMUSG00000032503	Arpp21	0	7	8.65E-05	8.40	1.66E-08
ENSMUSG00000020053	Igf1	0	6	1.08E-05	8.29	6.53E-35
ENSMUSG00000035131	Fam5c	0	6	2.20E-05	8.18	1.33E-07
ENSMUSG00000027661	Slc2a10	0	4	4.67E-05	8.12	2.92E-24
ENSMUSG00000053615	Gm9913	0	11	1.96E-08	8.05	7.55E-33
ENSMUSG00000025779	Ly96	0	7	6.01E-05	8.05	3.86E-07
ENSMUSG00000053117	E330013P04Rik	0	9	3.40E-07	8.00	5.69E-07
ENSMUSG00000013483	Card14	0	6	4.06E-05	7.98	4.34E-24
ENSMUSG00000045954	Sdpr	0	11	5.91E-11	7.97	2.19E-30
ENSMUSG00000079491	H2-T10	0	5	2.01E-06	7.91	3.99E-22
ENSMUSG00000038530	Rgs4	0	24	6.44E-33	7.88	2.04E-36
ENSMUSG00000062980	A430107O13Rik	0	12	5.95E-07	7.87	3.80E-46
ENSMUSG00000057137	Tmem140	0	8	2.19E-07	7.84	3.24E-21

ENSMUSG00000050164	Mchr1	0	8	9.23E-06	7.75	3.53E-06
ENSMUSG00000082361	Btc	0	12	4.24E-13	7.73	5.18E-06
ENSMUSG00000026471	Mr1	0	9	2.48E-10	7.59	2.56E-26
ENSMUSG00000046491	C1qtnf2	0	11	3.13E-07	7.58	2.10E-20
ENSMUSG00000079560	Hoxa3	0	11	1.50E-06	7.55	3.60E-06
ENSMUSG00000029810	Tmem176b	0	8	1.48E-10	7.52	4.93E-45
ENSMUSG00000044629	Cnrip1	0	12	1.32E-12	7.50	2.30E-27
ENSMUSG00000062480	Acat3	0	10	8.27E-08	7.50	2.56E-34
ENSMUSG00000019278	Dpep1	0	13	1.24E-11	7.47	4.21E-26
ENSMUSG00000026072	Ii1r1	0	10	3.89E-10	7.32	1.70E-44
ENSMUSG00000029309	Sparcl1	0	11	5.65E-13	7.21	3.75E-16
ENSMUSG00000021994	Wnt5a	0	6	7.04E-05	7.20	7.21E-47
ENSMUSG00000040212	Emp3	0	5	7.68E-05	7.12	6.73E-43
ENSMUSG00000079484	Phyh1	0	8	1.12E-09	7.11	8.10E-31
ENSMUSG00000024395	Lims2	0	10	1.42E-05	7.06	1.01E-24
ENSMUSG00000040260	Daam2	0	9	2.81E-05	7.04	9.68E-31
ENSMUSG00000031129	Slc9a9	0	16	1.15E-17	6.92	1.24E-21
ENSMUSG00000049409	Prokr1	0	15	2.78E-14	6.89	2.32E-21
ENSMUSG00000025498	Irf7	0	16	9.78E-22	6.82	1.81E-14
ENSMUSG00000004105	Angptl2	0	8	9.23E-06	6.79	3.52E-41
ENSMUSG00000034353	Ramp1	0	12	1.90E-07	6.70	7.55E-24
ENSMUSG00000047497	Adamts12	0	15	2.76E-18	6.67	2.12E-32
ENSMUSG00000024349	Tmem173	0	8	1.66E-08	6.66	9.44E-29
ENSMUSG00000044674	Fzd1	0	9	2.04E-06	6.53	1.93E-39
ENSMUSG00000028328	Tmod1	0	15	9.10E-13	6.41	8.24E-24
ENSMUSG00000019768	Esr1	0	11	8.09E-12	6.38	6.43E-12
ENSMUSG00000035783	Acta2	0	9	1.61E-08	6.33	2.52E-41
ENSMUSG00000029163	Emilin1	0	5	2.01E-06	6.27	3.45E-40
ENSMUSG00000001020	S100a4	0	6	1.80E-06	6.27	1.06E-36
ENSMUSG00000019899	Lama2	0	8	2.19E-07	6.26	2.77E-32
ENSMUSG00000046463	5930403N24Rik	0	13	2.94E-12	6.13	2.81E-15
ENSMUSG00000025610	ORF63	0	14	4.24E-13	6.11	3.63E-09
ENSMUSG00000023367	Tmem176a	0	7	2.46E-08	6.10	3.06E-28
ENSMUSG00000033033	Calhm2	0	13	1.46E-10	6.07	1.97E-20
ENSMUSG00000006344	Ggt5	0	12	1.17E-13	6.03	1.09E-13
ENSMUSG00000042333	Tnfrsf14	0	10	4.60E-11	5.99	4.70E-09

