

METTL1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP9887c

Product Information

Application	WB, E
Primary Accession	Q9UBP6
Other Accession	Q9Z120 , Q2YDF1
Reactivity	Human
Predicted	Bovine, Mouse, Rat, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB24424
Calculated MW	31471
Antigen Region	147-175

Additional Information

Gene ID	4234
Other Names	tRNA (guanine-N(7))-methyltransferase {ECO:0000255 HAMAP-Rule:MF_03055}, 21133 {ECO:0000255 HAMAP-Rule:MF_03055}, Methyltransferase-like protein 1 {ECO:0000255 HAMAP-Rule:MF_03055}, tRNA (guanine(46)-N(7))-methyltransferase {ECO:0000255 HAMAP-Rule:MF_03055}, tRNA(m7G46)-methyltransferase {ECO:0000255 HAMAP-Rule:MF_03055}, METTL1 {ECO:0000255 HAMAP-Rule:MF_03055}, C12orf1
Target/Specificity	This METTL1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 147-175 amino acids from the Central region of human METTL1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	METTL1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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..

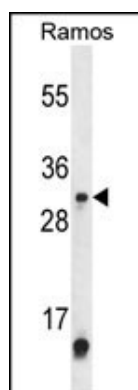
Background

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.

References

Guey, L.T., et al. Eur. Urol. 57(2):283-292(2010)
 Nat. Genet. 41(7):824-828(2009)
 Cartlidge, R.A., et al. EMBO J. 24(9):1696-1705(2005)
 Alexandrov, A., et al. RNA 8(10):1253-1266(2002)

Images



Western blot analysis of METTL1 Antibody (Center) (Cat. #AP9887c) in Ramos cell line lysates (35ug/lane). METTL1 (arrow) was detected using the purified Pab.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.