10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

METTL1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP9887c

Specification

METTL1 Antibody (Center) - Product Information

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

METTL1 Antibody (Center) - 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

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.

METTL1 Antibody (Center) - Protein Information

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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:37379838, PubMed:37369656). 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:34352207, PubMed:34352206, 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

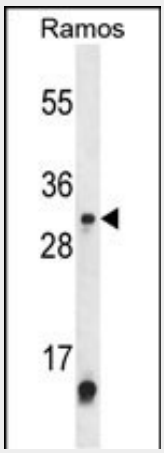
Tissue Location
Ubiquitous..

METTL1 Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

METTL1 Antibody (Center) - Images



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

METTL1 Antibody (Center) - 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.

METTL1 Antibody (Center) - 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)