

DACA-1 Polyclonal Antibody

Catalog # AP69466

Specification

DACA-1 Polyclonal Antibody - Product Information

Application Primary Accession Reactivity Host Clonality WB, IHC-P <u>O9BYJ9</u> Human, Mouse, Rat Rabbit Polyclonal

DACA-1 Polyclonal Antibody - 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

DACA-1 Polyclonal 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:32492408, PubMed:32492408). 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: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:<a href="http://www.uniprot.org/citations/28106072"

target=" blank">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

DACA-1 Polyclonal Antibody - Protocols

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

- <u>Western Blot</u>
- <u>Blocking Peptides</u>
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

DACA-1 Polyclonal Antibody - Images







DACA-1 Polyclonal Antibody - 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).