ENSMUSG00000035493	Tgfb1	0	10	1.95E-06	5.97	1.48E-37
ENSMUSG00000051439	Cd14	0	8	5.99E-06	5.90	7.33E-20
ENSMUSG00000022309	Angpt1	0	8	2.19E-07	5.90	3.13E-14
ENSMUSG00000028459	Cd72	0	6	1.80E-06	5.88	1.81E-13
ENSMUSG00000025551	Fgf14	0	10	2.30E-12	5.82	8.46E-09
ENSMUSG00000047250	Ptgs1	0	12	1.15E-08	5.81	2.97E-18
ENSMUSG00000090394	4930523C07Rik	0	16	9.07E-15	5.72	1.85E-16
ENSMUSG00000030208	Emp1	0	9	3.25E-08	5.61	6.03E-35
ENSMUSG00000038463	Olfml2b	0	12	7.21E-08	5.61	1.05E-33
ENSMUSG00000003420	Fcgrt	0	8	1.48E-10	5.58	9.79E-36
ENSMUSG00000014813	Stc1	0	12	4.09E-16	5.51	5.09E-08
ENSMUSG00000029212	Gabrb1	0	13	1.98E-16	5.49	4.98E-08
ENSMUSG00000043456	Zfp536	0	10	4.88E-06	5.42	1.06E-06
ENSMUSG00000026303	Mlph	0	10	4.65E-09	5.42	2.83E-09
ENSMUSG00000037348	Paqr7	0	11	4.83E-08	5.40	6.52E-10
ENSMUSG00000025212	Sfxn3	0	9	2.81E-05	5.27	1.37E-26
ENSMUSG00000020061	Mybpc1	0	10	3.89E-10	5.27	5.59E-10
ENSMUSG00000052688	5430435G22Rik	0	10	1.47E-10	5.22	1.25E-14
ENSMUSG00000029119	Man2b2	0	23	7.45E-23	5.16	1.33E-26
ENSMUSG00000025492	Ifitm3	0	12	8.99E-11	4.75	6.32E-24
ENSMUSG00000049922	Slc35c1	0	11	4.83E-08	4.75	1.03E-14
ENSMUSG00000036854	Hspb6	0	8	3.83E-05	4.73	2.77E-14
ENSMUSG00000001123	Lgals9	0	10	3.89E-10	4.67	1.17E-21
ENSMUSG00000032766	Gng11	0	7	1.65E-05	4.61	3.19E-14
ENSMUSG00000055632	Hmcn2	0	9	2.14E-05	4.54	8.18E-05
ENSMUSG00000030770	Parva	0	9	3.40E-07	4.52	8.33E-26
ENSMUSG00000020251	Glit8d2	0	10	5.06E-08	4.47	6.61E-07
ENSMUSG00000022636	Alcam	0	16	2.93E-16	4.42	7.61E-20
ENSMUSG00000022018	1190002H23Rik	0	17	2.88E-13	4.41	2.17E-11
ENSMUSG00000033355	Rtp4	0	8	1.44E-06	4.39	6.94E-09
ENSMUSG00000079057	Cyp4v3	0	10	5.59E-05	4.36	1.62E-15
ENSMUSG00000030107	Usp18	0	17	1.01E-14	4.35	6.21E-09
ENSMUSG00000026678	Rgs5	0	11	5.65E-13	4.34	1.75E-06
ENSMUSG00000030220	Arhgdib	0	7	9.52E-08	4.17	1.15E-20
ENSMUSG00000020774	Aspa	0	10	1.47E-10	4.12	3.99E-08
ENSMUSG00000017446	C1qtnf1	0	11	2.32E-11	4.11	7.47E-18

ENSMUSG00000037411	Serpine1	0	9	6.26E-08	4.04	1.06E-21
ENSMUSG00000059173	Pde1a	0	13	6.07E-15	4.01	4.03E-09
ENSMUSG00000024781	Lipa	0	12	8.87E-12	4.00	1.30E-21
ENSMUSG00000024810	Ii33	0	8	1.66E-08	3.98	6.82E-21
ENSMUSG00000074818	Pdzd7	0	12	3.59E-08	3.98	1.61E-12
ENSMUSG00000026269	Rnpepl1	0	10	1.42E-05	3.94	4.70E-20
ENSMUSG00000070044	Fam149a	0	9	6.26E-08	3.93	7.77E-17
ENSMUSG00000040569	Slc26a7	0	6	4.83E-06	3.86	0.000886607
ENSMUSG00000037606	Osbpl5	0	8	7.04E-05	3.82	1.10E-19
ENSMUSG00000051041	Olfml1	0	9	8.91E-10	3.77	9.88E-12
ENSMUSG00000046169	Adamts6	0	16	1.14E-19	3.77	2.10E-15
ENSMUSG00000017760	Ctsa	0	18	2.18E-12	3.76	1.69E-17
ENSMUSG00000048096	Lmod1	0	8	9.23E-06	3.73	3.87E-14
ENSMUSG00000021185	9030617O03Rik	0	7	7.11E-07	3.73	7.38E-10
ENSMUSG00000022223	Sdr39u1	0	13	5.97E-08	3.68	4.90E-14
ENSMUSG00000010358	Ifi35	0	9	6.26E-08	3.66	3.17E-13
ENSMUSG00000002107	Celf2	0	13	1.98E-16	3.63	1.70E-18
ENSMUSG00000024778	Fas	0	10	5.06E-08	3.53	2.96E-09
ENSMUSG00000055782	Abcd2	0	9	2.04E-06	3.51	6.53E-06
ENSMUSG00000051373	Ppapdc3	0	7	3.10E-06	3.50	1.40E-07
ENSMUSG00000027955	Fam198b	1	5	7.04E-05	3.42	2.70E-16
ENSMUSG00000061132	Blnk	0	8	1.66E-08	3.36	2.11E-06
ENSMUSG00000028962	Slc4a2	0	12	3.31E-06	3.33	1.44E-14
ENSMUSG00000068874	Selenbp1	0	10	1.66E-08	3.33	3.26E-05
ENSMUSG00000050737	Ptges	0	7	2.63E-05	3.28	8.00E-13
ENSMUSG00000002147	Stat6	0	17	1.01E-13	3.23	4.47E-14
ENSMUSG00000046658	Zfp316	0	11	1.54E-07	3.15	1.68E-11
ENSMUSG00000037625	Cldn11	0	11	2.33E-09	3.15	0.013047008
ENSMUSG00000093661	Eif4e3.1	0	11	4.83E-08	3.12	3.26E-10
ENSMUSG00000051351	Zfp46	0	9	2.61E-09	3.06	9.61E-14
ENSMUSG00000001750	Tcirg1	0	11	3.13E-07	3.00	8.00E-11
ENSMUSG00000053475	Tnfaip6	0	12	1.01E-09	3.00	2.69E-11
ENSMUSG00000024885	Aldh3b1	0	8	2.19E-07	2.98	2.65E-07
ENSMUSG00000031626	Sorbs2	0	10	8.27E-08	2.90	3.83E-08
ENSMUSG00000027737	Slc7a11	0	12	1.17E-13	2.84	1.06E-07
ENSMUSG00000039043	2610034B18Rik	0	13	1.03E-09	2.84	7.66E-11

