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KD-Validated Anti-YTHDF1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI2289

Product Information

Application	WB
Primary Accession	Q9BYJ9
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	25GB4790
Calculated MW	60874
Gene Name	Ythdf1
Aliases	YTHDF1; YTH N6-Methyladenosine RNA Binding Protein F1; C20orf21; Dermatomyositis Associated With Cancer Putative Autoantigen 1; YTH N(6)-Methyladenosine RNA Binding Protein 1; YTH N6-Methyladenosine RNA Binding Protein 1; YTH Domain-Containing Family Protein 1; YTH Domain Family, Member 1; YTH Domain Family 1; FLJ20391; DACA-1; DF1; YTH Domain Family Protein 1
Immunogen	Recombinant protein of mouse YTHDF1

Additional Information

Gene ID	54915
Other Names	YTH domain-containing family protein 1, DF1, Dermatomyositis associated with cancer putative autoantigen 1 {ECO:0000303|Ref.4}, DACA-1 {ECO:0000303|Ref.4}, YTHDF1 {ECO:0000303|Ref.4, ECO:0000312|HGNC:HGNC:15867}

Protein Information

Name	YTHDF1 {ECO:0000303|Ref.4, ECO:0000312|HGNC:HGNC:15867}
Function	Specifically recognizes and binds N6-methyladenosine (m6A)- containing mRNAs, and regulates their stability (PubMed:24284625, PubMed:26318451, PubMed:32492408, PubMed:39900921). 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:24284625, PubMed:32492408). Acts as a regulator of mRNA stability by promoting degradation of m6A-containing mRNAs via interaction with the CCR4-NOT complex (PubMed:32492408). The YTHDF paralogs (YTHDF1, YTHDF2 and YTHDF3) shares m6A-containing mRNAs targets and act redundantly to mediate mRNA degradation and cellular differentiation (PubMed:28106072, PubMed:32492408). Required to facilitate learning and memory formation in the hippocampus by binding to m6A-containing neuronal mRNAs (By similarity). Acts as a regulator of axon guidance by binding to m6A-containing ROBO3 transcripts (By similarity). Acts

	as a negative regulator of antigen cross-presentation in myeloid dendritic cells (By similarity). In the context of tumorigenesis, negative regulation of antigen cross-presentation limits the anti-tumor response by reducing efficiency of tumor-antigen cross- presentation (By similarity). 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 (PubMed:31292544, PubMed:31388144, PubMed:32451507). The resulting mRNA-YTHDF complexes then partition into different endogenous phase- separated membraneless compartments, such as P-bodies, stress granules or neuronal RNA granules (PubMed:31292544).
Cellular Location	Cytoplasm. Cytoplasm, P-body. Cytoplasm, Stress granule

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