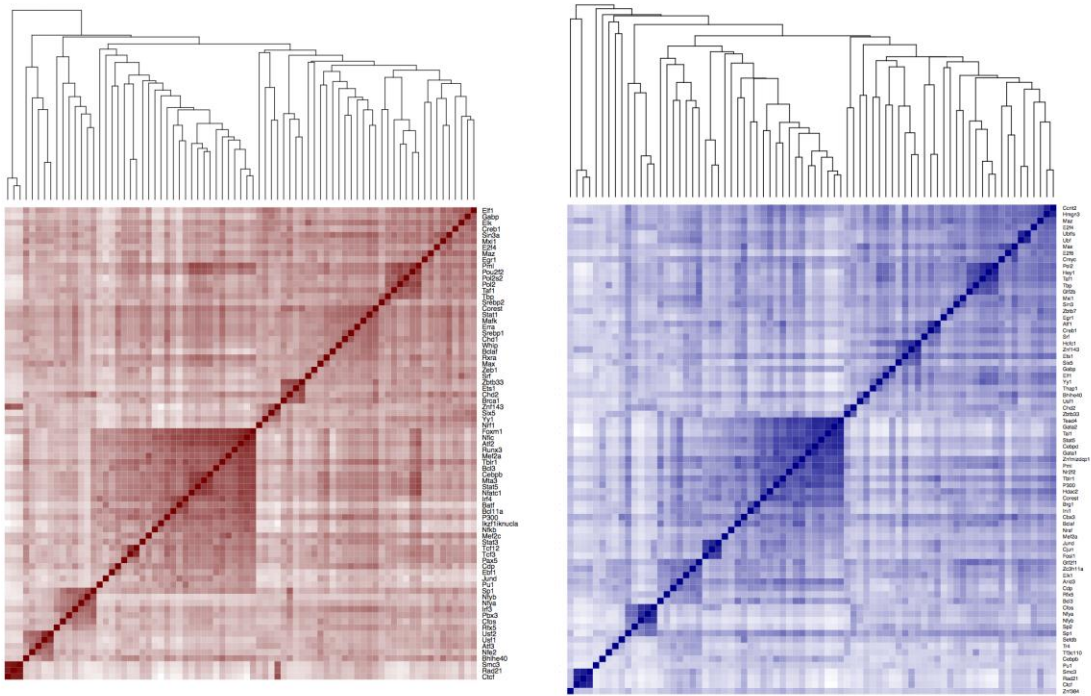
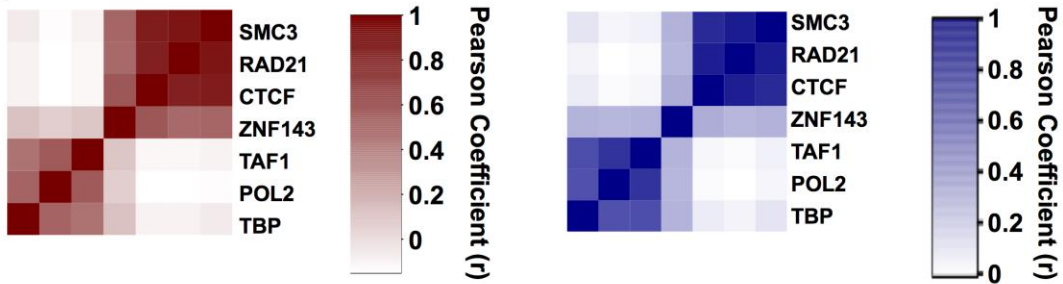