ENSMUSG00000044197	Gpr146	0	8	4.56E-08	2.82	2.18E-05
ENSMUSG00000020102	Slc16a7	0	7	3.10E-06	2.80	0.002079033
ENSMUSG00000047821	Trim16	0	10	3.89E-10	2.79	2.17E-07
ENSMUSG00000021226	Acot2	0	9	9.65E-05	2.72	1.76E-09
ENSMUSG00000039873	Neurl2	0	18	9.76E-13	2.69	3.46E-05
ENSMUSG00000027580	BC006779	0	10	3.89E-10	2.66	2.52E-09
ENSMUSG00000004032	Gstm5	0	17	1.01E-13	2.55	2.15E-09
ENSMUSG00000053007	Creb5	0	14	8.90E-18	2.55	0.000730956
ENSMUSG00000026173	Plcd4	0	6	1.80E-06	2.55	3.08E-05
ENSMUSG00000061455	Stx17	0	11	5.42E-05	2.52	3.98E-09
ENSMUSG00000039158	Akna	0	8	1.12E-09	2.48	1.26E-08
ENSMUSG00000041827	Oasl1	0	8	3.83E-05	2.47	0.004560948
ENSMUSG00000034308	Sdr42e1	0	13	2.48E-10	2.43	0.00313698
ENSMUSG00000000605	Cln4-2	0	26	2.82E-24	2.39	3.52E-09
ENSMUSG00000025232	Hexa	0	11	2.08E-05	2.36	2.09E-06
ENSMUSG00000024659	Anxa1	0	4	4.67E-05	2.34	1.19E-08
ENSMUSG00000025701	Alox5	0	14	1.22E-09	2.31	3.03E-06
ENSMUSG00000016495	5033414D02Rik	0	15	4.97E-12	2.28	4.90E-07
ENSMUSG00000051147	Nat2	0	8	4.35E-07	2.28	0.000558279
ENSMUSG00000040596	Pogk	0	9	1.16E-05	2.24	9.15E-08
ENSMUSG00000039063	Echdc3	0	11	1.13E-06	2.24	0.008288928
ENSMUSG00000054459	Vsnl1	0	13	1.21E-08	2.23	0.027372545
ENSMUSG00000057143	Trim12c	0	8	1.48E-10	2.15	1.12E-05
ENSMUSG00000038540	Tmc3	0	6	8.53E-08	2.04	0.029402459
ENSMUSG00000074384	Al429214	0	10	1.42E-06	2.04	0.001617857
ENSMUSG00000034898	Filip1	0	11	8.09E-12	1.83	0.018581924
ENSMUSG00000056313	1810011O10Rik	0	22	3.63E-26	1.79	0.008514297
ENSMUSG00000007872	Id3	0	9	2.81E-05	1.75	1.21E-05
ENSMUSG00000021591	Glrx	0	7	3.10E-06	1.74	0.000258554
ENSMUSG00000051910	Sox6	0	9	1.61E-08	1.73	0.000427396
ENSMUSG00000044080	S100a1	0	10	1.66E-08	1.72	0.005105747
ENSMUSG00000022389	Tef	0	6	4.06E-05	1.70	7.54E-05
ENSMUSG00000056116	H2-T22	0	7	1.65E-05	1.63	0.00748481
ENSMUSG00000001052	Sec24b	0	9	6.89E-09	1.50	0.000196436
ENSMUSG00000038143	Stox2	0	11	1.26E-08	1.33	0.001005435
ENSMUSG00000045639	Zfp629	0	11	2.33E-09	1.25	0.005928711

ENSMUSG00000066838	Zfp772	0	5	1.03E-05	1.23	0.022623274
ENSMUSG00000045410	Akr1e1	0	7	2.63E-05	1.20	0.016630572
ENSMUSG00000044033	Ccdc141	0	8	3.86E-06	1.13	0.018581924
ENSMUSG00000026923	Notch1	0	11	5.91E-11	0.95	0.019335939
ENSMUSG00000022311	Csmd3	0	26	2.20E-32	0.00	1
ENSMUSG00000030666	Calcb	0	22	9.94E-28	0.00	1
ENSMUSG00000045875	Adra1a	0	20	4.67E-26	0.00	1
ENSMUSG00000049690	Nckap5	0	21	1.36E-25	0.00	1
ENSMUSG00000028755	Cda	0	22	6.71E-25	0.00	1
ENSMUSG00000024256	Adcyap1	0	18	1.50E-24	0.00	1
ENSMUSG00000043953	Ccr12	0	18	1.50E-24	0.00	1
ENSMUSG00000046518	Ferd3l	0	22	2.21E-24	0.00	1
ENSMUSG00000044186	Nkx2-6	0	17	3.78E-23	0.00	1
ENSMUSG00000090386	2810055G20Rik	0	18	2.02E-22	0.00	1
ENSMUSG00000049985	Ankrd55	0	18	1.29E-21	0.00	1
ENSMUSG00000067158	Col4a4	0	20	8.60E-21	0.00	1
ENSMUSG00000031772	Cntnap4	0	16	1.47E-20	0.00	1
ENSMUSG00000030670	Cyp2r1	0	26	2.04E-20	0.00	1
ENSMUSG00000079465	Col4a3	0	20	2.33E-20	0.00	1
ENSMUSG00000079679	Vwde	0	16	1.14E-19	0.00	1
ENSMUSG00000050587	Lrrc4c	0	15	2.76E-18	0.00	1
ENSMUSG00000039728	Slc6a5	0	18	7.45E-18	0.00	1
ENSMUSG00000021416	Eci3	0	18	1.73E-17	0.00	1
ENSMUSG00000052848	C130026L21Rik	0	17	1.74E-17	0.00	1
ENSMUSG00000024254	Abcg8	0	17	1.74E-17	0.00	1
ENSMUSG00000052481	1700036A12Rik	0	16	3.70E-17	0.00	1
ENSMUSG00000006311	Etv2	0	14	5.86E-17	0.00	1
ENSMUSG00000042596	Tfap2d	0	14	2.91E-16	0.00	1
ENSMUSG00000092071	A230065N10Rik	0	19	1.23E-15	0.00	1
ENSMUSG00000036123	Slc9a3	0	21	2.25E-15	0.00	1
ENSMUSG00000046610	5330437I02Rik	0	14	4.19E-15	0.00	1
ENSMUSG00000050883	4930523C07Rik	0	16	4.28E-15	0.00	1
ENSMUSG00000038457	Fam70b	0	12	4.64E-15	0.00	1
ENSMUSG00000091722	Siah3	0	13	2.29E-14	0.00	1
ENSMUSG00000052450	2810055G20Rik	0	12	2.72E-14	0.00	1
ENSMUSG00000061762	Tac1	0	15	2.78E-14	0.00	1

