# Data Sheet (Cat.No.TMAB-05007)

TargetMol

## Anti-DCP1A Polyclonal Antibody

### Product Details

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| Ig Type: | IgG |
| Reactivity: | Rat (predicted:Human,Mouse,Horse) |
| Molecular Weight: | Theoretical: 63 kDa. |
| Purification: | Protein A purified |

### Applications

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| Verified Activity: | Paraformaldehyde-fixed, paraffin embedded (rat liver); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody incubation with (DCP1A) Polyclonal Antibody, Unconjugated (TMAB-05007) at 1: 200 overnight at 4°C, followed by operating according to SP Kit (Rabbit) instructions and DAB staining. |
| Application: | IHC-P,IHC-Fr,IF |
| Recommended | IHC-P: 1:100-500; IHC-Fr: 1:100-500; IF: 1:100-500 |

### Properties

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| Stability & Storage: | Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. |
| Shipping: | Shipping with blue ice. |

### Antigen Details

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| Immunogen: | KLH conjugated synthetic peptide: human DCP1A |
| Antigen Species: | Human |
| Gene ID: | 55802 |
| Uniprot ID: | Q9NPI6 |

### Research Background

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.



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