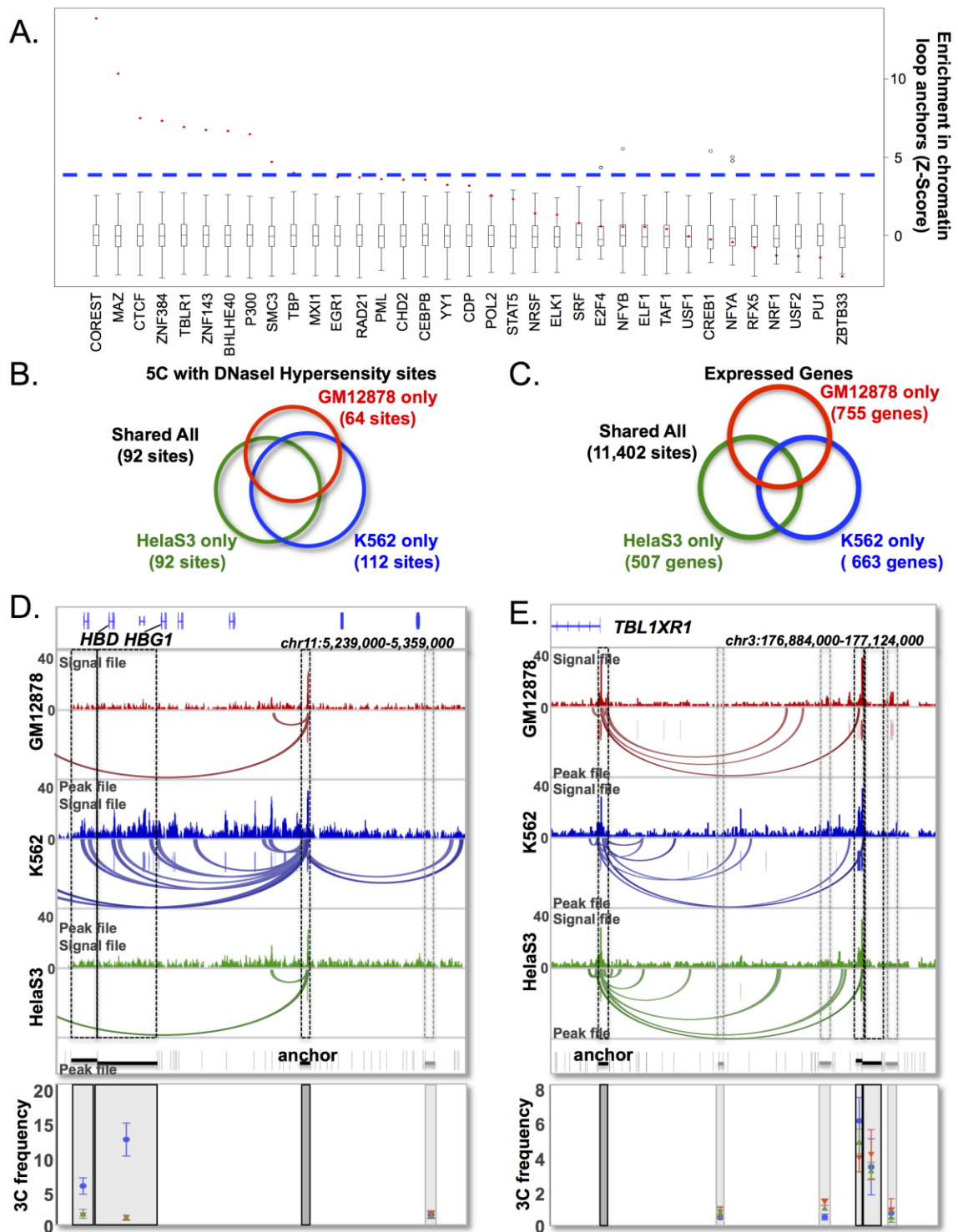
A.



B.



