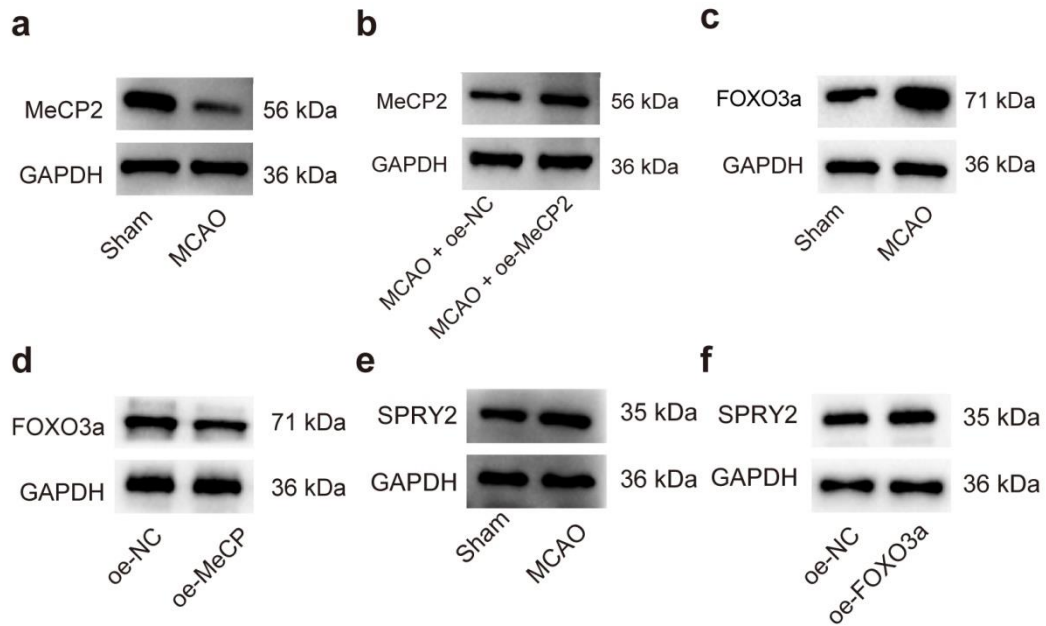


Supplementary Information

Supplementary Fig. 1. **a.** Representative protein bands of Fig. 1f. **b.** Representative protein bands of Fig. 2b. **c.** Representative protein bands of Fig. 4a. **d.** Representative protein bands of Fig. 4h. **e.** Representative protein bands of Fig. 6b. **f.** Representative protein bands of Fig. 6g.



Supplementary Table 1. Primer sequences used for RT-qPCR

Gene	Primer sequence
MeCP2	Forward: 5'-AGTCTTCCATACGGTCTGTGCA-3'
	Reverse: 5'-CTTCCCGCTTTTCTCACCAAG-3'
FOXO3a	Forward: 5'-TGCTGACGGGTTGGATTT-3'
	Reverse: 5'-CCAGTGAAGTTCCCCACATT-3'
SPRY2	Forward: 5'-ATTCAAGGGAGAGGGGTTGG-3'
	Reverse: 5'-TCCATCAGGTCTTGGCAGTG-3'
GAPDH	Forward: 5'-CCTCGTCCCGTAGACAAAATG-3'
	Reverse: 5'-TGAGGTCAATGAAGGGGTCGT-3'

Supplementary Table 2. FOXO3a methylation-specific PCR and bisulfite sequencing PCR primer sequences

Gene	Primer sequence
FOXO3a (M)	Forward: 5'-ATATACGTGTGTTGGTAAATAAGCG-3'
	Reverse: 5'-CTAACGAAACGAAAAAAACGAA-3'
FOXO3a (U)	Forward: 5'-AATAATATATATGTGTGTTGGTAAATAAGT-3'
	Reverse: 5'-ACCCTAACAAAACAAAAAAACAAA-3'
Bisulfite sequencing PCR	Forward: 5'-TTTTTTTTGTTTTTGTAATTTTATT-3'
	Reverse: 5'-CAAACAAATAATATCATTATCTCTACAC-3'

U, unmethylated; M, methylated.