



Rabbit Anti-DCP1A antibody

SL10788R

Product Name:	DCP1A
Chinese Name:	脱帽酶1A抗体
Alias:	DCP1 decapping enzyme homolog A; Dcp1a; DCP1A_HUMAN; mRNA decapping enzyme 1A; mRNA-decapping enzyme 1A; Smad4 interacting transcriptional co activator; Smad4-interacting transcriptional co-activator; Smad4-interacting transcriptional co-activator; SMAD4IP1; SMIF; Transcription factor SMIF.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Horse,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	63kDa
Cellular localization:	cytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human DCP1A:501-582/582
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	Cleavage of the 5'-cap structure is involved in the major 5'-to-3' and nonsense-mediated mRNA decay pathways. The protein complex consisting of Dcp1 and Dcp2 has been identified as the species responsible for the decapping reaction in Saccharomyces cerevisiae. In nonsense-mediated decay, the human decapping complex, made up of S.

cerevisiae homologs hDcp1a and hDcp2, may be recruited to mRNAs containing premature termination codons by nonsense-mediated decay factor (Upf) proteins. hDcp2 specifically hydrolyzes methylated capped RNA to release m(7)GDP, thereby aiding in mRNA degradation. Both hDcp1a and hDcp2 colocalize in the cytoplasm. In addition, hDcp1a interacts with Smad4 forming a complex with TGF Beta and BMP-4. hDcp1a and Smad4 interact directly through a EVH1/WH1 domain on hDcp1a and a proline-rich activation domain on Smad4. Smad4 is essential to nuclear translocation of hDcp1a as deletion of the Smad4-interacting domain (located in the N-terminal 100 amino acids) of hDcp1a eliminates TGF Beta-induced nuclear translocation of hDcp1a.

Function:

Necessary for the degradation of mRNAs, both in normal mRNA turnover and in nonsense-mediated mRNA decay. Removes the 7-methyl guanine cap structure from mRNA molecules, yielding a 5'-phosphorylated mRNA fragment and 7m-GDP. Contributes to the transactivation of target genes after stimulation by TGFB1.

Subunit:

Forms a complex with EDC3, DCP2, DDX6 and EDC4/HEDLS, within this complex directly interacts with EDC3. Binds DCP1B, UPF1 and SMAD4. Part of a cytoplasmic complex containing proteins involved in mRNA decay, including XRN1 and LSM1. Interacts with PNRC2. Interacts with DDX17 in an RNA-independent manner. Interacts with ZC3HAV1.

Subcellular Location:

Cytoplasm, P-body. Nucleus. Co-localizes with NANOS3 in the processing bodies. Predominantly cytoplasmic, in processing bodies (PB). Nuclear, after TGFB1 treatment. Translocation to the nucleus depends on interaction with SMAD4.

Tissue Specificity:

Detected in heart, brain, placenta, lung, skeletal muscle, liver, kidney and pancreas.

Similarity:

Belongs to the DCP1 family.

SWISS:

Q9NPI6

Gene ID:

55802

Database links:

[Entrez Gene: 55802](#)Human

[Entrez Gene: 75901](#)Mouse

[Entrez Gene: 361109](#)Rat

[Omid: 607010](#)Human

[SwissProt: Q9NPI6](#)Human

[SwissProt: Q91YD3](#)Mouse

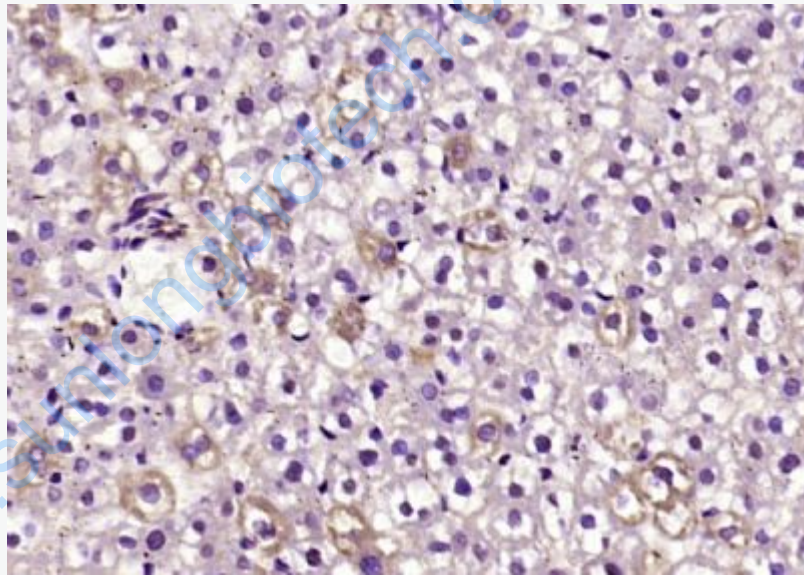
[Unigene: 476353](#)Human

[Unigene: 28733](#)Mouse

[Unigene: 206852](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.



Picture:

Paraformaldehyde-fixed, paraffin embedded (rat liver); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (DCP1A) Polyclonal Antibody, Unconjugated (SL10788R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.