



Poly(A)-binding Protein 1 (PABP1, PABP-1, PBP1, PAB1, PABP, PABPC1, PABPC2, PABPL1, Poly(A)-binding Protein Cytoplasmic 1, Polyadenylate Binding Protein 1)

Catalog number

P4362-01A

Supplier

United States Biological

Stability and translation of mRNA in the cytoplasm is governed by different proteins, among them the PABP protein (poly(A)-binding protein). This protein, which is found in the cytoplasm, binds to the 3'-poly(A) tail of mRNA transcripts. PABP is found in excess, relative to the amount of cytoplasmic poly(A) (three fold) and binds to its poly(A) target at high affinity (Kd of 7nM). PABP is highly conserved between different organisms especially at the amino-terminal region of the protein that contains four RNA-binding domains (RBDs). These domains are important for the binding of the poly(A) tail of mRNA. Most mRNAs in eukaryotic cells contain a cap structure in their 5' end (m7GpppX). This structure is recognized by the EIF4F complex, which interacts with PABP indirectly via the PAIP-1 protein (PABP-interacting protein-1). As a consequence, an interaction between the 5' and 3' ends of mRNA occurs. This proximity between the mRNA ends contributes to its stability and enhances translation, since terminating ribosomes may start translation again.

Applications

Suitable for use in ELISA, Western Blot, Immunoprecipitation and Immunocytochemistry. Other applications not tested.

Recommended Dilutions

Western Blot: 0.5ug/ml labels PABP1 using whole cell extract of HEK 293T cells.
Optimal dilutions to be determined by the researcher.

Hybridoma

Sp2/0 myeloma cells with spleen cells from Balb/c mice.

Storage and Stability

May be stored at 4°C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20°C. Aliquots are stable for 12 months after receipt. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.

Immunogen

Recombinant protein corresponding to human Poly(A)-binding Protein 1.

Formulation

Supplied as a liquid in 0.01M PBS, pH 7.4, 15mM sodium azide.

Purity

Purified

Specificity



Recognizes human Poly(A)-binding Protein 1 at ~69kD. Species Crossreactivity: monkey, bovine, hamster, canine and Xenopus

Product Type

Mab

Source

human

Isotype

IgG2b

Grade

Affinity Purified

Applications

E IC IP WB

Crossreactivity

Bo Ca Hm Hu Mk Xe

Storage

-20°C

Reference

1. Gorlach, M., et al., Exp. Cell Res., 211, 400-407 (1994). 2. Adam, S.A., et al., Mol. Cell. Biol., 6, 2932-2943 (1986). 3. Grange, T.C.M., et al., Nuc. Acid Res., 15, 4771-4787 (1987). 4. Craig., A.W.B., et al., Nature, 392, 520-523 (1998).