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METTL1 Rabbit pAb

Catalog # AP98251

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q9UBP6
Other Accession	Q9UBP6
Reactivity	Human, Mouse
Predicted	Rat, Pig, Rabbit, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	31471
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human METTL1
Epitope Specificity	1-100/276
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the methyltransferase superfamily. TrmB family.
Post-translational modifications	Phosphorylation at Ser-27 inactivates its catalytic activity but does not affect the interaction with WDR4.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene is similar in sequence to the S. cerevisiae YDL201w gene. The gene product contains a conserved S-adenosylmethionine-binding motif and is inactivated by phosphorylation. Alternative splice variants encoding different protein isoforms have been described for this gene. A pseudogene has been identified on chromosome X. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	4234
Other Names	C12orf1; TRM8; TRMT8; YDL201w; 2810012D02Rik; TRMB_BOVIN; METTL1; Methyltransferase-like protein 1; mRNA (guanine-N(7)-)-methyltransferase; miRNA (guanine-N(7)-)-methyltransferase; tRNA (guanine(46)-N(7))-methyltransferase; tRNA(m7G46)-methyltransferase; 2.1.1.33; TRMB_HUMAN; TRMB_MOUSE; methyltransferase 1, tRNA methylguanosine; methyltransferase like 1
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	TRMB
Function	Catalytic component of METTL1-WDR4 methyltransferase complex that mediates the formation of N(7)-methylguanine in a subset of RNA species, such as tRNAs, mRNAs and microRNAs (miRNAs) (PubMed:12403464, PubMed:31031083, PubMed:31031084, PubMed:36599982, PubMed:36599985, PubMed:37369656, PubMed:37379838). Catalyzes the formation of N(7)- methylguanine at position 46 (m7G46) in a large subset of tRNAs that contain the 5'-RAGGU-3' motif within the variable loop (PubMed:12403464, PubMed:34352206, PubMed:34352207, PubMed:36599982, PubMed:36599985, PubMed:37369656). M7G46 interacts with C13-G22 in the D-loop to stabilize tRNA tertiary structure and protect tRNAs from decay (PubMed:36599982, PubMed:36599985). Also acts as a methyltransferase for a subset of internal N(7)-methylguanine in mRNAs (PubMed:31031084, PubMed:37379838). Internal N(7)-methylguanine methylation of mRNAs in response to stress promotes their relocalization to stress granules, thereby suppressing their translation (PubMed:31031084, PubMed:37379838). Also methylates a specific subset of miRNAs, such as let-7 (PubMed:31031083). N(7)- methylguanine methylation of let-7 miRNA promotes let-7 miRNA processing by disrupting an inhibitory secondary structure within the primary miRNA transcript (pri-miRNA) (PubMed:31031083). Acts as a regulator of embryonic stem cell self-renewal and differentiation (By similarity).
Cellular Location	Nucleus
Tissue Location	Ubiquitous..

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