

Recombinant Mouse Mettl4 Protein, Myc/DDK-tagged

Cat. No. Mettl4-4049M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length methyltransferase like 4 (Mettl4), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	N6-adenine-specific methyltransferase that can methylate both RNAs and DNA. Acts as a N6-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. Internal m6A(m) methylation of snRNAs regulates RNA splicing. Also able to act as a N6-adenine-specific DNA methyltransferase by mediating methylation of DNA on the 6th position of adenine (N6-methyladenosine). The existence of N6-methyladenosine (m6A) on DNA is however unclear in mammals, and additional evidences are required to confirm the role of the N6-adenine-specific DNA methyltransferase activity of METTL4 in vivo. Acts as a regulator of mitochondrial transcript levels and mitochondrial DNA (mtDNA) copy number by mediating mtDNA N6-methylation: m6A on mtDNA reduces transcription by repressing TFAM DNA-binding and bending. N6-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.

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Molecular Mass	53.3 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Mettl4 methyltransferase like 4 [<i>Mus musculus</i> (house mouse)]
Official Symbol	Mettl4
Synonyms	METTL4; methyltransferase like 4; methyltransferase-like protein 4; HST661; AV296509; 2410198H06Rik; A730091E08Rik
Gene ID	76781
mRNA Refseq	NM_176917
Protein Refseq	NP_795891
UniProt ID	Q3U034

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