SANTA CRUZ BIOTECHNOLOGY, INC.

Paip1 (m): 293T Lysate: sc-122357

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., 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. Gray, N.K., Coller, J.M., Dickson, K.S. and Wickens, M. 2000. Multiple portions of poly(A)-binding protein stimulate translation *in vivo*. EMBO J. 19: 4723-4733.
3. Grosset, C., Chen, C.Y., Xu, N., Sonenberg, N., Jacquemin-Sablon, H. and Shyu, A.B. 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., 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.
5. 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.
6. Gouyon, F., Onesto, C., Dalet, V., Pages, G., Leturque, A. and Brot-Laroche, E. 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 (mouse) mapping to 13 D2.3.

PRODUCT

Paip1 (m): 293T Lysate represents a lysate of mouse Paip1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Paip1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Paip1 antibodies. Recommended use: 10-20 µl per lane.

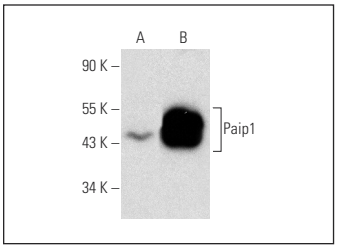
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Paip1 (E-7): sc-365687 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Paip1 expression in Paip1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

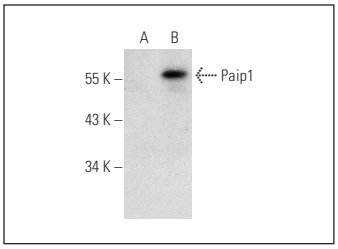
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Paip1 (E-7): sc-365687. Western blot analysis of Paip1 expression in non-transfected: sc-117752 (**A**) and mouse Paip1 transfected: sc-122357 (**B**) 293T whole cell lysates.



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.

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.