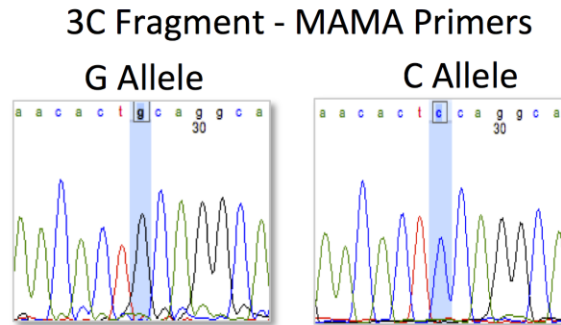
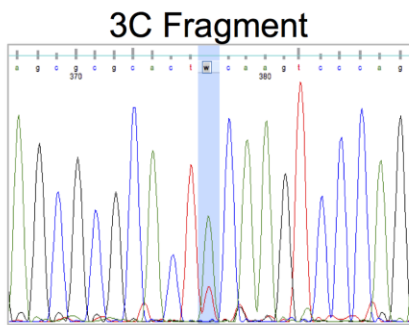
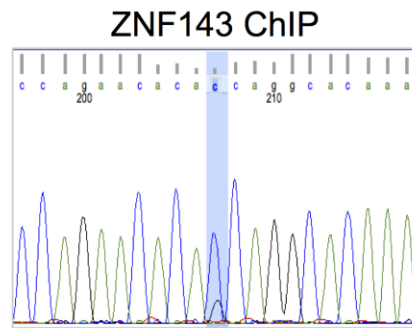
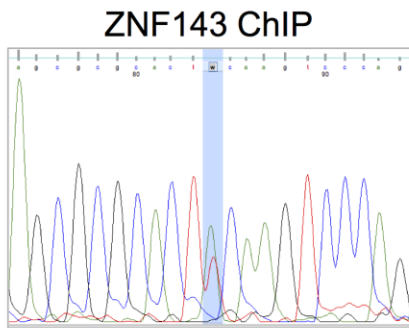
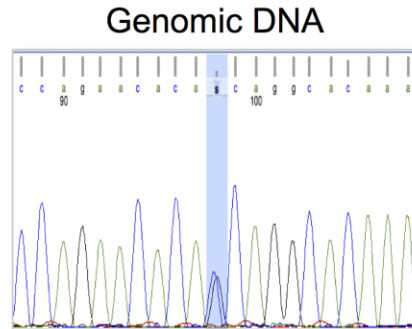
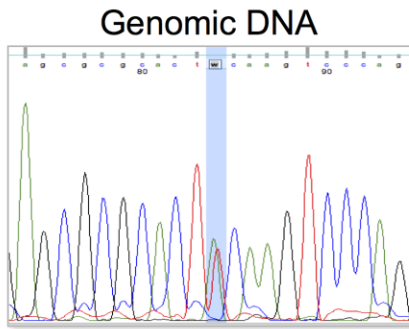
**Supplementary Figure 1: ZNF143 bridges promoter factors with CTCF and cohesin.**



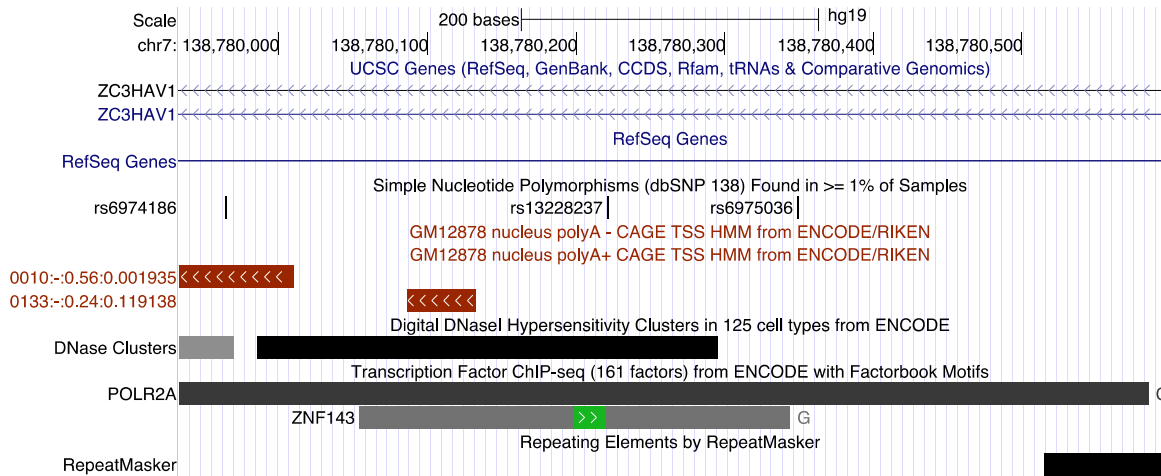
**Supplementary Figure 2: ZNF143 is enriched within the anchors of chromatin interactions and displays cell type-specificity.** Black boxes and bars indicate the anchor and test regions. Grey boxes and bars indicate control regions.

rs2232015

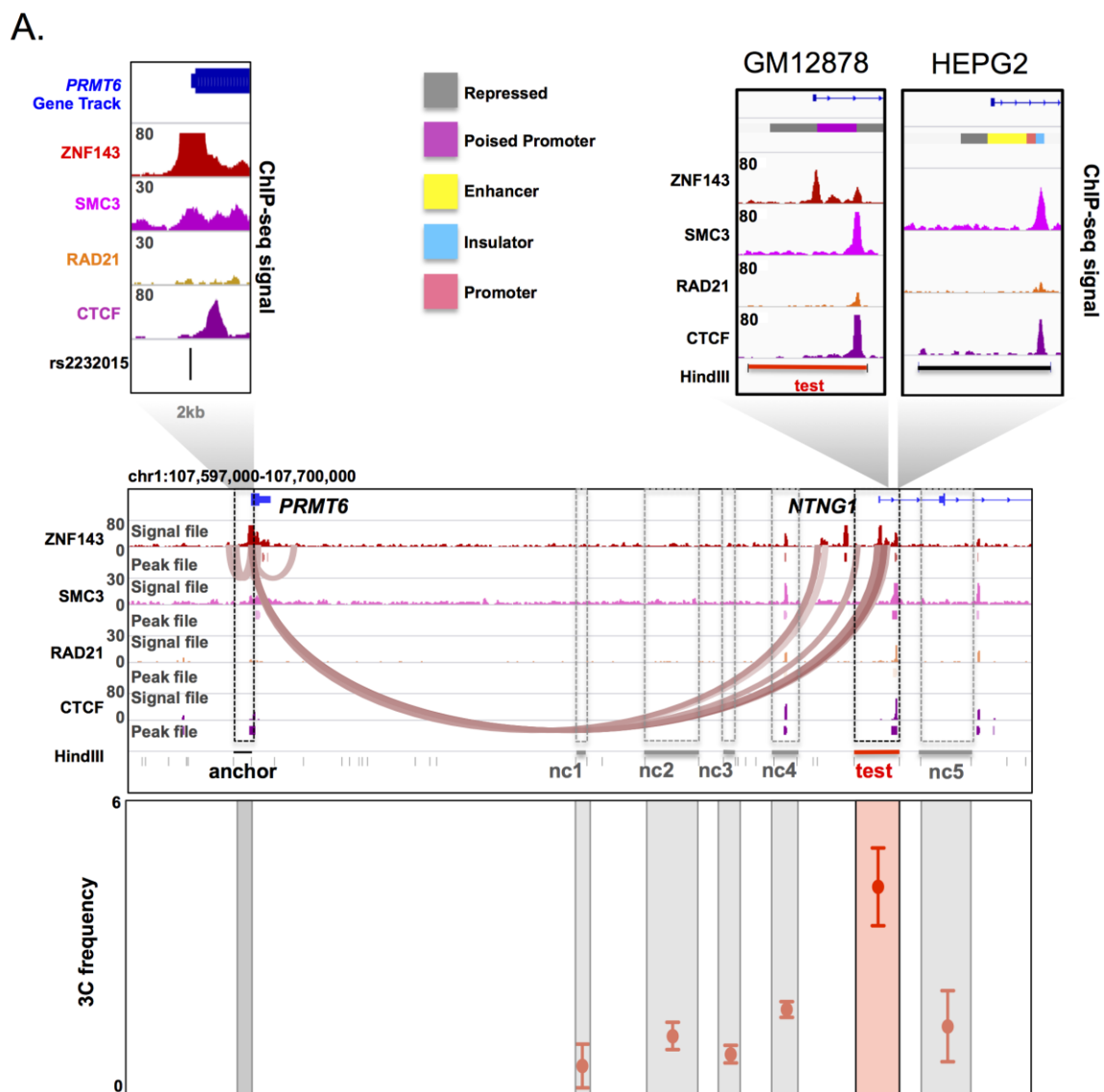
rs13228237



**Supplementary Figure 3: SNPs causing allele-specific ZNF143 binding lead to allele-specific changes in the frequency of chromatin interactions**