ENSMUSG00000067242	Lgi1	0	13	2.09E-13	0.00	1
ENSMUSG00000026815	Gfi1b	0	12	4.24E-13	0.00	1
ENSMUSG00000021790	Dydc1	0	14	4.24E-13	0.00	1
ENSMUSG00000051480	A130050O07Rik	0	12	4.24E-13	0.00	1
ENSMUSG00000079278	Tmem233	0	14	1.81E-12	0.00	1
ENSMUSG00000055138	Gm4861	0	10	2.30E-12	0.00	1
ENSMUSG00000075478	Slitrk1	0	15	2.91E-12	0.00	1
ENSMUSG00000079069	8430423G03Rik	0	13	2.94E-12	0.00	1
ENSMUSG00000045680	Tcf21	0	14	3.44E-12	0.00	1
ENSMUSG00000012520	Phox2b	0	12	3.53E-12	0.00	1
ENSMUSG00000027971	Ndst4	0	11	8.09E-12	0.00	1
ENSMUSG00000010803	Gabra1	0	12	8.87E-12	0.00	1
ENSMUSG00000048148	Nwd1	0	10	1.19E-11	0.00	1
ENSMUSG00000047867	Gimap6	0	10	1.19E-11	0.00	1
ENSMUSG00000031491	Chrna6	0	10	1.19E-11	0.00	1
ENSMUSG00000051727	Kctd14	0	13	1.24E-11	0.00	1
ENSMUSG00000063409	Lrrc43	0	11	2.32E-11	0.00	1
ENSMUSG00000052143	Gm9869	0	10	4.60E-11	0.00	1
ENSMUSG00000074673	Ttll9	0	14	9.47E-11	0.00	1
ENSMUSG00000078855	Gm11003	0	9	2.48E-10	0.00	1
ENSMUSG00000063600	Egfem1	0	11	3.09E-10	0.00	1
ENSMUSG00000060534	Dcc	0	11	3.09E-10	0.00	1
ENSMUSG00000018862	Otop3	0	11	3.09E-10	0.00	1
ENSMUSG00000052613	Pcdh15	0	11	3.09E-10	0.00	1
ENSMUSG00000059974	Ntm	0	10	3.89E-10	0.00	1
ENSMUSG00000025905	Oprk1	0	10	3.89E-10	0.00	1
ENSMUSG00000037610	Kcnmb2	0	10	9.78E-10	0.00	1
ENSMUSG00000028024	Enpep	0	10	9.78E-10	0.00	1
ENSMUSG00000091519	Skor2	0	14	1.80E-09	0.00	1
ENSMUSG00000022997	Wnt1	0	14	1.80E-09	0.00	1
ENSMUSG00000027273	Snap25	0	10	2.20E-09	0.00	1
ENSMUSG00000049946	BC030500	0	10	2.20E-09	0.00	1
ENSMUSG00000026986	Hnmt	0	9	2.61E-09	0.00	1
ENSMUSG00000073142	6030469F06Rik	0	9	2.61E-09	0.00	1
ENSMUSG00000035165	Kcne3	0	13	3.77E-09	0.00	1
ENSMUSG00000050747	Trim15	0	11	4.24E-09	0.00	1

ENSMUSG00000071001	Hrct1	0	8	5.15E-09	0.00	1
ENSMUSG00000071112	B230216G23Rik	0	9	6.89E-09	0.00	1
ENSMUSG00000090173	Fbxw10	0	8	1.66E-08	0.00	1
ENSMUSG00000071862	Lrrtm2	0	10	1.66E-08	0.00	1
ENSMUSG00000025475	Gpr123	0	13	1.66E-08	0.00	1
ENSMUSG00000060579	Fhit	0	12	1.66E-08	0.00	1
ENSMUSG00000045591	Olig3	0	12	1.66E-08	0.00	1
ENSMUSG00000044749	Abca6	0	8	1.66E-08	0.00	1
ENSMUSG00000023828	Slc22a3	0	12	1.66E-08	0.00	1
ENSMUSG00000052014	A330070K13Rik	0	7	2.46E-08	0.00	1
ENSMUSG00000035033	Tbr1	0	7	2.46E-08	0.00	1
ENSMUSG00000028716	Pdzk1ip1	0	8	4.56E-08	0.00	1
ENSMUSG00000022039	Adam2	0	10	5.06E-08	0.00	1
ENSMUSG00000030217	Art4	0	9	6.26E-08	0.00	1
ENSMUSG00000021509	Slc25a48	0	11	7.21E-08	0.00	1
ENSMUSG00000019232	Agxt2l1	0	6	8.53E-08	0.00	1
ENSMUSG00000053499	Gm5444	0	7	9.52E-08	0.00	1
ENSMUSG00000020436	Gabrg2	0	7	9.52E-08	0.00	1
ENSMUSG00000063458	1700112E06Rik	0	8	1.02E-07	0.00	1
ENSMUSG00000021206	D830046C22Rik	0	8	1.02E-07	0.00	1
ENSMUSG00000066755	Tnfsf18	0	8	1.02E-07	0.00	1
ENSMUSG00000037771	Slc32a1	0	9	1.13E-07	0.00	1
ENSMUSG00000021919	Chat	0	9	2.04E-07	0.00	1
ENSMUSG00000054351	4930553M12Rik	1	8	2.04E-07	0.00	1
ENSMUSG00000047641	Krt83	0	10	2.05E-07	0.00	1
ENSMUSG00000029275	Gfi1	0	11	2.19E-07	0.00	1
ENSMUSG00000079353	Gm11099	0	8	2.19E-07	0.00	1
ENSMUSG00000047180	Neurl3	0	8	2.19E-07	0.00	1
ENSMUSG00000023964	Calcr	0	7	2.85E-07	0.00	1
ENSMUSG00000024511	Rab27b	0	9	3.40E-07	0.00	1
ENSMUSG00000038754	Elovl3	0	9	3.40E-07	0.00	1
ENSMUSG00000074872	Ctxn2	0	11	4.35E-07	0.00	1
ENSMUSG00000061864	Galnt16	0	8	4.35E-07	0.00	1
ENSMUSG00000075015	Gm10801	0	8	4.35E-07	0.00	1
ENSMUSG00000028386	Slc46a2	0	10	4.63E-07	0.00	1
ENSMUSG00000021872	Rnase10	0	6	5.03E-07	0.00	1

