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YTHDF2 Antibody - C-terminal region

Rabbit Polyclonal Antibody

Catalog # AI15546

Specification

YTHDF2 Antibody - C-terminal region - Product Information

Application	**WB**
Primary Accession	Q9Y5A9
Other Accession	NM_016258, NP_057342
Reactivity	**Human, Mouse, Rat, Rabbit, Horse, Bovine, Dog**
Predicted	**Human, Mouse, Rat, Rabbit, Horse, Bovine, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**62kDa KDa**

YTHDF2 Antibody - C-terminal region - Additional Information

Gene ID 51441

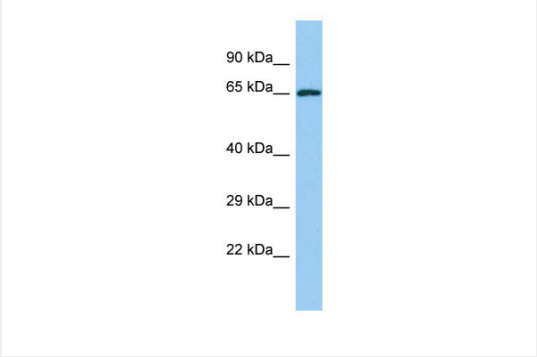
Alias Symbol	**HGRG8, NY-REN-2**

Other Names
YTH domain-containing family protein 2, CLL-associated antigen KW-14, High-glucose-regulated protein 8, Renal carcinoma antigen NY-REN-2, YTHDF2, HGRG8

Format
Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

Reconstitution & Storage
Add 50 ul of distilled water. Final anti-YTHDF2 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.

Precautions
YTHDF2 Antibody - C-terminal region is for research use only and not for use in



Host: Rabbit
Target Name: YTHDF2
Sample Tissue: Jurkat Whole cell lysate
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Antibody Dilution: 1.0µg/mlYTHDF2 is supported by BioGPS gene expression data to be expressed in Jurkat

YTHDF2 Antibody - C-terminal region - References

Scanlan M.J.,et al.Int. J. Cancer 83:456-464(1999).
Roberts T.P.,et al.Submitted (OCT-1999) to the EMBL/GenBank/DDBJ databases.
Krackhardt A.M.,et al.Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Gregory S.G.,et al.Nature 441:315-321(2006).

diagnostic or therapeutic procedures.

YTHDF2 Antibody - C-terminal region - Protein Information

Name YTHDF2 {ECO:0000303|PubMed:24284625, ECO:0000312|HGNC:HGNC:31675}

Function
Specifically recognizes and binds N6-methyladenosine (m6A)- containing RNAs, and regulates their stability (PubMed:24284625, PubMed:26046440, PubMed:26318451, 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:32492408, PubMed:25412658, PubMed:25412661). Acts as a regulator of mRNA stability by promoting degradation of m6A-containing mRNAs via interaction with the CCR4-NOT and ribonuclease P/MRP complexes, depending on the context (PubMed:24284625, PubMed:26046440, PubMed:27558897,

PubMed:30930054, 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:32492408). M6A-containing mRNAs containing a binding site for RIDA/HRSP12 (5'-GGUUC-3') are preferentially degraded by endoribonucleolytic cleavage: cooperative binding of RIDA/HRSP12 and YTHDF2 to transcripts leads to recruitment of the ribonuclease P/MRP complex (PubMed:30930054). Other m6A-containing mRNAs undergo deadenylation via direct interaction between YTHDF2 and CNOT1, leading to recruitment of the CCR4-NOT and subsequent deadenylation of m6A-containing mRNAs (PubMed:27558897). Required maternally to regulate oocyte maturation: probably acts by binding to m6A-containing mRNAs, thereby regulating maternal transcript dosage during oocyte maturation, which is essential for the competence of oocytes to sustain early zygotic development (By similarity). Also required during spermatogenesis: regulates spermagonial adhesion by promoting degradation of m6A-containing transcripts coding for matrix metallopeptidases (By similarity). Also involved in hematopoietic stem cells specification by binding to m6A-containing mRNAs, leading to promote their degradation (PubMed:30065315). Also acts as a regulator of neural development by promoting m6A-dependent degradation of neural development-related mRNA targets (By similarity). Inhibits neural specification of induced pluripotent stem cells by binding to methylated neural-specific mRNAs and promoting their degradation, thereby

restraining neural differentiation (PubMed:32169943). Regulates circadian regulation of hepatic lipid metabolism: acts by promoting m6A-dependent degradation of PPARA transcripts (PubMed:30428350). Regulates the innate immune response to infection by inhibiting the type I interferon response: acts by binding to m6A-containing IFNB transcripts and promoting their degradation (PubMed:30559377). May also act as a promoter of cap-independent mRNA translation following heat shock stress: upon stress, relocalizes to the nucleus and specifically binds mRNAs with some m6A methylation mark at their 5'-UTR, protecting demethylation of mRNAs by FTO, thereby promoting cap-independent mRNA translation (PubMed:26458103). Regulates mitotic entry by promoting the phase-specific m6A-dependent degradation of WEE1 transcripts (PubMed:32267835). 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:31388144, PubMed:31292544, PubMed:32451507, PubMed:31642031). 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 RNAs modified by C5-methylcytosine (m5C) and act as a regulator of rRNA processing (PubMed:31815440).

Cellular Location
Cytoplasm, cytosol. Cytoplasm, P-body. Cytoplasm, Stress granule. Nucleus. Note=Localizes to the cytosol and relocates to the nucleus following heat shock stress (PubMed:26458103) Can partition into different structures: into P-bodies in unstressed cells, and into stress granules during stress (PubMed:31292544)

Tissue Location
Highly expressed in induced pluripotent stem cells (iPSCs) and down-regulated during neural differentiation

YTHDF2 Antibody - C-terminal region - 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