

YTHDC1 (P561) Antibody

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	110	Rabbit	#Q96MU7	91746

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

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

YTHDC1 (P561) Antibody recognizes endogenous levels of total YTHDC1 protein.

Species predicted to react based on 100% sequence homology

Hamster

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro561 of human YTHDC1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

YTH domain-containing protein 1 (YTHDC1) and YTH domain-containing protein 2 (YTHDC2) both belong to a family of proteins that bind to RNA. YTHDC1 and YTHDC2 both recognize and bind to N6-methyladenosine(m6A)-containing RNAs; binding is mediated through the YTH domains (1-3). m6A is a modification that is present at internal sites of mRNAs and some non-coding RNAs and plays a role in regulating mRNA splicing, processing, and stability. YTHDC1, also known as splicing factor YT521, regulates alternative splicing by functioning as a key regulator of exon-inclusion or exon-skipping. YTHDC1 promotes exon-inclusion by recruiting pre-mRNA splicing factor SRSF3 to regions containing m6A, while repressing exon-skipping by blocking SRSF10 binding to these same regions (2). Increased expression of YTHDC1 promotes malignant endometrial carcinoma (EC) through alternative splicing of vascular endothelial growth factor A (VEGF-A), resulting in an increase in VEGF-165 isoform and increased EC cell invasion (4). YTHDC2 functions to enhance the translation efficiency of target mRNAs and may play a role in spermatogenesis (5).

Background References

- Xu, C. et al. (2015) *J Biol Chem* 290, 24902-13.
- Xiao, W. et al. (2016) *Mol Cell* 61, 507-19.
- Xu, C. et al. (2014) *Nat Chem Biol* 10, 927-9.
- Zhang, B. et al. (2015) *Tumor Biol* 37, 15543-9.
- Hsu, P.J. et al. (2017) *Cell Res* 27, 1115-27.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

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

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