

YTHDF2 Antibody



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IF-IC	H M R Mk	Endogenous	65	Rabbit	#Q9Y5A9	51441

Product Usage Information

Application

Western Blotting
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:50 - 1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

YTHDF2 Antibody recognizes endogenous levels of total YTHDF2 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly167 of human YTHDF2 protein. Antibodies are purified by peptide affinity chromatography.

Background

N⁶-methyladenosine (m⁶A) is an abundant RNA modification that plays an important role in mRNA splicing, processing, and stability. The m⁶A modification is specifically recognized by members of the YT521B homology (YTH) domain-containing family (YTHDF), consisting of YTHDF1, YTHDF2, and YTHDF3. All three members of the YTHDF family are primarily cytosolic proteins that share similar sequence and domain structure, including a conserved C-terminal YTH domain that specifically interacts with m⁶A (1). Despite these similarities, recent studies suggest that YTHDF proteins are involved in distinct regulatory functions with minimal overlap. Specifically, YTHDF1 binding has been reported to promote enhanced mRNA translation, but has no measurable effect on mRNA stability (2). Conversely, YTHDF2 binding appears to promote mRNA degradation, but has minimal effect on translation efficiency (3). The function of YTHDF3 is less clear, but it has been proposed to function as an auxiliary protein for both YTHDF1 and YTHDF2, helping to promote either increased mRNA translation or decay, respectively (4). Additional studies offer a different viewpoint, suggesting that all three YTHDF proteins initiate mRNA degradation (5), or mediate increased mRNA stability and protein expression (6), promoting the idea that these proteins may carry out similar rather than distinct functions.

Background References

1. Meyer, K.D. and Jaffrey, S.R. (2017) *Annu Rev Cell Dev Biol* 33, 319-42.
2. Wang, X. et al. (2015) *Cell* 161, 1388-99.
3. Wang, X. et al. (2014) *Nature* 505, 117-20.
4. Shi, H. et al. (2017) *Cell Res* 27, 315-28.
5. Du, H. et al. (2016) *Nat Commun* 7, 12626.
6. Kennedy, E.M. et al. (2016) *Cell Host Microbe* 19, 675-85.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's

terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.