

Paip1 (E-7): sc-365687

BACKGROUND

Paip, for PABP-interacting protein, binds to the polyadenylate-binding protein (PABP), which in yeasts and plants has been shown to bind to the eukaryotic initiation factor component eIF4G. There are two Paip proteins, called Paip1 and Paip2. Paip1 stimulates translation and Paip2, which competes with Paip1 for binding to PABP, represses translation. Paip2 decreases the affinity of PABP for polyadenylate RNA and disrupts the repeating structure of poly(A) ribonucleoprotein. Paip1 contains an eIF4A-binding region and a proline-rich N-terminus. Overexpression of Paip1 in COS7 cells stimulates translation, perhaps by providing a physical link between the mRNA-termini. The human Paip1 gene encodes a 480 amino acid protein.

REFERENCES

1. Craig, A.W., et al. 1998. Interaction of polyadenylate-binding protein with the eIF4G homologue PAIP enhances translation. *Nature* 392: 520-523.
2. Gray, N.K., et al. 2000. Multiple portions of poly(A)-binding protein stimulate translation *in vivo*. *EMBO J.* 19: 4723-4733.
3. Grosset, C., et al. 2000. A mechanism for translationally coupled mRNA turnover: interaction between the poly(A) tail and a c-Fos RNA coding determinant via a protein complex. *Cell* 103: 29-40.
4. Khaleghpour, K., et al. 2001. Dual interactions of the translational repressor Paip2 with poly(A) binding protein. *Mol. Cell. Biol.* 21: 5200-5213.
5. Kozlov, G., et al. 2001. Structure and function of the C-terminal PABC domain of human poly(A)-binding protein. *Proc. Natl. Acad. Sci. USA* 98: 4409-4413.

CHROMOSOMAL LOCATION

Genetic locus: PAIP1 (human) mapping to 5p12; Paip1 (mouse) mapping to 13 D2.3.

SOURCE

Paip1 (E-7) is a mouse monoclonal antibody raised against amino acids 180-479 mapping at the C-terminus of Paip1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Paip1 (E-7) is available conjugated to agarose (sc-365687 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365687 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365687 PE), fluorescein (sc-365687 FITC), Alexa Fluor® 488 (sc-365687 AF488), Alexa Fluor® 546 (sc-365687 AF546), Alexa Fluor® 594 (sc-365687 AF594) or Alexa Fluor® 647 (sc-365687 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365687 AF680) or Alexa Fluor® 790 (sc-365687 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

Paip1 (E-7) is recommended for detection of Paip1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Paip1 siRNA (h): sc-40800, Paip1 siRNA (m): sc-40801, Paip1 shRNA Plasmid (h): sc-40800-SH, Paip1 shRNA Plasmid (m): sc-40801-SH, Paip1 shRNA (h) Lentiviral Particles: sc-40800-V and Paip1 shRNA (m) Lentiviral Particles: sc-40801-V.

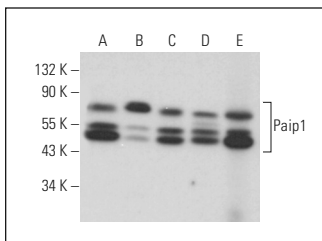
Molecular Weight of Paip1: 70 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, Neuro-2A whole cell lysate: sc-364185 or L6 whole cell lysate: sc-364196.

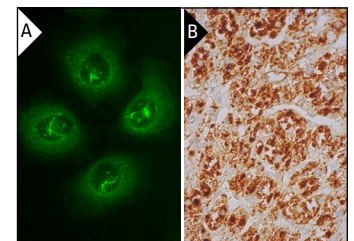
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Paip1 (E-7): sc-365687. Western blot analysis of Paip1 expression in SH-SY5Y (A), Neuro-2A (B), RPE-J (C) and L6 (D) whole cell lysates and human testis tissue extract (E).



Paip1 (E-7): sc-365687. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells (B).

RESEARCH USE

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

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