

#4992 Store at -20C

# PABP1 Antibody



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-P	H M R Mk	Endogenous	71	Rabbit	#P11940	26986

## Product Usage Information

### Application

Western Blotting  
Immunohistochemistry (Paraffin)

### Dilution

1:1000  
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

PABP1 Antibody detects endogenous levels of total PABP1 and PABP3 proteins.

## Species predicted to react based on 100% sequence homology

Xenopus, Zebrafish, Bovine

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acids at the amino-terminus of human PABP1. Antibodies are purified by protein A and peptide affinity chromatography.

## Background

Poly(A)-binding protein 1 (PABP1) associates with the 3' poly(A) tail of mRNA and also eIF4F (1,2). eIF4F is a complex whose functions include the recognition of the mRNA 5' cap structure (eIF4E), delivery of an RNA helicase to the 5' region (eIF4A), bridging of the mRNA and the ribosome (eIF4G), and circularization of the mRNA via interaction between eIF4G and the poly(A) binding protein (PABP). PABP1 has been shown to have multiple functions including translation initiation, mRNA stabilization, and mRNA turnover (3,4). Phosphorylation of PABP has been shown to enhance RNA binding in eukaryotes, and PABP1 has been shown to shuttle between the nucleus and cytoplasm (5,6). PABP1 is methylated on Arg455 and Arg460 by the CARM1 protein methyltransferase (7,8); however, the function of this methylation has yet to be determined.

## Background References

1. Sachs, A. B. et al. (1986) *Cell* 45, 827-835.
2. Piron, M. et al. (1998) *EMBO J.* 17, 5811-5821.
3. Caponigro, G. and Parker, R. (1995) *Genes Dev.* 9, 2421-2432.
4. Sachs, A.B. and Davis, R.W. (1989) *Cell* 58, 857-867.
5. Le, H. et al. (2000) *J. Biol. Chem.* 275, 17452-17462.
6. Afonina, E. et al. (1998) *J. Biol. Chem.* 273, 13015-13021.
7. Lee, J. and Bedford, M.T. (2002) *EMBO Rep* 3, 268-73.
8. Yadav, N. et al. (2003) *Proc Natl Acad Sci U S A* 100, 6464-8.

## 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 **IHC-P:** Immunohistochemistry (Paraffin)

## Cross-Reactivity Key

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

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