

Paip2b (E-9): sc-514137

BACKGROUND

Various PABP-interacting proteins bind to and regulate the activity of polyadenylate-binding protein (PABP), an essential, well-conserved, multi-functional protein involved in translational initiation, mRNA biogenesis and degradation. PABP enhances translation by circularizing mRNA through its interaction with the translation initiation factor eIF4G and mRNA's poly(A) tail. PABP-interacting proteins include PaiP1, a translational stimulator, and Paip2a and Paip2b, translational inhibitors. Paip1 is thought to act as a translational activator in 5' cap-dependent translation by interacting with PABP and the initiation factors eIF4A and eIF3, whereas Paip2 decreases the affinity of PABP for polyadenylate RNA, and disrupts the repeating structure of poly(A) ribonucleoprotein. Paip2b (poly(A) binding protein interacting protein 2B) is a 123 amino acid protein that may be involved in regulating PABP activity.

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. 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.
4. Khaleghpour, K., et al. 2001. Translational repression by a novel partner of human poly(A) binding protein, Paip2. *Mol. Cell. Biol.* 7: 205-216.
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. Derry, M.C., et al. 2006. Regulation of poly(A)-binding protein through PABP-interacting proteins. *Cold Spring Harb. Symp. Quant. Biol.* 71: 537-543.

CHROMOSOMAL LOCATION

Genetic locus: PAIP2B (human) mapping to 2p13.3; Paip2b (mouse) mapping to 6 C3.

SOURCE

Paip2b (E-9) is a mouse monoclonal antibody raised against amino acids 1-49 mapping at the N-terminus of Paip2b 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.

Paip2b (E-9) is available conjugated to agarose (sc-514137 AC), 500 µg/0.25 ml agarose in 1 ml, for IP, to HRP (sc-514137 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514137 PE), fluorescein (sc-514137 FITC), Alexa Fluor® 488 (sc-514137 AF488), Alexa Fluor® 546 (sc-514137 AF546), Alexa Fluor® 594 (sc-514137 AF594) or Alexa Fluor® 647 (sc-514137 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514137 AF680) or Alexa Fluor® 790 (sc-514137 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Paip2b (E-9) is recommended for detection of Paip2b 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Paip2b siRNA (h): sc-156100, Paip2b siRNA (m): sc-151995, Paip2b shRNA Plasmid (h): sc-156100-SH, Paip2b shRNA Plasmid (m): sc-151995-SH, Paip2b shRNA (h) Lentiviral Particles: sc-156100-V and Paip2b shRNA (m) Lentiviral Particles: sc-151995-V.

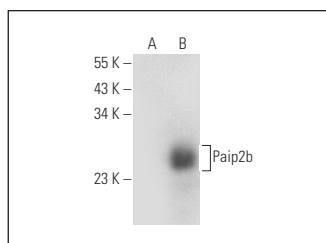
Molecular Weight of Paip2b: 14 kDa.

Positive Controls: Paip2b (m2): 293T Lysate: sc-122360.

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



Paip2b (E-9): sc-514137. 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.

RESEARCH USE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA