

## Supplementary Tables and Figures

**Table 1S. Assay design for pyrosequencing analysis of the DNA methylation of the *PRDM16*, *BMP7*, *CTBP2* and *PPARGC1 $\alpha$*  gene loci**

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<i>PRDM16</i> -A (1 CpG)	Seq: 5'-CCCTAAAATTCATCATT-3' F: 5'bio-GTGGTGATAAAAGGTAGAGGAAATAG-3' R: 5'-ACTCAACCCTAAAATTCATCA-3'	90 bp
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*gDNA*  
ACTTAAAAGGATTAAACGGACCTCGGAGGAGCCTCGGCGTTTCACCCGTTGGTGACAA  
AAGGCAGAGGAAACAGAAGGGAGCACGGCTTTGTCCCCAAATCCCACTTATAC<sup>1</sup>GA  
AATGATGAAATTTTCAGGGCTGAGCATCCATCGTGGGCCCGGGAACCGGCCTCTCAG  
CCTCTCTTTTCGCTTCTCTCTAGTCATAAGCATTATCTTGGTCT

*Bisulfite treated DNA*  
ATTTAAAAGGATTAAACGGATTTTCGGAGGAGTTTCGGCGTTTTATTTCGTGGTGATAA  
AAGGTAGAGGAAATAGAAGGGAGTACGGTTTTGTTTTTAAATTTTTATTTATAC<sup>1</sup>GAA  
ATGATGAAATTTTAGGGTTGAGTATTTATCGTGGGTTTCGGGAATCGGTTTTTTAGTT  
TTTTTTTTCGTTTTTTTTTAGTTATAAGTATTATTTTGGTT

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<i>PRDM16</i> -B (3 CpGs)	Seq: 5'-AAAATTTATAAACCCATCA-3' F: 5'bio-AGGTTTAGAGGAGGGTTAAA-3' R: 5'-ACCCAATAAAACAACCATAATTCTA-3'	238 bp
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*gDNA*  
GGGACCTGGAAAAAAAACCCTTCAGAAGCTTCGGAAAAAACGCATCCACCCAGCC  
AGCCCCTAGGGCGAGGGGCGGGAGTGCAGAGGCTTAGAGGAGGGTCAAAAATAAAT  
CGAGCTAATAAAGTCATTCC<sup>3</sup>GCC<sup>2</sup>GGAAGAGGGGCC<sup>1</sup>GGTGATGGGTCCATAAATCT  
CTCCCGTTATTATTATTACGTACAAAATGCTACAGGTCATAAAAGTCGTCTGATAGC  
CCAGCCTTGCAATTGTCCAAACAGGGTGATTGATTGATAATGACGATAATTTGTGAAA  
TGATTATTTGGATGTTAGAACCATGGCCTGTCCCACTGGGCTGTTCTGTGGGCGTTTT  
CTATAGCCCCGGCCCGGGCAAAATGCCTCTGGTAA

*Bisulfite treated DNA*  
GGGATTTGGAAAAAAAATTTTTTAGAAGTTTCGGAAAAAACGTATTTATTTTAGTTA  
GTTTTTAGGGCGAGGGGCGGGAGTGTAGAGGTTTAGAGGAGGGTTAAAAATAAATC  
GAGTTAATAAAGTTATTTCC<sup>3</sup>GTC<sup>2</sup>GGAAGAGGGGTC<sup>1</sup>GGTGATGGGTTTATAAATTTT  
TTCGGTTATTATTATTACGTATAAAATGTTATAGGTTATAAAAGTCGTTTTGATAGTTT  
AGTTTTGCATTGTTTAAATAGGGTGATTGATTGATAATGACGATAATTTGTGAAATGA  
TTATTTGGATGTTAGAAATTATGGTTTTGTTTTATTGGGTTGTTTTGTGGGCGTTTTTTAT  
AGTTCGGTTCGGGTAAAATGTTTTTGGTAA

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<i>BMP7</i> (4 CpGs)	Seq: 5'-GGGATTGAGGGGTAAG-3' F: 5'-GGGGTTAGAGTGGTTGGTTTAAAA-3' R: 5'bio-AAAAAAATCCAAACCCACCCTACCCTCTC-3'	214 bp
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The second CpG (C<sup>2</sup>) contains a listed SNP (rs116320975; G/A). The reported minor allele frequency of the A is less than 0.01%.