ENSMUSG00000074728	Gm10748	0	7	7.11E-07	0.00	1
ENSMUSG00000048498	Cd300e	0	7	7.11E-07	0.00	1
ENSMUSG00000032532	Cck	0	7	7.11E-07	0.00	1
ENSMUSG00000020891	Alox8	0	8	8.09E-07	0.00	1
ENSMUSG00000037393	Nmur2	0	8	8.09E-07	0.00	1
ENSMUSG00000039539	Sgcz	0	8	8.09E-07	0.00	1
ENSMUSG00000021239	Vsx2	0	11	1.13E-06	0.00	1
ENSMUSG00000026163	Sphkap	0	8	1.44E-06	0.00	1
ENSMUSG00000041730	Prrxl1	0	11	1.50E-06	0.00	1
ENSMUSG00000020334	Slc22a4	0	13	1.57E-06	0.00	1
ENSMUSG00000021903	Galntl2	0	7	1.57E-06	0.00	1
ENSMUSG00000030108	Slc6a13	0	7	1.57E-06	0.00	1
ENSMUSG00000092277	Gm19684	0	5	2.01E-06	0.00	1
ENSMUSG00000042184	1700069L16Rik	0	9	2.04E-06	0.00	1
ENSMUSG00000035653	Lrfn5	0	9	2.04E-06	0.00	1
ENSMUSG00000045052	Prlhr	0	8	2.38E-06	0.00	1
ENSMUSG00000043020	Wdr63	0	9	3.06E-06	0.00	1
ENSMUSG00000057228	Aadat	0	9	3.06E-06	0.00	1
ENSMUSG00000090799	Klhl33	0	8	3.86E-06	0.00	1
ENSMUSG00000005640	Insrr	0	9	4.38E-06	0.00	1
ENSMUSG00000038204	Asb10	0	6	4.83E-06	0.00	1
ENSMUSG00000059187	Fam19a1	0	6	4.83E-06	0.00	1
ENSMUSG00000024526	Cidea	0	11	5.53E-06	0.00	1
ENSMUSG00000040046	Tph1	0	7	5.77E-06	0.00	1
ENSMUSG00000030732	Chrdl2	0	7	5.77E-06	0.00	1
ENSMUSG00000044375	BC027072	0	8	5.99E-06	0.00	1
ENSMUSG00000001823	Hoxd12	0	9	8.78E-06	0.00	1
ENSMUSG00000041540	Sox5	0	5	1.03E-05	0.00	1
ENSMUSG00000026828	Galnt5	0	5	1.03E-05	0.00	1
ENSMUSG00000030092	Cntn6	0	5	1.03E-05	0.00	1
ENSMUSG00000004360	9330159F19Rik	0	5	1.03E-05	0.00	1
ENSMUSG00000036944	Tmem71	0	6	1.08E-05	0.00	1
ENSMUSG00000061311	Rag1	0	6	1.08E-05	0.00	1
ENSMUSG00000091028	Gm10722	0	8	1.34E-05	0.00	1
ENSMUSG00000090275	Cbln1	0	10	1.42E-05	0.00	1
ENSMUSG00000027517	Ankrd60	0	9	1.59E-05	0.00	1

ENSMUSG00000021337	Scgn	0	8	1.95E-05	0.00	1
ENSMUSG00000026124	Cfc1	0	6	2.20E-05	0.00	1
ENSMUSG00000039005	Tlr4	0	6	2.20E-05	0.00	1
ENSMUSG00000026904	Slc4a10	0	6	2.20E-05	0.00	1
ENSMUSG00000041468	Gpr12	0	12	2.39E-05	0.00	1
ENSMUSG00000022375	Lrrc6	0	7	2.63E-05	0.00	1
ENSMUSG00000042379	Esm1	0	8	2.76E-05	0.00	1
ENSMUSG00000074385	Gm10684	0	5	3.17E-05	0.00	1
ENSMUSG00000063529	Gm1574	0	5	3.17E-05	0.00	1
ENSMUSG00000023439	Gnb3	0	5	3.17E-05	0.00	1
ENSMUSG00000038725	Pkhd111	0	5	3.17E-05	0.00	1
ENSMUSG00000024401	Tnf	0	7	4.05E-05	0.00	1
ENSMUSG00000062545	Tlr12	0	6	4.06E-05	0.00	1
ENSMUSG00000023336	Wfdc1	0	6	4.06E-05	0.00	1
ENSMUSG00000090124	Ugt1a7c	0	4	4.67E-05	0.00	1
ENSMUSG00000020992	4930512B01Rik	0	10	5.59E-05	0.00	1
ENSMUSG00000030873	Scnn1b	0	7	6.01E-05	0.00	1
ENSMUSG00000058831	Opn1sw	0	6	7.04E-05	0.00	1
ENSMUSG00000039146	H28	0	6	7.04E-05	0.00	1
ENSMUSG00000047606	Ankrd34c	0	5	7.68E-05	0.00	1
ENSMUSG00000040478	Prdm13	0	10	8.35E-05	0.00	1
ENSMUSG00000050439	Enthd1	0	7	8.65E-05	0.00	1
ENSMUSG00000033080	Vsx1	0	7	8.65E-05	0.00	1
ENSMUSG00000053519	Kcnp1	0	7	8.65E-05	0.00	1
ENSMUSG00000042406	Atf4	0	31	7.54E-27	0.00	1
ENSMUSG00000029022	Miip	0	29	2.36E-27	0.00	1
ENSMUSG00000025176	Hoga1	0	7	6.01E-05	0.00	1
ENSMUSG00000052751	Repin1	0	8	7.04E-05	0.00	1
ENSMUSG00000023064	Sncg	0	7	3.10E-06	0.00	1
ENSMUSG00000034855	Cxcl10	0	7	3.10E-06	0.00	1
ENSMUSG00000031634	Ufsp2	0	13	2.35E-06	0.00	1
ENSMUSG00000067424	Zfp563	0	14	3.52E-11	0.00	1
ENSMUSG00000030966	Trim21	0	6	8.53E-08	0.00	1
ENSMUSG00000020176	Grb10	0	7	6.01E-05	0.00	1
ENSMUSG00000046879	Irgm1	0	9	6.15E-06	0.00	1
ENSMUSG00000042312	S100a13	0	10	8.27E-08	0.00	1

