

Table S1. The sequence of primers

METTL14	Forward: 5'-GTT GGA ACA TGG ATA GCC GC-3'
	Reverse: 5'-CAA TGC TGT CGG CAC TTT CA-3'
YTHDF2	Forward: 5'-TAGCCAACTGCGACACATTC-3'
	Reverse: 5'-CACGACCTTGACGTTTCCTTT-3'
KDM5C	Forward :5'-GAGGTGACCCTGGATGAGAA-3'
	Reverse :5'-CAGGAGCTGAGGTCTGAAC-3'
YTHDF1	Forward:5'-ATGTCGGCCACCAGCGTGGACA-3'
	Forward:5'-TCATTGTTTGTTCGACTCTGC-3'
YTHDF3	Forward : 5'-TGACAACAAACCGGTTACCA-3'
	Reverse: 5'-TGTTTCTATTTCTCTCCCTACGC-3'
GAPDH	Forward: 5'-GGTGGTCTCCTCTGACTTCAA-3'
	Reverse: 5'-GTTGCTGTAGCCAAATTCGTTGT-3'
SOX4(precursor)	Forward:5'-GCAAGATCATGGAGCAGTCG-3'
	Reverse:5'-GGGCCGGTACTTGTAGTCG-3'
SOX4(mature)	Forward:5'-GGTCTCTAGTTCTTGCACGCTC-3'
	Reverse:5'-CGGAATCGGCACTAAGGAG- 3'

Table S2. The sequence of shRNAs

shNC	ACTCAAAAGGAAGTGACAAGA
shMETTL14-1	GCTAAAGGATGAGTTAAT
shMETTL14-2	GGACTTGGGATGATATTAT
shSOX4	AAGAAGGTGAAGCGCGTCTA
shYTHDF2-1	GAACGTCAAGGTCGTGGGAAA
sh-YTHDF2-2	ACACATTCGCCTAGAGAACAA
shYTHDF1-1	GATACAGTTCATGACAATGA
shYTHDF1-2	GAAACGTCCAGCCTAATTCT
shYTHDF3-1	GGACGTGTGTTTATAATTA
shYTHDF3-2	GACTAGCATTGCAACCAAT
shKDM5C-1	GGAGGAAGGTGGTTATGAA
shKDM5C-2	GGAGGAAGGTGGTTATGAA

Table S3. The sequence of primers for ChIP.

C1	Forward: 5'-AACAGACGCCATTCACAT- 3'
	Reverse:5'-AGGACTGGTAGCCATCCTG- 3'
C2	Forward: 5'-GAAGCAGAGGGTAGGTGAG- 3'
	Reverse:5'-ATGGCAAGCACTGTGATAGG- 3'
C3	Forward: 5'-AAATACACTTTAACTCATATGGACA- 3'
	Reverse:5'-GGGCAAGACTAGATTCTACTTAG- 3'
C4	Forward: 5'-CGCCACTGTAGGCTTGAAATA- 3'

	Reverse: 5'-AACCCAAGGATAAGGAAACAAA- 3'
C5	Forward: 5'-TGTGGCTGTTACCTGCGTGA- 3'
	Reverse: 5'-AGCGGTGTAGAAGTGCTTGTTATT- 3'
C6	Forward: 5'-AAACGTCAGGACTGTCATCT- 3'
	Reverse: 5'-GCAGGTTCCCTTGGTGTAT- 3'
C7	Forward: 5'-TCCAAGTGGCGTCACATAGC- 3'
	Reverse: 5'-CCGGGAGCTTACGAACAGAG- 3'
C8	Forward: 5'-TTTCTGGTCCTGCGATCTTG- 3'
	Reverse: 5'- ATCCTGGCATTTCGGTTTAGC- 3'

Table S4. Antibodies for western blot, ChIP and IHC

Antibody name	Source	Item number
METTL14	Abcam	ab46154
SOX4	AVIVA	ARP33252_P050
KDM5C	CST	#3876
YTHDF1	proteintech	17479-1-AP
YTHDF2	proteintech	24744-1-AP
YTHDF3	proteintech	25537-1-AP
M6A	Abcam	ab208577
H3K4me3	proteintech	39159
Akt	CST	#9272
phospho(Ser473)-Akt	CST	#4060
PI3K	CST	#4249
phospho(Tyr458)-PI3K	CST	#4228
GAPDH	proteintech	10494-1-AP