

PABP (H-300): sc-28834

BACKGROUND

PABP, for poly(A)-binding protein, is an essential, well-conserved, multifunctional protein involved in translational initiation, mRNA biogenesis and degradation. PABP is required for the shortening of the 3' poly(A) tail of eukaryotic mRNA and translation initiation. The interaction between PABP and eukaryotic translation initiation factor 4G (eIF4G) facilitates translational initiation of polyadenylated mRNAs. This interaction is mediated, at least in part, by eIF4G, which bridges the mRNA termini by simultaneously binding PABP and the cap-binding protein, eIF4E. With lower affinities, PABP can also associate with non-poly(A) sequences. The physiological consequences of these PABP/RNA interactions are far from clear but may include functions such as translational silencing. PABP is a modular protein, with four N-terminal RNA-binding domains and an extensive C-terminus. During poliovirus infection, cleavage of eIF4GII and PABP have been proposed to contribute to complete host translation shutoff. The human PABP gene maps to chromosome 8q22.2-q23 and encodes a 633 amino acid protein.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604679. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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3. Deo, R.C., et al. 2001. X-ray structure of the human hyperplastic discs protein: an ortholog of the C-terminal domain of poly(A)-binding protein. *Proc. Natl. Acad. Sci. USA* 98: 4414-4419.
4. Mohr, E., et al. 2001. Vasopressin mRNA localization in nerve cells: characterization of *cis*-acting elements and *trans*-acting factors. *Proc. Natl. Acad. Sci. USA* 98: 7072-7079.

CHROMOSOMAL LOCATION

Genetic locus: PABPC1 (human) mapping to 8q22.3; Pabpc1 (mouse) mapping to 15 B3.1.

SOURCE

PABP (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 (deletion 82-129) mapping at the N-terminus of PABP of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

PABP (H-300) is recommended for detection of PABP1, 2, 3, 4 and 5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

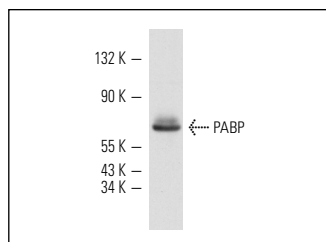
PABP (H-300) is also recommended for detection of PABP1, 2, 3, 4 and 5 in additional species, including canine.

Suitable for use as control antibody for PABP siRNA (h): sc-108012, PABP siRNA (m): sc-36170, PABP shRNA Plasmid (h): sc-108012-SH, PABP shRNA Plasmid (m): sc-36170-SH, PABP shRNA (h) Lentiviral Particles: sc-108012-V and PABP shRNA (m) Lentiviral Particles: sc-36170-V.

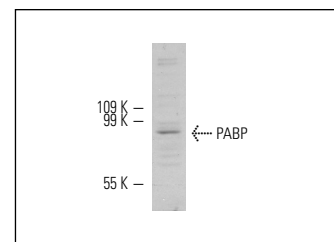
Molecular Weight of PABP: 70 kDa.

Positive Controls: mouse testis extract: sc-2405, HeLa whole cell lysate: sc-2200 or LNCaP cell lysate: sc-2231.

DATA



PABP (H-300): sc-28834. Western blot analysis of PABP expression in mouse testis tissue extract.



PABP (H-300): sc-28834. Western blot analysis of PABP expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Laine, J.P. and Egly, J.M. 2006. Initiation of DNA repair mediated by a stalled RNA polymerase II. *EMBO J.* 25: 387-397.
2. Konopka, J.L., et al. 2007. A two-phase innate host response to α virus infection identified by mRNP-tagging *in vivo*. *PLoS Pathog.* 3: e199.
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