ENSMUSG00000029063	Nack	0	11	5.65E-13	0.00	1
ENSMUSG00000075703	Ept1	0	13	3.24E-05	0.00	1
ENSMUSG00000045519	Zfp560	0	11	8.93E-06	0.00	1
ENSMUSG00000018143	Mafk	0	11	5.42E-05	0.00	1
ENSMUSG00000015363	Trabd	0	8	2.19E-07	0.00	1
ENSMUSG00000078495	Gm13157	0	8	4.56E-08	0.00	1
ENSMUSG00000024228	Nudt12	0	22	6.71E-25	0.00	1
ENSMUSG00000055809	6030429G01Rik	0	10	1.95E-06	0.00	1
ENSMUSG00000026170	Cyp27a1	0	11	1.97E-06	0.00	1
ENSMUSG00000030213	Atf7ip	0	46	1.42E-51	0.00	1
ENSMUSG00000034738	Nostrin	0	13	2.29E-14	0.00	1
ENSMUSG00000028247	Coq3	0	11	9.04E-05	0.00	1
ENSMUSG00000029466	Anapc7	0	9	2.04E-06	0.00	1
ENSMUSG00000031523	Dlc1	0	18	1.50E-24	0.00	1
ENSMUSG00000003271	Sult2b1	0	9	1.61E-08	0.00	1
ENSMUSG00000024302	Dtna	0	9	8.91E-10	0.00	1
ENSMUSG00000069793	Sifn9	0	8	4.35E-07	0.00	1
ENSMUSG00000073409	H2-Q6	0	35	1.28E-39	0.00	1
ENSMUSG00000031897	Psmb10	0	12	4.24E-13	0.00	1
ENSMUSG00000020990	Cdk11	0	13	1.37E-07	0.00	1
ENSMUSG00000041608	Entpd3	0	9	7.68E-05	0.00	1
ENSMUSG00000024986	Hhex	0	8	5.99E-06	0.00	1
ENSMUSG00000020415	Pttg1	0	8	8.09E-07	0.00	1
ENSMUSG00000042155	Klhl23	0	10	6.88E-07	0.00	1
ENSMUSG00000058420	Syt17	0	6	5.03E-07	0.00	1
ENSMUSG00000028017	Egf	0	9	6.26E-08	0.00	1
ENSMUSG00000062743	Zfp677	0	7	6.01E-05	0.00	1
ENSMUSG00000016496	Cd274	0	15	1.24E-13	0.00	1
ENSMUSG00000021792	5730469M10Rik	0	12	3.24E-10	0.00	1
ENSMUSG00000039765	Cc2d2a	0	13	6.07E-15	0.00	1
ENSMUSG00000060550	H2-Q7	0	11	3.09E-05	0.00	1
ENSMUSG00000028268	Gbp3	0	7	2.46E-08	0.00	1
ENSMUSG00000091345	Col6a5	0	6	7.04E-05	0.00	1
ENSMUSG00000069601	Ank3	0	9	2.48E-10	0.00	1
ENSMUSG00000037440	Vnn1	0	15	2.10E-16	0.00	1
ENSMUSG00000028901	Gmeb1	0	7	3.10E-06	-1.03	0.02024831

ENSMUSG00000027957	Slc35a3	0	10	1.95E-06	-1.03	0.046873222
ENSMUSG00000021000	Ctage5	0	6	2.20E-05	-1.10	0.028615648
ENSMUSG00000070327	Rnf213	0	12	2.05E-11	-1.20	0.026671243
ENSMUSG00000070583	Fv1	0	26	1.99E-26	-1.36	0.018243203
ENSMUSG00000030188	Magohb	0	29	3.70E-31	-1.83	0.000329121
ENSMUSG00000021360	Gcnt2	1	10	1.96E-08	-1.99	1.42E-05
ENSMUSG00000032246	Calml4	0	11	2.37E-12	-2.09	0.000438778
ENSMUSG00000050623	1700019N12Rik	0	18	1.88E-16	-2.10	0.02348705
ENSMUSG00000030045	Mrpl19	0	9	1.59E-05	-2.27	1.15E-06
ENSMUSG00000056671	Prelid2	0	10	1.82E-05	-2.31	1.14E-05
ENSMUSG00000034532	Fbxo16	0	11	6.36E-10	-2.33	0.004777841
ENSMUSG00000068245	D14Ertid668e	0	6	1.08E-05	-2.64	3.97E-08
ENSMUSG00000034177	Rnf43	0	9	3.06E-06	-2.65	0.018900094
ENSMUSG00000000320	Alox12	0	14	1.17E-11	-2.81	0.004462339
ENSMUSG00000025885	Myo5b	0	9	6.26E-08	-3.16	1.17E-07
ENSMUSG00000029195	Klb	0	10	4.63E-07	-3.19	0.015106567
ENSMUSG00000022054	Nefm	0	17	3.29E-14	-3.27	0.006869801
ENSMUSG00000020297	Nsg2	0	7	4.05E-05	-3.28	0.002539201
ENSMUSG00000022425	Enpp2	0	15	1.22E-14	-3.42	1.70E-10
ENSMUSG00000030137	Tuba8	0	12	1.15E-08	-3.90	0.00638555
ENSMUSG00000030739	Myh14	0	13	2.32E-08	-3.94	2.06E-11
ENSMUSG00000028179	Cth	0	11	4.32E-06	-4.09	1.50E-14
ENSMUSG00000030111	A2m	0	8	5.99E-06	-4.20	2.63E-06
ENSMUSG00000052396	Mogat2	0	11	6.36E-10	-4.31	2.55E-05
ENSMUSG00000021944	Gata4	0	6	1.08E-05	-4.90	0.000131386
ENSMUSG00000050105	Grrp1	0	7	1.01E-05	-6.91	0.00430685
ENSMUSG00000020911	Krt19	0	14	8.97E-13	-7.11	1.14E-28
ENSMUSG00000021098	4930447C04Rik	0	13	1.03E-09	-8.50	1.38E-21
ENSMUSG00000026114	Cnga3	0	7	2.63E-05	-8.84	1.11E-07
ENSMUSG00000000805	Car4	0	14	2.46E-08	-10.04	4.97E-13

Table S5. Hypomethylated promoters during the differentiation of mESC to mFC.

