

PABP (h): 293T Lysate: sc-170011

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 simultaneous binding of 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 8q22.3 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/>
2. Chekanova, J.A., et al. 2001. Analysis of an essential requirement for the poly(A) binding protein function using cross-species complementation. *Curr. Biol.* 11: 1207-1214.
3. Svitkin, Y.V., et al. 2001. Poly(A)-binding protein interaction with eIF4G stimulates picornavirus IRES-dependent translation. *RNA* 7: 1743-1752.
4. 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.
5. 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.

PRODUCT

PABP (h): 293T Lysate represents a lysate of human PABP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

PABP (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive PABP antibodies. Recommended use: 10-20 µl per lane.

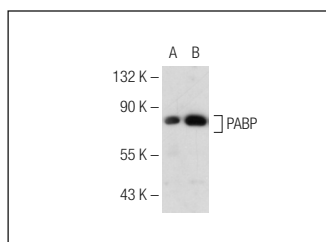
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PABP (F-2): sc-166027 is recommended as a positive control antibody for Western Blot analysis of enhanced human PABP expression in PABP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



PABP (F-2): sc-166027. Western blot analysis of PABP expression in non-transfected: sc-117752 (A) and human PABP transfected: sc-170011 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.