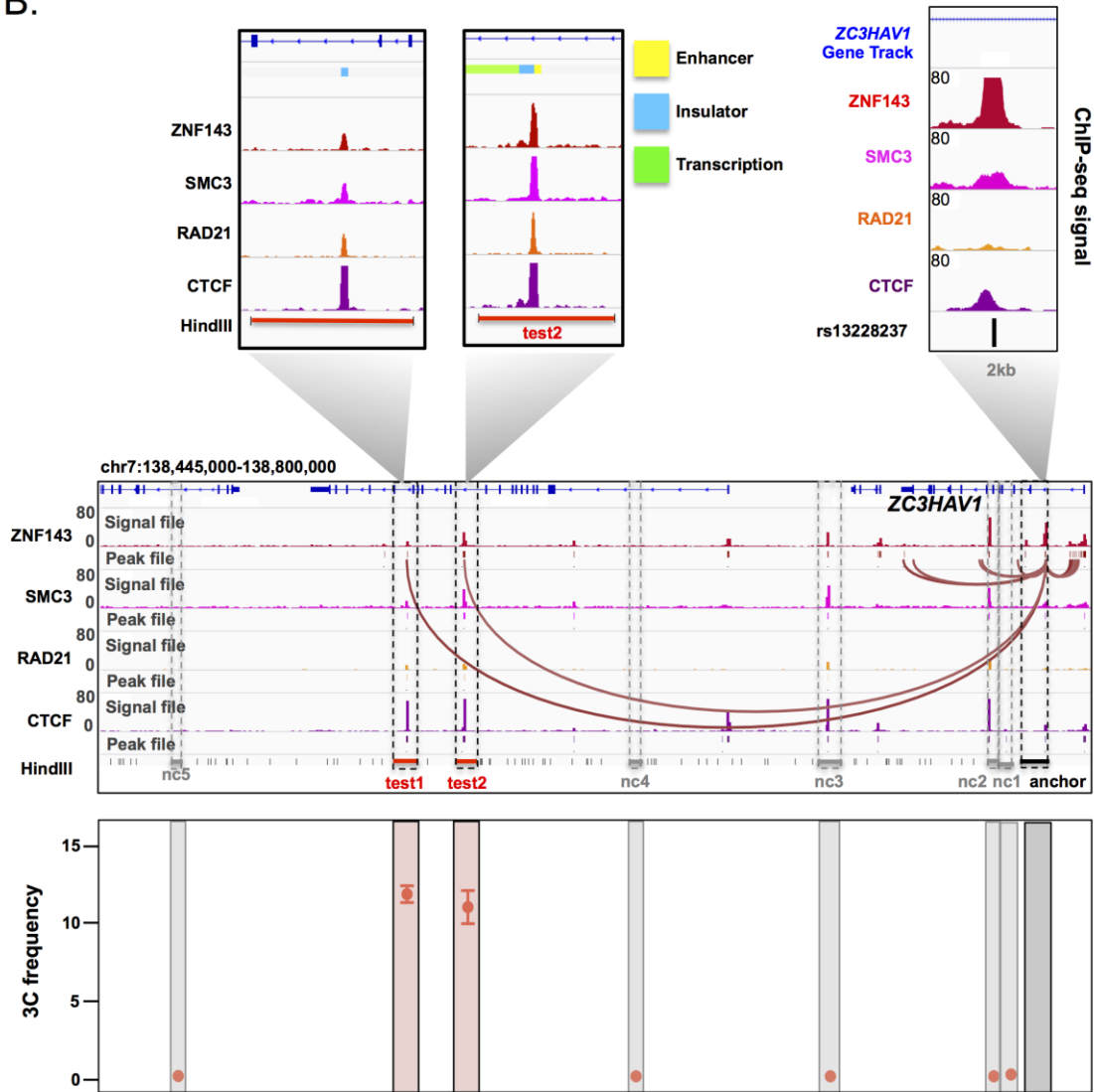


**Supplementary Figure 4: The ZNF143 binding site modulated by the rs13228327 SNP at the *ZC3HAV1* gene locus and may represent an unknown isoform of *ZC3HAV1* gene.**



**Supplementary Figure 5a: The *PRMT6* locus displays allele-specific ZNF143 binding to the chromatin leading and a change in the frequency of a distal chromatin interaction. Test (red) is the test region. nc1-5 (grey) are the negative control regions.**

B.



**Supplementary Figure 5b: The *ZC3HAV1* locus displays allele-specific ZNF143 binding to the chromatin leading to a change in the frequency of distal chromatin interactions.** Test (red) is the test region. nc1-5 (grey) are the negative control regions.

Cell name	GEO accession number	Platform	Protocol
GM12878	GSM591661/GSM591673	Illumina	Paired-end non-specific
GM12878	GSM591664/GSM591669	Illumina	Strand-specific not paired end
GM12878	GSM958728/GSM958728	Illumina	Paired-end non-specific
GM12878	GSM958730/GSM958730	Illumina	Strand-specific not paired-end
HeLaS3	GSM591670/GSM591671	Illumina	Strand-specific not paired-end
HeLaS3	GSM591682/GSM591659	Illumina	Paired-end non-specific
HeLaS3	GSM765402/GSM765402	Illumina	Paired-end non-specific
HeLaS3	GSM767848/GSM767848	Illumina	Paired-end non-specific
K562	GSM883635/GSM672833	Illumina	Paired-end non-specific
K562	GSM591666/GSM591668	Illumina	Paired-end non-specific
K562	GSM591679/GSM591660	Illumina	Strand-specific not paired-end
K562	GSM958729/GSM958729	Illumina	Paired-end non-specific

**Supplementary Table 1 : List of RNA-seq experiments for the GM12878, K562 and HeLaS3 cell lines.** The Gene Expression Omnibus (GEO) accession number, the sequencing platform and the protocol used to measure the gene expression levels are listed.