Gene ID	Gene Symbol	No. of hyper-methylated CpGs in this promoter	No. of hypo-methylated CpGs in this promoter	Enrichment FDR	Log2 scale fold change of gene expression (mFC/mESC)	FDR of differential gene expression
ENSMUSG00000029309	Sparcl1	0	10	1.45E-16	14.09	4.82E-178
ENSMUSG00000022311	Csmd3	0	9	1.91E-10	13.68	9.37E-93
ENSMUSG00000071862	Lrrtm2	0	19	1.08E-35	13.03	6.72E-91
ENSMUSG00000032532	Cck	0	4	7.90E-05	12.93	1.60E-82
ENSMUSG00000010803	Gabra1	0	6	3.69E-07	12.89	1.21E-133
ENSMUSG00000036295	Lrrn3	0	9	1.89E-15	12.86	5.09E-80
ENSMUSG00000033849	B3galt2	0	7	1.52E-10	12.80	3.29E-75
ENSMUSG00000070695	Cntnap5a	0	6	5.57E-07	12.69	5.61E-77
ENSMUSG00000030621	Me3	0	8	4.74E-07	12.33	2.40E-68
ENSMUSG00000025475	Gpr123	0	7	4.91E-06	12.05	2.07E-61
ENSMUSG00000034997	Htr2a	0	10	1.88E-15	12.05	1.40E-63
ENSMUSG00000019990	Pde7b	0	9	1.12E-13	11.39	6.51E-48
ENSMUSG00000038530	Rgs4	0	15	1.46E-23	11.21	4.43E-129
ENSMUSG00000024617	Camk2a	0	4	4.63E-05	11.11	9.23E-134
ENSMUSG00000026904	Slc4a10	0	9	1.89E-15	10.78	2.75E-130
ENSMUSG00000041797	Abca9	0	6	1.42E-07	10.58	3.29E-36
ENSMUSG00000061864	Galnt16	0	5	3.29E-06	10.58	3.66E-36
ENSMUSG00000045875	Adra1a	0	5	6.37E-05	10.52	1.87E-34
ENSMUSG00000046793	Gpr61	0	5	1.92E-07	10.42	3.17E-34
ENSMUSG00000054459	Vsnl1	0	6	8.29E-05	10.38	1.10E-134
ENSMUSG00000031517	Gpm6a	0	8	1.69E-11	10.37	6.71E-145
ENSMUSG00000025551	Fgf14	0	7	1.52E-10	10.34	2.76E-85
ENSMUSG00000050587	Lrrc4c	0	11	8.86E-17	10.31	2.04E-80
ENSMUSG00000050875	A730017C20Rik	0	5	4.58E-07	10.14	4.05E-24
ENSMUSG00000028864	Hgf	0	9	1.89E-15	9.94	5.50E-19
ENSMUSG00000035033	Tbr1	0	5	4.58E-07	9.77	1.62E-79
ENSMUSG00000029212	Gabrb1	0	8	3.86E-11	9.64	1.14E-76
ENSMUSG00000026678	Rgs5	0	8	2.61E-12	9.02	1.30E-68
ENSMUSG00000030249	Abcc9	0	6	8.86E-09	8.91	1.62E-11
ENSMUSG00000059974	Ntm	0	6	7.93E-08	8.66	3.28E-83
ENSMUSG00000059173	Pde1a	0	11	3.02E-17	8.56	9.78E-100
ENSMUSG00000044629	Cnrip1	0	5	3.55E-05	8.40	3.57E-58

ENSMUSG00000052848	C130026L21Rik	0	12	1.09E-17	8.40	1.25E-11
ENSMUSG00000037625	Cldn11	0	7	1.23E-07	8.39	4.24E-64
ENSMUSG00000049985	Ankrd55	0	8	7.71E-11	8.34	9.49E-11
ENSMUSG00000063727	Tnfrsf11b	0	7	3.85E-10	8.25	2.21E-10
ENSMUSG00000027188	Pamr1	0	8	1.18E-08	8.15	3.77E-56
ENSMUSG00000031772	Cntnap4	0	11	2.37E-16	7.96	1.72E-61
ENSMUSG00000023828	Slc22a3	0	7	1.80E-06	7.91	7.74E-08
ENSMUSG00000027962	Vcam1	0	6	2.00E-08	7.91	5.54E-36
ENSMUSG00000041540	Sox5	0	4	1.10E-05	7.83	1.13E-70
ENSMUSG00000024511	Rab27b	0	10	2.98E-14	7.77	1.32E-65
ENSMUSG00000031129	Slc9a9	0	8	4.42E-10	7.67	9.52E-42
ENSMUSG00000055782	Abcd2	0	6	4.36E-06	7.61	2.56E-78
ENSMUSG00000027971	Ndst4	0	6	4.21E-08	7.61	6.18E-11
ENSMUSG00000052613	Pcdh15	0	11	8.86E-17	7.57	1.40E-47
ENSMUSG00000029919	Hpgds	0	7	4.09E-08	7.52	8.19E-06
ENSMUSG00000052450	2810055G20Rik	0	11	9.15E-18	7.35	3.11E-05
ENSMUSG00000045036	Tmem232	0	7	1.04E-08	7.29	8.77E-06
ENSMUSG00000057387	4922502B01Rik	0	7	2.32E-07	7.15	4.60E-05
ENSMUSG00000073528	Gm10530	0	6	7.93E-08	7.12	0.000191574
ENSMUSG00000090386	2810055G20Rik	0	8	2.56E-10	7.02	0.000161218
ENSMUSG00000051456	Hspb3	0	10	1.13E-10	6.99	6.22E-05
ENSMUSG00000022636	Alcam	0	5	8.13E-05	6.90	7.21E-92
ENSMUSG00000051480	A130050O07Rik	0	5	9.75E-07	6.81	0.000287764
ENSMUSG00000028036	Ptgr	0	7	2.32E-07	6.77	0.000460346
ENSMUSG00000073470	Gm1604b	0	5	5.95E-08	6.64	0.000598593
ENSMUSG00000038457	Fam70b	0	7	1.73E-09	6.60	0.00104274
ENSMUSG00000049946	BC030500	0	7	1.73E-09	6.37	1.62E-16
ENSMUSG00000031626	Sorbs2	0	9	6.17E-12	6.34	2.55E-75
ENSMUSG00000091722	Siah3	0	7	3.31E-09	6.30	0.002345792
ENSMUSG00000024256	Adcyap1	0	12	4.33E-18	6.30	9.00E-42
ENSMUSG00000042662	Dusp15	0	5	8.13E-05	6.22	5.07E-16
ENSMUSG00000061762	Tac1	0	9	1.91E-10	6.11	1.16E-21
ENSMUSG00000082361	Btc	0	5	1.25E-05	6.00	0.012464022
ENSMUSG00000048148	Nwd1	0	5	5.30E-06	5.89	4.90E-48
ENSMUSG00000020334	Slc22a4	0	8	5.30E-06	5.70	6.11E-10
ENSMUSG00000014813	Stc1	0	9	1.89E-15	5.62	4.95E-10

