

Paip2 (A-2): sc-376970

BACKGROUND

Paip, for PABP-interacting protein, binds to the polyadenylate-binding protein (PABP). There are two Paip proteins called Paip1 and Paip2. Paip1 stimulates translation, and Paip2, which competes with Paip1 for binding to PABP, represses translation. Paip1 contains a region similar to the central portion of eIF4G. Paip2 decreases the affinity of PABP for polyadenylate RNA, and disrupts the repeating structure of poly(A) ribonucleoprotein. Paip2 contains two binding sites for PABP, one encompassing a 16 amino-acid stretch located in the C terminus and a second encompassing a larger central region. There is a two-to-one stoichiometry for binding of Paip2 to PABP indicating that they could form a trimeric complex containing one PABP molecule and two Paip2 molecules. Significantly, only the central Paip2 fragment, which binds with high affinity to the PABP RRM region, inhibits PABP binding to poly(A) RNA and translation. Translation in extracts in which eIF4G is cleaved is resistant to inhibition by Paip2. The human Paip2 gene maps to chromosome 5q31.2 and encodes a 127 amino acid protein.

REFERENCES

1. Khaleghpour, K., et al. 2001. Translational repression by a novel partner of human poly(A) binding protein, Paip2. *Mol. Cell* 7: 205-216.
2. Khaleghpour, K., et al. 2001. Dual interactions of the translational repressor Paip2 with poly(A) binding protein. *Mol. Cell. Biol.* 21: 5200-5213.
3. Svitkin, Y.V., et al. 2001. Poly(A)-binding protein interaction with eIF4G stimulates picornavirus IRES-dependent translation. *RNA* 7: 1743-1752.
4. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605604. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. LocusLink Report (LocusID: 51247). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: PAIP2 (human) mapping to 5q31.2; Paip2 (mouse) mapping to 18 B2.

SOURCE

Paip2 (A-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 13-49 near the N-terminus of Paip2 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-376970 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Paip2 (A-2) is recommended for detection of Paip2 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).

Paip2 (A-2) is also recommended for detection of Paip2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Paip2 siRNA (h): sc-40802, Paip2 siRNA (m): sc-40803, Paip2 shRNA Plasmid (h): sc-40802-SH, Paip2 shRNA Plasmid (m): sc-40803-SH, Paip2 shRNA (h) Lentiviral Particles: sc-40802-V and Paip2 shRNA (m) Lentiviral Particles: sc-40803-V.

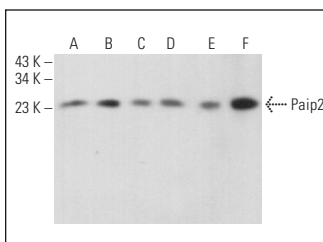
Molecular Weight of Paip2: 28 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

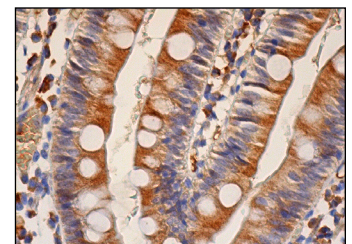
RECOMMENDED SUPPORT REAGENTS

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



Paip2 (A-2): sc-376970. Western blot analysis of Paip2 expression in HeLa (A), Jurkat (B), SH-SY5Y (C), Neuro-2A (D) and NIH/3T3 (E) whole cell lysates and rat testis tissue extract (F).



Paip2 (A-2): sc-376970. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

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.