SANTA CRUZ BIOTECHNOLOGY, INC.

# Paip2 (C-8): sc-365317

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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/


## CHROMOSOMAL LOCATION

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

## SOURCE

Paip2 (C-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 65-97 within an internal region of Paip2 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Paip2 (C-8) is available conjugated to agarose (sc-365317 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365317 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365317 PE), fluorescein (sc-365317 FITC), Alexa Fluor® 488 (sc-365317 AF488), Alexa Fluor® 546 (sc-365317 AF546), Alexa Fluor® 594 (sc-365317 AF594) or Alexa Fluor® 647 (sc-365317 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365317 AF680) or Alexa Fluor® 790 (sc-365317 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365317 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

Paip2 (C-8) 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).

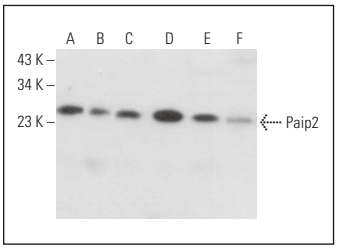
Paip2 (C-8) is also recommended for detection of Paip2 in additional species, including equine, canine, bovine, porcine and avian.

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.

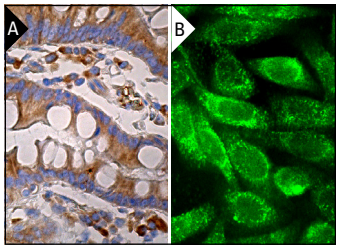
Molecular Weight of Paip2: 28 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, Neuro-2A whole cell lysate: sc-364185 or F9 cell lysate: sc-2245.

## DATA




Paip2 (C-8): sc-365317. Western blot analysis of Paip2 expression in SH-SY5Y (**A**), Neuro-2A (**B**), NIH/3T3 (**C**), F9 (**D**) and HL-60 (**E**) whole cell lysates and rat testis tissue extract (**F**).




Paip2 (C-8): sc-365317. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells (**A**). Immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic vesicles localization (**B**).

## SELECT PRODUCT CITATIONS


1. Tahiri-Alaoui, A., et al. 2014. Poly(A) binding protein 1 enhances cap-independent translation initiation of neurovirulence factor from avian herpesvirus. PLoS ONE 9: e114466.


## 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.

## PROTOCOLS

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