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KD-Validated Anti-YTHDF1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI2289

Specification

KD-Validated Anti-YTHDF1 Rabbit Monoclonal Antibody - Product Information

Application	**WB**
Primary Accession	Q9BYJ9
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 61 kDa; observed, 70 kDa KDa**
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**

KD-Validated Anti-YTHDF1 Rabbit Monoclonal Antibody - 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}

KD-Validated Anti-YTHDF1 Rabbit Monoclonal Antibody - 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

KD-Validated Anti-YTHDF1 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-YTHDF1 Rabbit Monoclonal Antibody - Images

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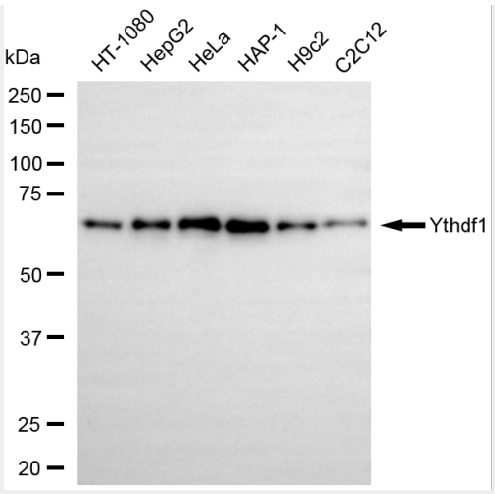
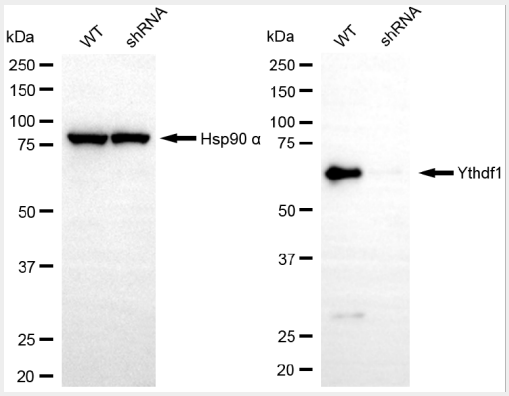


Western blotting analysis using anti-Ythdf1 antibody (Cat#AGI2289). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Ythdf1 antibody (Cat#AGI2289, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-ythdf1 antibody (Cat#AGI2289). YTHDF1 expression in wild-type (WT) and YTHDF1 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-ythdf1 antibody (Cat#AGI2289, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.