

Recombinant Mouse Ythdf1 Protein, Myc/DDK-tagged

Cat. No. Ythdf1-7038M Lot. No. (See product label)

SPECIFICATION

Product Overview Purified recombinant protein of Mouse YTH N6-methyladenosine RNA binding protein 1 (Ythdf1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.

Species Mouse

Source HEK293

Description

Specifically recognizes and binds N6-methyladenosine (m6A)-containing mRNAs, and promotes mRNA translation efficiency. M6A is a modification present at internal sites of mRNAs and some non-coding RNAs and plays a role in the efficiency of mRNA splicing, processing and stability. Acts as a regulator of mRNA translation efficiency: promotes ribosome loading to m6A-containing mRNAs and interacts with translation initiation factors eIF3 (EIF3A or EIF3B) to facilitate translation initiation. Required to facilitate learning and memory formation in the hippocampus by enhancing protein synthesis upon neuronal stimulation: in response to neuronal stimulation, binds to m6A-containing neuronal mRNAs, promoting their translation, thereby contributing to learning and memory. Acts as a regulator of axon guidance by binding to m6A-containing ROBO3 transcripts, thereby promoting their translation. Acts as a negative regulator of antigen cross-presentation in myeloid dendritic cells. Acts by binding and promoting translation of m6A-containing transcripts encoding proteins involved in lysosomal degradation and phagosome maturation, leading to increased antigen degradation in myeloid dendritic cells. In the context of tumorigenesis, negative regulation of antigen cross-presentation limits the anti-tumor response by reducing efficiency of tumor-antigen cross-presentation.

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Molecular Mass	60.9 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	Ythdf1 YTH N6-methyladenosine RNA binding protein 1 [Mus musculus (house mouse)]
Official Symbol	Ythdf1
Synonyms	YTHDF1; YTH domain family 1; YTH domain family protein 1; DACA-1 homolog; dermatomyositis associated with cancer putative autoantigen 1 homolog; 8030473O16; 2210410K23Rik
Gene ID	228994
mRNA Refseq	NM_173761
Protein Refseq	NP_776122
UniProt ID	P59326

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