SANTA CRUZ BIOTECHNOLOGY, INC.

PRPSAP1 (A-9): sc-398422

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phosphoribosylpyrophosphate (PRPP) is an essential substrate and critical control factor for the synthesis of purine and pyrimidine nucleotides, histidine, tryptophan and NAD. The formation of phosphoribosylpyrophosphate from ATP and ribose-5-phosphate is catalyzed by the enzyme phosphoribosylpyrophosphate synthetase (PRS), which exists as a complex with two catalytic subunits, PRPS1 and PRPS2, and two associated subunits, PRPSAP1 and PRPSAP2. PRPSAP1 (phosphoribosyl pyrophosphate synthetase-associated protein 1), also known as PAP39, is a 356 amino acid ubiquitous protein belonging to the ribose-phosphate pyrophosphokinase family. PRPSAP1 may play a negative regulatory role in 5-phosphoribose 1-diphosphate synthesis and is encoded by a gene mapping to human chromosome 17q25.1.

REFERENCES

1. Avdienko, I.D., et al. 1983. Range of the transmissivity of the genetic transfer factors pAP38, pAP39, pAP41 and pAP42. Biull. Eksp. Biol. Med. 95: 76-77.
2. Tatibana, M. 1996. Mammalian phosphoribosylpyrophosphate synthetase. Nippon Rinsho 54: 3195-3201.
3. Fujimori, S. 1996. PRPP synthetase superactivity. Nippon Rinsho 54: 3309-3314.
4. Sonoda, T., et al. 1997. Cloning and sequencing of rat cDNA for the 41-kDa phosphoribosylpyrophosphate synthetase-associated protein has a high homology to the catalytic subunits and the 39-kDa associated protein. Biochim. Biophys. Acta 1350: 6-10.

CHROMOSOMAL LOCATION

Genetic locus: PRPSAP1 (human) mapping to 17q25.1; Prpsap1 (mouse) mapping to 11 E2.

SOURCE

PRPSAP1 (A-9) is a mouse monoclonal antibody raised against amino acids 29-120 mapping near the N-terminus of PRPSAP1 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.

PRPSAP1 (A-9) is available conjugated to agarose (sc-398422 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398422 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398422 PE), fluorescein (sc-398422 FITC), Alexa Fluor® 488 (sc-398422 AF488), Alexa Fluor® 546 (sc-398422 AF546), Alexa Fluor® 594 (sc-398422 AF594) or Alexa Fluor® 647 (sc-398422 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398422 AF680) or Alexa Fluor® 790 (sc-398422 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

PRPSAP1 (A-9) is recommended for detection of PRPSAP1 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). PRPSAP1 (A-9) is also recommended for detection of PRPSAP1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for PRPSAP1 siRNA (h): sc-93758, PRPSAP1 siRNA (m): sc-152503, PRPSAP1 shRNA Plasmid (h): sc-93758-SH, PRPSAP1 shRNA Plasmid (m): sc-152503-SH, PRPSAP1 shRNA (h) Lentiviral Particles: sc-93758-V and PRPSAP1 shRNA (m) Lentiviral Particles: sc-152503-V.

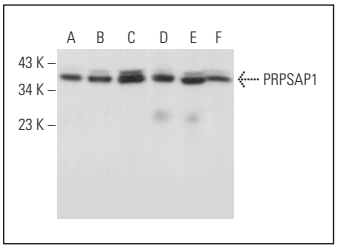
Molecular Weight of PRPSAP1: 41 kDa.

Positive Controls: human liver extract: sc-363766, IMR-32 cell lysate: sc-2409 or Hep G2 cell lysate: sc-2227.

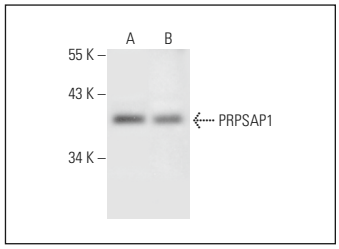
RECOMMENDED SUPPORT REAGENTS

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



PRPSAP1 (A-9): sc-398422. Western blot analysis of PRPSAP1 expression in Hep G2 (**A**), IMR-32 (**B**) and Neuro-2A (**C**) whole cell lysates and human cerebral cortex (**D**), mouse brain (**E**) and rat brain (**F**) tissue extracts.



PRPSAP1 (A-9): sc-398422. Western blot analysis of PRPSAP1 expression in Hep G2 whole cell lysate (**A**) and human liver tissue extract (**B**).

SELECT PRODUCT CITATIONS

1. Srivastava, S., et al. 2021. NOTCH1-driven UBR7 stimulates nucleotide biosynthesis to promote T cell acute lymphoblastic leukemia. Sci. Adv. 7: eabc9781.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.