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METT10D Rabbit pAb

Catalog # AP99425

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q86W50
Other Accession	Q86W50
Predicted	Rat, Pig, Cat, Chimpanzee, Human, Mouse, Rabbit, Chicken, Dog, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	63621
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human METT10D
Epitope Specificity	1-100/562
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. METTL16/RlmF family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	METT10D is a 562 amino acid protein that belongs to the METTL16/rlmF family and methyltransferase superfamily. A putative methyltransferase, METT10D exists as two alternatively spliced isoforms and undergoes phosphorylation in response to DNA damage, most likely by Atm or ATR. The gene encoding METT10D maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, and is linked to predisposition of cancers of the ovary, colon, prostate gland and fallopian tubes.

Additional Information

Gene ID	79066
Other Names	CK820_G0046784; METT10D; 2610100D03Rik; 2810013M15Rik; A830095F14Rik; MET16_HUMAN; METTL16; Methyltransferase 10 domain-containing protein; Methyltransferase-like protein 16; U6 small nuclear RNA (adenine-(43)-N(6))-methyltransferase; 2.1.1.348; MET16_MOUSE; methyltransferase 16, RNA N6-adenosine; methyltransferase 10 domain containing; methyltransferase like 16; methyltransferase 16, N6-methyladenosine; U6 snRNA methyltransferase; N6-methyladenosine methyltransferase
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=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	METTL16 {ECO:0000303|PubMed:27872311, ECO:0000312|HGNC:HGNC:28484}
Function	RNA N6-methyltransferase that methylates adenosine residues at the N(6) position of a subset of RNAs and is involved in S-adenosyl- L-methionine homeostasis by regulating expression of MAT2A transcripts (PubMed:28525753, PubMed:30197297, PubMed:30197299, PubMed:33428944, PubMed:33930289). Able to N6-methylate a subset of mRNAs and U6 small nuclear RNAs (U6 snRNAs) (PubMed:28525753). In contrast to the METTL3- METTL14 heterodimer, only able to methylate a limited number of RNAs: requires both a 5'UACAGAGAA-3' nonamer sequence and a specific RNA structure (PubMed:28525753, PubMed:30197297, PubMed:30197299). Plays a key role in S-adenosyl-L-methionine homeostasis by mediating N6- methylation of MAT2A mRNAs, altering splicing of MAT2A transcripts: in presence of S-adenosyl-L-methionine, binds the 3'-UTR region of MAT2A mRNA and specifically N6-methylates the first hairpin of MAT2A mRNA, preventing recognition of their 3'-splice site by U2AF1/U2AF35, thereby inhibiting splicing and protein production of S-adenosylmethionine synthase (PubMed:28525753, PubMed:33930289). In S-adenosyl-L-methionine-limiting conditions, binds the 3'-UTR region of MAT2A mRNA but stalls due to the lack of a methyl donor, preventing N6-methylation and promoting expression of MAT2A (PubMed:28525753). In addition to mRNAs, also able to mediate N6-methylation of U6 small nuclear RNA (U6 snRNA): specifically N6-methylates adenine in position 43 of U6 snRNAs (PubMed:28525753, PubMed:29051200, PubMed:32266935). Also able to bind various lncRNAs, such as 7SK snRNA (7SK RNA) or 7SL RNA (PubMed:29051200). Specifically binds the 3'-end of the MALAT1 long non-coding RNA (PubMed:27872311).
Cellular Location	Nucleus. Cytoplasm

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