*gDNA*

GCGAGCGCAGAGACAGGCTGGCAACGGCTTCAGGGAGGCGCGGAGGGGTCAGCGTG  
GCTGGCTTAAAAAGATACAGGGACTGAGGGGCAAGACC<sup>1</sup>GGCTCAAGGGTCACC<sup>2</sup>GC  
 TTCCAGGAAGCCTTCTATTTCC<sup>3</sup>GC<sup>4</sup>GCCACCTCCGCGCTCCCCAACTTTTCCCACCG  
 CGGTCCGCAGCCCACCCGTCCTGCTCGGGCCGCCTTCCTGGTCCGGACCGCGAGTGC  
CGAGAGGGCAGGGCCGGCTCCGATTCTCCAGCCGCATCCCCGCGACGTCCCCGCCAG  
 GCTCTAGGCACCCCGTGGGCACTCAGTAAACATTT

*Bisulfite treated DNA*

GCGAGCGTAGAGATAGGTTGGTAACGGTTTTAGGGAGGCGCGGAGGGGTTAGCGTG  
GTTGGTTTTAAAAAGATATAGGGATTGAGGGGTAAGATC<sup>1</sup>GGTTTAAGGGTTATC<sup>2</sup>GTT  
 TTTAGGAAGTTTTTTATTTTC<sup>3</sup>GC<sup>4</sup>GTTATTTTCGCGTTTTTTTAATTTTTTTATCGCGG  
 TTCGTAGTTTATTCGTTTTGTTTCGGGTCGTTTTTTTGGTTCGGATCGCGAGTGTCGAGA  
GGGTAGGGTCGGTTTCGATTTTTTTAGTCGTATTTTCGCGACGTTTCGTTAGGTTTTAG  
 GTATTTTCGTGGGTATTTAGTAAATATTT

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<i>CTBP2</i> (6 CpGs)	Seq: 5'-GGATGGAGGAGATTATAT-3' F: 5'-GGTATTTAGGGATGGAGGAGATTA-3' R: 5'bio-CCAAAACCCCCCAAACCTCTT-3'	252 bp
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*gDNA*

GAAAAGGGTCGTGCAGCTCGGTGGCCTCTCCTCCGGCCCCCTGGCCCTGGCTGTAAG  
 TTTCTCGGCTCTGCAGGGCGCGGGGCACTCAGGGATGGAGGAGACCACACC<sup>1</sup>GC<sup>2</sup>GC  
<sup>3</sup>GGCTGGGTT<sup>4</sup>GC<sup>5</sup>GGAATGGC<sup>6</sup>GGTCCCTGCGGCC<sup>7</sup>TCCAAAGGCCGACCTCAGACC  
 CCTCCCACTCCTTTCCTGCTCGACATCTCAATCCAGCTCCTAATATCTCAATAGGGTT  
 TTTAAACAAATCGATCCTAAGGGCTCAGTTCAGCCACCCAGGGATTCTCGGAGGAC  
 GCACGCCGAACCTCAGGGTAGTGAGAAAGAGTTTGGGGGGCCCTGGGGCGCAGGGAGA  
 AGACCCCACTCCA

*Bisulfite treated DNA*

GAAAAGGGTCGTGTAGTTCGGTGGTTTTTTTTTCGGTTTTTTGGTTTTGGTTGTAAGTT  
 TTTTCGGTTTTGTAGGGCGCGGGGTATTTAGGGATGGAGGAGATTATATC<sup>1</sup>GC<sup>2</sup>GC<sup>3</sup>GT  
 TGGGTT<sup>4</sup>GC<sup>5</sup>GGAATGGC<sup>6</sup>GGTTTTTTCGGTTTTTTAAAGGCCGATTTTAGATTTTTTT  
 TATTTTTTTTTTGTTCGATATTTAATTTAGTTTTTTAATATTTAATAGGGTTTTTAAAT  
 AAATCGATTTTAAAGGGTTTAGTTTTAGTTTTATTTAGGGATTTTCGGAGGACGTACGTCG  
 AATTTAGGGTAGTGAGAAAGAGTTTGGGGGGTTTTGGGGCGTAGGGAGAAGATTTTAT  
 ATTTTA

