

# **DACA-1 Polyclonal Antibody**

Catalog # AP69466

#### **Product Information**

Application WB, IHC-P Primary Accession O98YI9

Reactivity Human, Mouse, Rat

HostRabbitClonalityPolyclonalCalculated MW60874

#### **Additional Information**

**Gene ID** 54915

Other Names YTHDF1; C20orf21; YTH domain family protein 1; Dermatomyositis associated

with cancer putative autoantigen 1; DACA-1

**Dilution** WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300.

ELISA: 1/5000. Not yet tested in other applications. IHC-P~~N/A

Format Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium

azide.

Storage Conditions -20°C

#### **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).

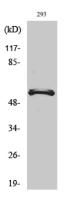
**Cellular Location** 

Cytoplasm, Cytoplasm, P-body. Cytoplasm, Stress granule

## **Background**

Specifically recognizes and binds N6-methyladenosine (m6A)-containing mRNAs, and promotes mRNA translation efficiency (PubMed:24284625, PubMed:26046440, PubMed:26318451). 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 (PubMed:24284625). 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 (PubMed:26046440).

### **Images**



Western Blot analysis of various cells using DACA-1 Polyclonal Antibody

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