

Paip1 (F-6): sc-365188

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 COS-7 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. 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.
5. Khaleghpour, K., et al. 2001. Dual interactions of the translational repressor Paip2 with poly(A) binding protein. *Mol. Cell. Biol.* 21: 5200-5213.
6. Gouyon, F., et al. 2003. Fructose modulates Glut5 mRNA stability in differentiated Caco-2 cells: role of cAMP-signalling pathway and PABP (polyadenylated-binding protein)-interacting protein (Paip) 2. *Biochem. J.* 375: 167-174.
7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 605184. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
8. LocusLink Report (LocusID: 10605). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: PAIP1 (human) mapping to 5p12, LOC645139 (human) mapping to 17p11.2; Paip1 (mouse) mapping to 13 D2.3.

SOURCE

Paip1 (F-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 239-261 near the N-terminus of Paip1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365188 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Paip1 (F-6) is recommended for detection of Paip1 and LOC645139 of human origin and Paip1 of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

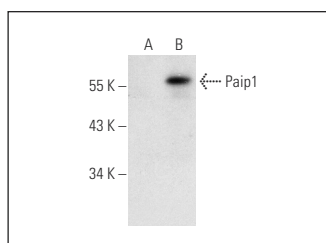
Molecular Weight of Paip1: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Paip1 (m): 293T Lysate: sc-122357.

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.

DATA



Paip1 (F-6): sc-365188. Western blot analysis of Paip1 expression in non-transfected: sc-117752 (A) and mouse Paip1 transfected: sc-122357 (B) 293T whole cell lysates.

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.

PROTOCOLS

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