

# Recombinant Human METTL16 Protein, His-tagged

**Cat. No.** METTL16-032H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <b>Product Overview</b> | Human recombinant C-terminal histidine-tagged human METTL16 protein (2-562) was purified from E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>ProteinLength</b>    | 2-562                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>      | <p>RNA N6-methyltransferase that methylates adenosine residues at the N6 position of a subset of RNAs and is involved in S-adenosyl-L-methionine homeostasis by regulating expression of MAT2A transcripts (PubMed:28525753, PubMed:30197299, PubMed:30197297). 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:30197299, PubMed:30197297). Plays a key role in S-adenosyl-L-methionine homeostasis by mediating N6-methylation of MAT2A mRNAs, altering splicing and/or stability 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, impairing MAT2A expression (PubMed:28525753). 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</p> |

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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).

**Molecular Mass** 64.5 kDa

**Purity** ≥90% as determined by SDS-PAGE

**Stability** ≥ 6 months

**Storage** At -80 centigrade.

**Storage Buffer** 50 mM HEPES, pH 8.0, with 150 mM sodium chloride, 10% glycerol

## GENE INFORMATION

**Gene Name** METTL16 methyltransferase 16, N6-methyladenosine [ Homo sapiens (human) ]

**Official Symbol** METTL16

**Synonyms** METTL16; methyltransferase 16, N6-methyladenosine; RNA N6-adenosine-methyltransferase METTL16; N6-adenosine-methyltransferase METTL16; U6 small nuclear RNA (adenine-(43)-N(6))-methyltransferase; U6 snRNA methyltransferase; methyltransferase 10 domain containing; methyltransferase 10 domain-containing protein; methyltransferase like 16; methyltransferase-like protein 16; putative methyltransferase METT10D; EC 2.1.1.346; EC 2.1.1.348

**Gene ID** 79066

**mRNA Refseq** NM\_024086

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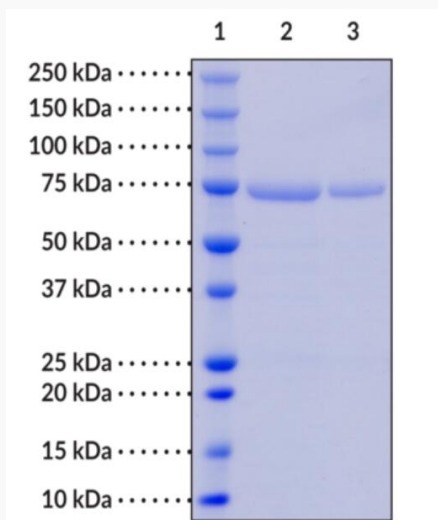
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Protein Refseq NP\_076991

UniProt ID Q86W50

**SDS-PAGE analysis  
of METTL16**



Lane 1: MW Markers

Lane 2: METTL16 (4 µg)

Lane 3: METTL16 (2 µg)

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