ENSMUSG00000002107	Celf2	0	10	1.88E-15	5.55	1.18E-87
ENSMUSG00000027737	Slc7a11	0	6	2.32E-07	5.31	4.64E-63
ENSMUSG00000062480	Acat3	0	6	2.41E-06	5.20	2.26E-25
ENSMUSG00000051777	Iqcj	0	7	3.31E-09	5.15	5.21E-09
ENSMUSG00000035964	Tmem59l	0	8	1.16E-09	5.11	2.06E-57
ENSMUSG00000051373	Ppapdc3	0	8	1.69E-11	5.00	6.26E-33
ENSMUSG00000034898	Filip1	0	7	1.73E-09	4.69	1.95E-22
ENSMUSG00000035686	Thrsp	0	5	6.37E-05	4.29	6.59E-22
ENSMUSG00000022018	1190002H23Rik	0	8	2.65E-07	4.23	2.48E-24
ENSMUSG00000049690	Nckap5	0	9	5.35E-11	4.17	2.28E-11
ENSMUSG00000022860	Chodl	0	5	6.37E-05	3.96	0.002669411
ENSMUSG00000004032	Gstm5	0	8	2.20E-07	3.92	3.00E-45
ENSMUSG00000040111	Gramd1b	0	8	5.96E-09	3.72	2.98E-40
ENSMUSG00000022054	Nefm	0	7	3.35E-06	3.63	1.94E-18
ENSMUSG00000020300	Cpeb4	0	5	1.13E-08	3.61	2.11E-32
ENSMUSG00000038740	Fam125b	0	6	2.32E-07	3.60	1.33E-32
ENSMUSG00000051401	Kctd16	0	6	3.69E-07	3.55	1.21E-34
ENSMUSG00000022425	Enpp2	0	5	2.55E-05	3.40	3.40E-25
ENSMUSG00000022223	Sdr39u1	0	11	4.52E-11	3.11	6.94E-21
ENSMUSG00000031958	Ldhd	0	12	4.42E-16	3.05	2.03E-17
ENSMUSG00000024810	Ii33	0	6	4.21E-08	3.02	3.42E-24
ENSMUSG00000034308	Sdr42e1	0	7	8.95E-07	2.86	4.36E-06
ENSMUSG00000036923	Stox1	0	7	5.82E-06	2.80	0.000319093
ENSMUSG00000021994	Wnt5a	0	5	5.30E-06	2.52	2.06E-09
ENSMUSG00000024302	Dtna	0	5	3.29E-06	2.30	2.41E-25
ENSMUSG00000051351	Zfp46	0	6	8.44E-10	2.04	8.45E-13
ENSMUSG00000069601	Ank3	0	5	9.75E-07	1.86	1.45E-12
ENSMUSG00000046169	Adamts6	0	5	8.37E-06	1.76	1.05E-06
ENSMUSG00000045639	Zfp629	0	6	4.36E-06	1.22	2.55E-06
ENSMUSG00000052751	Repin1	0	6	1.54E-05	0.88	0.000426111
ENSMUSG00000024228	Nudt12	0	10	6.11E-12	0.86	0.003671238
ENSMUSG00000039043	2610034B18Rik	0	7	1.43E-06	0.72	0.023151222
ENSMUSG00000030666	Calcb	0	18	4.14E-30	0.00	1
ENSMUSG00000079679	Vwde	0	15	5.70E-26	0.00	1
ENSMUSG00000046518	Ferd3l	0	17	1.25E-24	0.00	1
ENSMUSG00000026971	Itgb6	0	12	1.61E-18	0.00	1

ENSMUSG00000045680	Tcf21	0	11	1.54E-13	0.00	1
ENSMUSG00000092071	A230065N10Rik	0	11	1.49E-11	0.00	1
ENSMUSG00000044186	Nkx2-6	0	8	1.69E-11	0.00	1
ENSMUSG00000024254	Abcg8	0	9	8.41E-11	0.00	1
ENSMUSG00000066755	Tnfsf18	0	6	1.44E-10	0.00	1
ENSMUSG00000039728	Slc6a5	0	9	5.84E-10	0.00	1
ENSMUSG00000001823	Hoxd12	0	9	5.84E-10	0.00	1
ENSMUSG00000091519	Skor2	0	9	1.67E-08	0.00	1
ENSMUSG00000078855	Gm11003	0	6	2.00E-08	0.00	1
ENSMUSG00000006311	Etv2	0	6	3.69E-07	0.00	1
ENSMUSG00000053117	E330013P04Rik	0	6	5.57E-07	0.00	1
ENSMUSG00000029321	Slc10a6	0	6	8.48E-07	0.00	1
ENSMUSG00000048763	Hoxb3	0	5	1.86E-06	0.00	1
ENSMUSG00000052481	1700036A12Rik	0	6	3.29E-06	0.00	1
ENSMUSG00000021790	Dydc1	0	6	5.71E-06	0.00	1
ENSMUSG00000074385	Gm10684	0	4	2.40E-05	0.00	1
ENSMUSG00000044052	Ccr10	0	4	2.40E-05	0.00	1
ENSMUSG00000026815	Gfi1b	0	5	2.55E-05	0.00	1
ENSMUSG00000018862	Otop3	0	5	6.37E-05	0.00	1
ENSMUSG00000027762	Sucnr1	0	3	7.16E-05	0.00	1
ENSMUSG00000090173	Fbxw10	0	4	7.90E-05	0.00	1
ENSMUSG00000044375	BC027072	0	5	8.13E-05	0.00	1
ENSMUSG00000043953	Ccrl2	0	9	6.17E-12	0.00	1
ENSMUSG00000051079	Rgs13	0	5	5.95E-08	0.00	1
ENSMUSG00000052014	A330070K13Rik	0	6	8.44E-10	0.00	1
ENSMUSG00000010311	Optc	0	5	1.84E-05	0.00	1
ENSMUSG00000009070	Rtdr1	0	8	7.71E-11	0.00	1
ENSMUSG00000049409	Prokr1	0	9	1.91E-10	0.00	1
ENSMUSG00000038540	Tmc3	0	4	1.10E-05	0.00	1
ENSMUSG00000001052	Sec24b	0	8	1.69E-11	0.00	1
ENSMUSG00000000805	Car4	0	7	2.84E-05	0.00	1
ENSMUSG00000026042	Col5a2	0	7	3.85E-10	0.00	1
ENSMUSG00000028017	Egf	0	6	5.57E-07	0.00	1
ENSMUSG00000039765	Cc2d2a	0	6	3.69E-07	0.00	1
ENSMUSG00000027832	Ptx3	0	6	1.75E-06	0.00	1
ENSMUSG00000029063	Nadk	0	4	7.90E-05	-0.51	0.010086471

ENSMUSG00000028268	Gbp3	0	5	4.58E-07	-0.59	0.047499235
ENSMUSG00000030213	Atf7ip	0	9	3.71E-07	-1.11	2.44E-06
ENSMUSG00000031523	Dlc1	0	12	1.61E-18	-1.25	2.15E-10
ENSMUSG00000018143	Mafk	0	7	9.86E-05	-1.83	2.43E-11
ENSMUSG00000015363	Trabd	0	6	2.32E-07	-1.84	9.42E-17
ENSMUSG00000024986	Hhex	0	5	8.13E-05	-2.88	1.95E-05
ENSMUSG00000073409	H2-Q6	0	26	1.71E-37	-2.99	0.002765657
ENSMUSG00000030188	Magohb	0	8	1.10E-07	-2.99	1.05E-21
ENSMUSG00000078249	Hmga1-rs1	0	6	1.22E-06	-4.91	3.17E-58
