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YTHDF1 Rabbit mAb

Catalog # AP76902

Product Information

Application	WB, IP
Primary Accession	P59326
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	60879

Additional Information

Gene ID	228994
Other Names	Ythdf1
Dilution	WB~~1:1000 IP~~N/A
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	Ythdf1 {ECO:0000303|PubMed:30401835, ECO:0000312|MGI:MGI:1917431}
Function	Specifically recognizes and binds N6-methyladenosine (m6A)- containing mRNAs, and regulates their stability (PubMed:30401835, PubMed:32943573). M6A is a modification present at internal sites of mRNAs and some non-coding RNAs and plays a role in mRNA stability and processing (PubMed:30401835, PubMed:32943573). Acts as a regulator of mRNA stability by promoting degradation of m6A-containing mRNAs via interaction with the CCR4-NOT complex (By similarity). The YTHDF paralogs (YTHDF1, YTHDF2 and YTHDF3) share m6A-containing mRNAs targets and act redundantly to mediate mRNA degradation and cellular differentiation (PubMed:32943573). Required to facilitate learning and memory formation in the hippocampus by binding to m6A-containing neuronal mRNAs (PubMed:30401835). Acts as a regulator of axon guidance by binding to m6A-containing ROBO3 transcripts (PubMed:30843071). Acts as a negative regulator of antigen cross-presentation in myeloid dendritic cells (PubMed:30728504). In the context of tumorigenesis, negative regulation of antigen cross-presentation

	limits the anti-tumor response by reducing efficiency of tumor-antigen cross-presentation (PubMed:30728504). Promotes formation of phase-separated membraneless compartments, such as P-bodies or stress granules, by undergoing liquid-liquid phase separation upon binding to mRNAs containing multiple m6A-modified residues: polymethylated mRNAs act as a multivalent scaffold for the binding of YTHDF proteins, juxtaposing their disordered regions and thereby leading to phase separation (By similarity). The resulting mRNA-YTHDF complexes then partition into different endogenous phase-separated membraneless compartments, such as P-bodies, stress granules or neuronal RNA granules (By similarity).
Cellular Location	Cytoplasm. Cytoplasm, P-body {ECO:0000250|UniProtKB:Q9BYJ9}. Cytoplasm, Stress granule {ECO:0000250|UniProtKB:Q9BYJ9}
Tissue Location	In brain, preferentially expressed in the hippocampus.

Background

Specifically recognizes and binds N6-methyladenosine (m6A)-containing mRNAs, and regulates their stability.

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