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Seq: 5'-TTAAGGTAGTTAGGGAGGAAA-3'  
*PPARGC1α-A* F: 5'-TTAGGGTATTAGGGTTGGAATTTAATGT-3' 191 bp  
(2 CpGs) R: 5'bio-ACTTCCTTCTAATTATTTCCATTTCTCTC-3'

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*gDNA*

CCCCTCAGTTCACAGACATTCTTGATTTCAAACGCAAACCTACACAACCCAGGGCAC  
TAGGGTTGGAATTC AATGTTTATTCAA AAAAGGCACCCTAAGGCAGTTAGGGAGGAAA  
C<sup>1</sup>GCTACATGTATGAAAAATAGGAGCC<sup>2</sup>GGAATCAAAGCTGATCTGAGCAGAGCAG  
CAGCGACTGTATTTACTAACACTTGTTTTCTGGGAGCCTATGAGAGAAATGGAAATA  
ATTAGAAGGAAGCTGAAAGGATGGGGTTTTATGGCTTGTTCTCCTTATATGGAGCAA  
AGAAAAC

*Bisulfite treated DNA*

CCCCTCAGTTCACAGACATTCTTGATTTCAAACGCAAACCTACACAACCCAGGGCAC  
TAGGGTTGGAATTC AATGTTTATTCAA AAAAGGCACCCTAAGGCAGTTAGGGAGGAAA  
C<sup>1</sup>GCTACATGTATGAAAAATAGGAGCC<sup>2</sup>GGAATCAAAGCTGATCTGAGCAGAGCAG  
CAGCGACTGTATTTACTAACACTTGTTTTCTGGGAGCCTATGAGAGAAATGGAAATA  
ATTAGAAGGAAGCTGAAAGGATGGGGTTTTATGGCTTGTTCTCCTTATATGGAGCAA  
AGAAAAC

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Seq: 5'-TTAATTTTTTGT TTTAGTTTATTAG-3'  
*PPARGC1α-B* F: 5'-AGTTGTTGGTGAGGGTATT-3' 153 bp  
(2 CpGs) R: 5'bio-CTATATCCAAAAAAAATTTCTTCCC-3'

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*gDNA*

CAGTCACAACACTTACAAGGTAGGCTGGGGACCAAACGAGCTGTTGGTGAGGGCA  
CTGGAAGCAAAGAAAGCACATGCAAAGTCTGAGAACACACCAACTTCTTGCCTCCGT  
CCCATCAGC<sup>1</sup>GTCACTCTGTGGAAAGAGAATTCAGCACTTATTACAGAGC<sup>2</sup>GGGGGAA  
GAAACCTTTCCTTGGACACAGGTTAAACATATTCTATTTCAGCTGATAGGCAGTCTAAT  
TCACAAGCACCAAAGACTCCTGAAATGTTAGCCAGGTG

*Bisulfite treated DNA*

TAGTTATAATATTTATAAGGTAGGTTGGGGATTA AAAACGAGTTGTTGGTGAGGGTAT  
TGGAAGTAAAGAAAGTATATGTAAAGTTTGAGAATATATTAATTTTTTGT TTTTCGTTT  
TATTAGC<sup>1</sup>GTTATTTTTGTGGAAAGAGAATTTAGTATTTATTATAGAGC<sup>2</sup>GGGGGAAGA  
AATTTTTTTTTTGGATATAGGTTAAATATATTTTATTAGTTGATAGGTAGTTTAATTTA  
TAAGTATTA AAAAGATTTTTGAAATGTTAGTTAGGTG

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