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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..

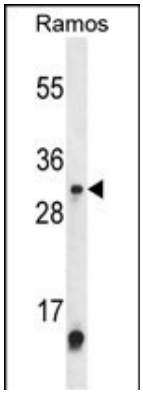
Background

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'.