

Paip2 (S-18): sc-23582

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 2 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 5q32 and encodes a 127 amino acid protein.

REFERENCES

1. Khaleghpour, K., Svitkin, Y.V., Craig, A.W., DeMaria, C.T., Deo, R.C., Burley, S.K. and Sonenberg, N. 2001. Translational repression by a novel partner of human poly(A) binding protein, Paip2. *Mol. Cell. Biol.* 7: 205-216.
2. Khaleghpour, K., Kahvejian, A., De Crescenzo, G., Roy, G., Svitkin, Y.V., Imataka, H., O'Connor-McCourt, M. and Sonenberg, N. 2001. Dual interactions of the translational repressor Paip2 with poly(A) binding protein. *Mol. Cell. Biol.* 21: 5200-5213.
3. Svitkin, Y.V., Imataka, H., Khaleghpour, K., Kahvejian, A., Liebig, H.D. and Sonenberg, N. 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 (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Paip2 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.

Blocking peptide available for competition studies, sc-23582 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Paip2 (S-18) is recommended for detection of Paip2 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).

Paip2 (S-18) 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.

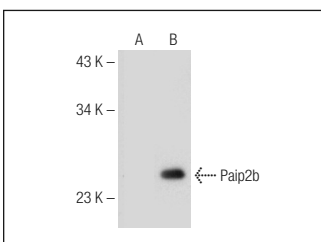
Molecular Weight of Paip2: 28 kDa.

Positive Controls: Paip2b (m): 293T Lysate: sc-122360, HeLa whole cell lysate: sc-2200 or Caco-2 cell lysate: sc-2262.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



Paip2 (S-18): sc-23582. Western blot analysis of Paip2b expression in non-transfected: sc-117752 (A) and mouse Paip2b transfected: sc-122360 (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.

PROTOCOLS

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