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YTHD3 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP9985a

Specification

YTHD3 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q7Z739

YTHD3 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 253943

Other Names
YTH domain-containing family protein 3, YTHDF3

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

YTHD3 Antibody (Center) Blocking Peptide - Protein Information

Name YTHDF3 {ECO:0000303|PubMed:28106072, ECO:0000312|HGNC:HGNC:26465}

Function
Specifically recognizes and binds N6-methyladenosine (m6A)- containing RNAs, and regulates their stability (PubMed:28106072, PubMed:28106076, PubMed:28281539, 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:22575960, PubMed:24284625, PubMed:28106072, PubMed:28281539, PubMed:32492408). Acts as a regulator of mRNA stability by promoting degradation of m6A-containing mRNAs via interaction with the CCR4-NOT complex or PAN3 (PubMed:32492408). The YTHDF paralogs (YTHDF1, YTHDF2 and YTHDF3) share m6A-containing mRNAs targets and act redundantly to mediate mRNA degradation and cellular differentiation (PubMed:28106072, PubMed:<a

href="http://www.uniprot.org/citations/28106076" target="_blank">28106076, PubMed:32492408). Acts as a negative regulator of type I interferon response by down-regulating interferon-stimulated genes (ISGs) expression: acts by binding to FOXO3 mRNAs (By similarity). Binds to FOXO3 mRNAs independently of METTL3-mediated m6A modification (By similarity). Can also act as a regulator of mRNA stability in cooperation with YTHDF2 by binding to m6A-containing mRNA and promoting their degradation (PubMed:28106072). Recognizes and binds m6A- containing circular RNAs (circRNAs); circRNAs are generated through back-splicing of pre-mRNAs, a non-canonical splicing process promoted by dsRNA structures across circularizing exons (PubMed:28281539). 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). May also recognize and bind N1-methyladenosine (m1A)-containing mRNAs: inhibits trophoblast invasion by binding to m1A-methylated transcripts of IGF1R, promoting their degradation (PubMed:32194978).

Cellular Location
Cytoplasm, cytosol. Cytoplasm, P-body. Cytoplasm, Stress granule

YTHD3 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

YTHD3 Antibody (Center) Blocking Peptide - Images

YTHD3 Antibody (Center) Blocking Peptide - References

Simpson, J.C., et al. EMBO Rep. 1(3):287-292(2000)