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Supplemental Information

METTL1/WDR4-mediated m⁷G tRNA

modifications and m⁷G codon usage promote mRNA

translation and lung cancer progression

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Supplemental information
Supplemental figures and legends

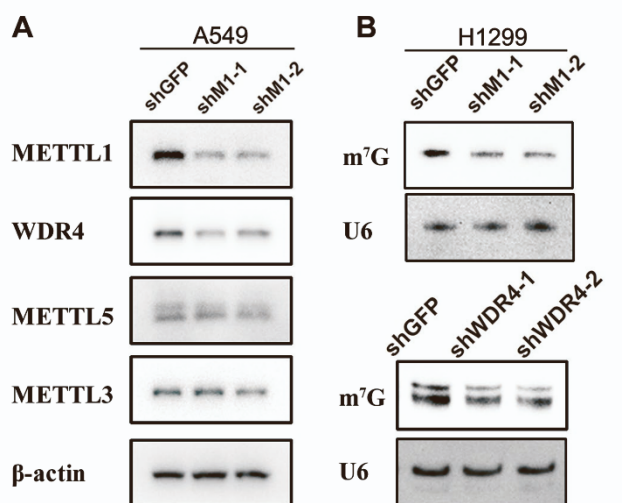


Figure S1. (A) Knockdown of METTL1 reduces the expression of WDR4 but not other methyltransferases including METTL3 and METTL5. (B) Knockdown of METTL1 or WDR4 reduced the m⁷G modification of tRNAs in H1299 cells.

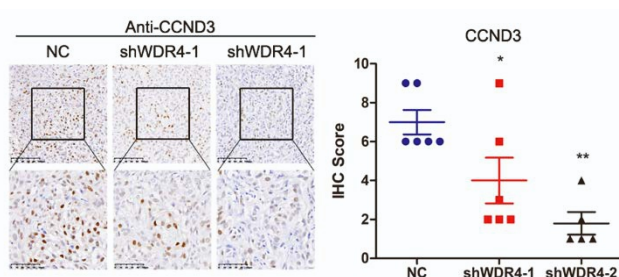


Figure S2. IHC confirmed the decreased expression of the identified TE down gene CCND3 in WDR4 depleted xenograft tumors sections. (One-way ANOVA, Student's t test, * p < 0.05, *** p < 0.001, compared to shGFP group).

Table S1. Oligonucleotides sequences

siRNA and shRNA	
shMETTL1-1	AAATGAGTGCACATCCAGTCG
shMETTL1-2	TTTCTTATCCTTTGGGTCATC
shWDR4-1	AAGAGGCTGTCATCATCACTG
shWDR4-2	TCTAACAGCATAGACAGGTGC
siMETTL1-1	GATGACCCAAAGGATAAGAAA
siMETTL1-2	GGACATCTAGGCACCTCAA
Primers for Real-time qRT-PCR	
β-actin primer	Forward: TTCTACAATGAGCTGCGTGTG Reverse: GGGGTGTTGAAGGTCTCAA
CCND3 primer	Forward: CCTGGGGGCTCTCATGTTTT Reverse: AGGGGCTCCAAAGTACTGA
CCNE1 primer	Forward: ACTCAACGTGCAAGCCTCG Reverse: GCTCAAGAAAGTGCTGATCCC
Northern blot probes	
tRNA-Pro-AGG	CTCGTCCGGGATTTGAACCC
tRNA-Val-AAC	TGTTTCCGCCCGTTTCGAA
tRNA-GlnCTG	CAGAGTGCTAACCATTACACCATGGAACC
U6 snoRNA	TGGAACGCTTCACGAATTTG

Table S2. RNC seq-TE down gene list

Table S3. RNC seq-TE up gene list

Table S4. RNC mRNA seq