

## SUPPLEMENTARY TABLES

**Supplementary Table 1. Primer sequences used for qRT-PCR in this study.**

Gene	Sequence
GPC5-AS1-F	5'-AGAAGAGGGAAAGGGAAGGTC-3'
GPC5-AS1-R	5'-ACTACTGGGGAGGCTGAGGT-3'
GPC5-F	5'-TGTGATGATGAAGATGGTTGC-3'
GPC5-R	5'-GCCAGTGTCTGTTTATGGA-3'
GPC5-AS1 promoter region-F	5'-CGGACATTTGGGGTATTA-3'
GPC5-AS1 promoter region-R	5'-TCGCAGGCATTAGGTGGT-3'
GAPDH-F	5'-TGAAGGTCGGAGTCAACGGATT-3'
GAPDH-R	5'-CCTGGAAGATGGTGATGGGATT-3'
hsa-miR-93-RT	5'-GTCGTATCCAGTGCCTGTCGTGGAGTCGGCAATTGCACTGGATACGACCTACCTG-3'
hsa-miR-93-F	5'-ATCCAGTGCCTGTCGTG-3'
hsa-miR-93-R	5'-TGCTCAAAGTGCTGTTCGTG-3'
hsa-miR-106a-RT	5'-GTCGTATCCAGTGCCTGTCGTGGAGTCGGCAATTGCACTGGATACGACCTACCTG-3'
hsa-miR-106a-F	5'-ATCCAGTGCCTGTCGTG-3'
hsa-miR-106a-R	5'-TGCTAAAAGTGCTTACAGTG-3'
U6-RT	5'-CGCTTCACGAATTTGCGTGCAT-3'
U6-F	5'-GCTTCGGCAGCACATATACTAAAAT-3'
U6-R	5'-CGCTTCACGAATTTGCGTGCAT-3'

**Supplementary Table 2. Information on antibodies used for the correlation analysis.**

Antibody	WB	Specificity	Company
MeCP2 (sc-20700)	1:1000	Rabbit polyclonal	Santa Cruz Biotechnology
GPC5 (ab123886)	1:1000	Rabbit Monoclonal	Abcam
GAPDH (sc-8432)	1:1000	Mouse Monoclonal	Cell Signaling Technology
MeCP2 ChIP Grade (ab2828)	-	Rabbit polyclonal	Abcam
GFP ChIP Grade (ab290)	-	Rabbit polyclonal	Abcam
IgG ChIP Grade (ab171870)	-	Rabbit polyclonal	Abcam

**Supplementary Table 3. Sequences of siRNA or shRNA.**

Name	Sequence
negative siRNA (NC-siRNA) sense	5'-UUCUCCGAACGUGUCACGUTT-3'
negative siRNA (NC-siRNA) antisense	5'-ACGUGACACGUUCGGAGAATT-3'
si-MeCP2 sense	5'-GCUUAAGCAAAGGAAAUCUTT-3'
si-MeCP2 antisense	5'-AGAUUCCUUUGCUUAAGCTT-3'
sh-Control target sequence	5'-TTCTCCGAACGTGTCACGT-3'
sh-GPC5-AS1 target sequence	5'-GCAACTCCACATAATATCTGG-3'
sh-GPC5 target sequence	5'-GCATGGAACATACGACATTGG-3'

**Supplementary Table 4. Sequences of MECP2 MT recombinant plasmids.**

Name	Sequence
MECP2-WT MBD sequence	5'-AGGGGCCCTATGTATGATGACCCTACACTGCCCGAGGGCTGGACCAGGAAACTGAA GCAGAGGAAGTCCGGA <b>AGGAGCGCCGGCAAATACGAT</b> GTCTACCTGATTAACCCCA GGGCAAGGCCTTTAGATCCAAGGTGGAGCTG <b>ATCGCCTACTTTGAGAAGGTC</b> GGCGA CACATCCCTAGACCCGAATGACTTCGACTTCACAGTGACCGGCAGAGGA-3'
MECP2-MT1 MBD sequence	5'-AGGGGCCCTATGTATGATGACCCTACACTGCCCGAGGGCTGGACCAGGAAACTGAA GCAGAGGAAGTCCGGA <b>GATCAGTATCAGAAAGGTCGC</b> GTCTACCTGATTAACCCCA GGGCAAGGCCTTTAGATCCAAGGTGGAGCTGATCGCCTACTTTGAGAAGGTCGGCGAC ACATCCCTAGACCCGAATGACTTCGACTTCACAGTGACCGGCAGAGGA-3'
MECP2-MT2 MBD sequence	5'-AGGGGCCCTATGTATGATGACCCTACACTGCCCGAGGGCTGGACCAGGAAACTGAA GCAGAGGAAGTCCGGAAGGAGCGCCGGCAAATACGATGTCTACCTGATTAACCCCA GGGCAAGGCCTTTAGATCCAAGGTGGAGCTG <b>CATGACAAGCAGGCCGAGAGT</b> GGCGA CACATCCCTAGACCCGAATGACTTCGACTTCACAGTGACCGGCAGAGGA-3'

**Supplementary Table 5. Sequences of MeCP2 binding to GPC5-AS1 promoter region.**

Gene	Sequence
GPC5-AS1	ATCTATTTATTGCTTTAAGTTGGACATCTTCCTCTCCA ACTTAGTTTAATGA GTGGTTTTTCAGCTGAAACCCGGACATTTGGGGTATTATGTGTAAGGGACTCC AGATATTATTTCAACCTTCCGTTTTAGCTGATTTCCACAGACTCCATTACTGC AGGCTATGGGAGAGCACCACCTAATGCCTGCGAGGTGTGGATAAAAGTCTG