SANTA CRUZ BIOTECHNOLOGY, INC.

Paip1 (E-20): sc-18614

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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., Haghighat, A., Yu, A.T. and Sonenberg, N. 1998. Interaction of polyadenylate-binding protein with the eIF4G homologue Paip enhances translation. Nature 392: 520-523.
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. Kozlov, G., Trempe, J.F., Khaleghpour, K., Kahvejian, A., Ekiel, I. and Gehring, K. 2001. Structure and function of the C-terminal PABC domain of human poly(A)-binding protein. Proc. Natl. Acad. Sci. USA 98: 4409-4413.
4. Online Mendelian Inheritance in Man, OMIM™. 2001 Johns Hopkins University, Baltimore, MD. MIM Number: 605184. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. 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 (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Paip1 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-18614 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

Paip1 (E-20) is recommended for detection of Paip1 and LOC645139 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).

Paip1 (E-20) is also recommended for detection of Paip1 and LOC645139 in additional species, including equine, canine, bovine and porcine.

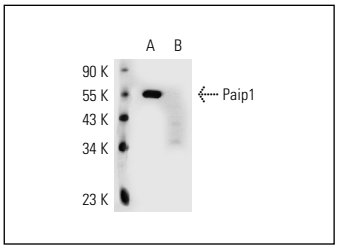
Molecular Weight of Paip1: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Paip1 (h): 293 Lysate: sc-112247 or Paip1 (m): 293T Lysate: sc-122357.

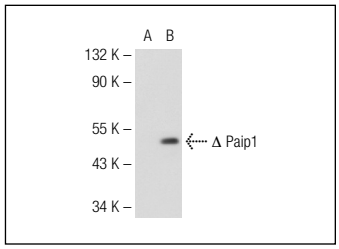
RECOMMENDED SECONDARY REAGENTS

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



Paip1 (E-20): sc-18614. Western blot analysis of Paip1 expression in Paip1 transfected: sc-112247 (**A**) and non-transfected: sc-110760 (**B**) 293 whole cell lysates.



Paip1 (E-20): sc-18614. Western blot analysis of Paip1 expression in non-transfected: sc-117752 (**A**) and truncated mouse Paip1 transfected: sc-122357 (**B**) 293T whole cell lysates.

PROTOCOLS

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