**3C**

3C_01	CACCAGGGGTGAAGAGTTTT	<i>TBLIXR1</i> anchor
3C_02	GCCTTCTCTTACAGCCAAATG	nc1
3C_03	TGATGGGACTTGCAGTTTGA	nc2
3C_04	CCTGTTGAGCCCAGAGAGAT	test1
3C_05	CCCGCTCCTCTGATGTTTAC	test2
3C_06	GCAGGTTTCCATTCTTACACC	nc3
3C_07	CCAAATGGGTGACTGTAGGG	<i>HBB</i> region enhancer anchor
3C_08	AGGGCGCAGGCTTATTATTT	<i>HBD</i>
3C_09	TGGTTATGGTCAGAGCCTCA	<i>HBB</i>
3C_10	TTCAAGTTCCTGGCACTCAC	nc
3C_11	TCAACATGACCCCTTTTAGGA	<i>EEF1A1</i> anchor
3C_12	GTTTAGTGTGCAGGGCCAAT	nc1
3C_13	GATCCCTGCTGTGAGTGGTT	test
3C_14	CTTTTGGCTCATCCCCTTT	nc2
3C_15	GCAGGAAGTAGGAAGGACGA	<i>PRMT6</i> anchor
3C_16	CGTCTTCCACACTTCAACCA	nc1
3C_17	TGGGCTAAAACCACAACCTC	nc2
3C_18	AGGGGCAAAGTCTTGTGAGA	nc3
3C_19	GTTGGGTCCTTGCAAAAGAG	nc4
3C_20	TAAACCTCCAGCAAGCCCTA	test
3C_21	TTGTCAATGGGGAAGAATCTG	nc5
Int_F	TGGGTGGTGTTCATCTGGTAA	Internal control
Int_R	GGATGGAATGGATCAGATGG	

**ChIP**

ChIP_01	GGAGAGGAATTGAGGCAGAA	<i>TBLIXR1</i> promoter
ChIP_02	GTTGAGTGTCTGAGCCGTTG	
ChIP_03	CGCTCCTCTGCTCAGTCATT	<i>TBLIXR1</i> enhancer
ChIP_04	CCGGAGTGCTCCTCTCTTAG	
ChIP_05	CACGGCGACTACTGCACTTA	<i>EEF1A1</i> promoter
ChIP_06	AACCGGTGCCTAGAGAAGGT	
ChIP_07	TTTTGCCTAGTGTCCCTGCT	<i>EEF1A1</i> enhancer
ChIP_08	GCGAACAATGGAAAGTCACA	

**RT PCR**

RT_01	CGATCCATCATCCGCAATG	<i>28S rRNA</i>
RT_02	AGCCAAGCTCAGCGCAAC	
RT_03	CGCAGTCTGACACCATCTTG	<i>ZNF143</i>
RT_04	CCAATCATTCCAGTACCTGCT	
RT_05	ACCCGCTGCATTGATTTCTA	<i>TBLIXR1</i>
RT_06	ACGGCATCTATCAGGGACAG	
RT_07	ACTGGGATGTGCATGTTGAA	<i>EEF1A1</i>
RT_08	TGGACCCTTCCACTCATAGG	

**MAMA**

rs2232015_F	<a href="#">ATGCCAGGACACCAGAAGAG</a>	rs2232015
rs2232015_R	CCCCGACTCAAGCTTTCCTT	
Forward_A	GAAGGACGAGCGCGCAC <b>AA</b>	
Forward_T	GAAGGACGAGCGCGCAC <b>AT</b>	
Reverse_A	CGGGGGCTTCTGGGACTT <b>AT</b>	
Reverse_T	CGGGGGCTTCTGGGACTT <b>AA</b>	

**Supplementary Table 2:** Primers used in this study.