

1 Additional file 12: **Table S5.** Oligonucleotides used in this study

2 **Oligonucleotides used for cloning sgRNA expression vector**

Oligonucleotides name	Sequence (5'-3')
<i>ALKBH5</i> -sgRNA-1-forward	CACCGGGGATCTCGTCCACGTCGCC
<i>ALKBH5</i> -sgRNA-1-reverse	AAACGGCGACGTGGACGAGATCCCC
<i>ALKBH5</i> -sgRNA-2-forward	CACCGGACGTCCCGGGACAACCTATA
<i>ALKBH5</i> -sgRNA-2-reverse	AAACTATAGTTGTCCCGGGACGTCC

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4 **Oligonucleotides used for cloning shRNA expression vector**

Oligonucleotides name	Sequence (5'-3')
<i>METTL3</i> -shRNA-1-forward	GCAAGTATGTTCACCTATGAAA
<i>METTL3</i> -shRNA-1-reverse	TTTCATAGTGAACATACTTGC
<i>METTL3</i> -shRNA-2-forward	GCTGCACTTCAGACGAATTAT
<i>METTL3</i> -shRNA-2-reverse	ATAATTCGTCTGAAGTGCAGC
<i>YTHDF1</i> -shRNA-1-forward	GTTTCGTTACATCAGAAGGATA
<i>YTHDF1</i> -shRNA-1-reverse	TATCCTTCTGATGTAACGAAC
<i>YTHDF1</i> -shRNA-2-forward	CCCGAAAGAGTTTGAGTGGAA
<i>YTHDF1</i> -shRNA-2-reverse	TTCCACTCAAACCTTTTCGGG

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6 **Oligonucleotides used for siRNA**

Oligonucleotides name	Sequence (5'-3')
<i>HINT2</i> -siRNA-1	TGCACAATCTGTGTATCATCTGC
<i>HINT2</i> -siRNA-2	GTGTATCATCTGCACATTCATGT

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8 **ssRNA probes used for RNA pull-down**

Oligonucleotides name	Sequence (5'-3')
A probe	TGAACCTGCCAACTGATTAAAGGACACCAG ^A CT CTGGATGCTTGGATGGA-Biotin
m ⁶ A probe	TGAACCTGCCAACTGATTAAAGGACACCAG ^{m⁶A} CTCTGGATGCTTGGATGGA-Biotin
UTR-NC probe	AAGGGAAAAATGGACCCTGTGATGCTAATAAAA CTGTTCTCCCTTAA-Biotin

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10 **Oligonucleotides used for luciferase reporter gene**

Oligonucleotides name	Sequence (5'-3')
<i>HINT2</i> -3'UTR-WT	ACCTGCCAACTGATTAAAGGACACC AGACTCTGGATGCTTGGATGGAAAG GGAAAAATGGACCCTGTGATGCTAA TAAACTGTTCTCCCTTAA
<i>HINT2</i> -3'UTR-MT	ACCTGCCAACTGATTAAAGGACACC AGTCTCTGGATGCTTGGATGGAAAG GGAAAAATGGACCCTGTGATGCTAA TAAACTGTTCTCCCTTAA