Revision 4

Store at -20C

#17676

METTL16 Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	78	Rabbit	#Q86W50	79066

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

METTL16 Antibody recognizes endogenous levels of total METTL16 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu38 of human METTL16 protein. Antibodies are purified by peptide affinity chromatography.

Background

METTL16 is an N6-adenosine methyltransferase responsible for the regulation of the *MAT2A* gene, which encodes S-adenosylmethionine (SAM) synthase. Upon SAM depletion, MAT2A expression increases due to a splicing event of a retained intron. Alternative splicing and mRNA stability is governed by adenosine methylation in the 3' UTR of the MAT2A mRNA by METTL16. These marks are then read by YTHDC1, and knockdown of either METTL16 or YTHDC1 results in decreased response to lack of SAM (1,2). The METTL16 methyltransferase domain differs from METTL3 and METTL14 as it contains an extra N-terminal module, suggesting a different set of target mRNAs (3,4). Lack of METTL16 during development has been shown to be embryonically lethal, resulting in a dysregulated transcriptome that cannot proceed past the 64-cell blastocyst stage (3).

Background References

1. Pendleton, K.E. et al. (2017) *Cell* 169, 824-835.e14.
2. Shima, H. et al. (2017) *Cell Rep* 21, 3354-63.
3. Mendel, M. et al. (2018) *Mol Cell* 71, 986-1000.e11.
4. Doxtader, K.A. et al. (2018) *Mol Cell* 71, 1001-1011.e4.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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Limited Uses

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