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METTL4 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10377B

Product Information

Application	WB, FC, IHC-P-Leica, E
Primary Accession	Q8N3J2
Other Accession	NP_073751.3
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB28044
Calculated MW	54041
Antigen Region	315-344

Additional Information

Gene ID	64863
Other Names	Methyltransferase-like protein 4, 211-, METTL4
Target/Specificity	This METTL4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 315-344 amino acids from the C-terminal region of human METTL4.
Dilution	WB~~1:1000 FC~~1:25 IHC-P-Leica~~1:500 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	METTL4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	METTL4 {ECO:0000303|PubMed:31913360, ECO:0000312|HGNC:HGNC:24726}
Function	N(6)-adenine-specific methyltransferase that can methylate both RNAs and DNA (PubMed:31913360, PubMed:32183942). Acts as a N(6)- adenine-specific

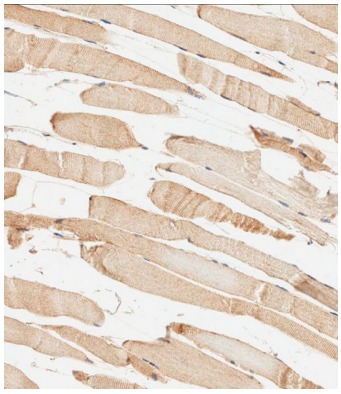
RNA methyltransferase by catalyzing formation of N6,2'-O-dimethyladenosine (m6A(m)) on internal positions of U2 small nuclear RNA (snRNA): methylates the 6th position of adenine residues with a pre-deposited 2'-O-methylation (PubMed:31913360). Internal m6A(m) methylation of snRNAs regulates RNA splicing (PubMed:31913360). Also able to act as a N(6)-adenine-specific DNA methyltransferase by mediating methylation of DNA on the 6th position of adenine (N(6)- methyladenosine) (PubMed:32183942). The existence of N(6)-methyladenosine (m6A) on DNA is however unclear in mammals, and additional evidences are required to confirm the role of the N(6)-adenine-specific DNA methyltransferase activity of METTL4 in vivo (PubMed:32203414). Acts as a regulator of mitochondrial transcript levels and mitochondrial DNA (mtDNA) copy number by mediating mtDNA N(6)-methylation: m6A on mtDNA reduces transcription by repressing TFAM DNA-binding and bending (PubMed:32183942). N(6)-methyladenosine deposition by METTL4 regulates Polycomb silencing by triggering ubiquitination and degradation of sensor proteins ASXL1 and MPND, leading to inactivation of the PR-DUB complex and subsequent preservation of Polycomb silencing (By similarity).

Cellular Location Nucleus. Cytoplasm, cytosol. Mitochondrion matrix

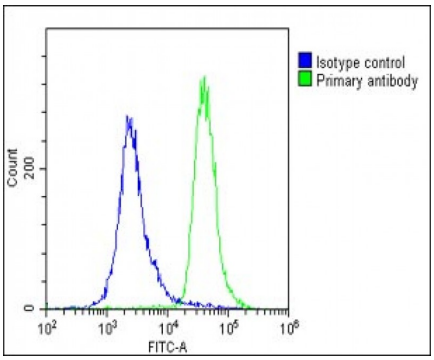
References

Trevino, L.R., et al. Nat. Genet. 41(9):1001-1005(2009)

Images

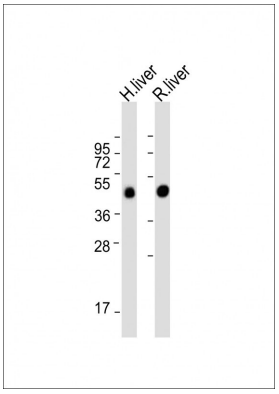


Immunohistochemical analysis of paraffin-embedded human skeletal muscle tissue using AP10377b performed on the Leica® BOND RXm. Samples were incubated with primary antibody(1/500) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.



Overlay histogram showing U-2 OS cells stained with AP10377b(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP10377b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

All lanes : Anti-METTL4 Antibody (C-term) at 1:2000 dilution Lane 1: Huamn liver lysate Lane 2: Rat liver lysate



Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 54 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- N-Deoxyadenosine Methylation in Mammalian Mitochondrial DNA