SANTA CRUZ BIOTECHNOLOGY, INC.

PSTPIP1 (B-10): sc-390727

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The Power to Question

BACKGROUND

PSTPIP1 (proline-serine-threonine phosphatase interacting protein 1), also known as H-PIP, PAPAS, CD2BP1, PSTPIP, CD2BP1L or CD2BP1S, is a 416 amino acid protein that localizes to both the cytoplasm and the cytoskeleton and contains one SH3 domain and one FCH domain. Expressed at high levels in T cells and spleen and present at lower levels in thymus, lung, placenta and small intestine, PSTPIP1 interacts with CD2AP, BDP1 and c-Abl and is involved in the regulation of the Actin cytoskeleton, possibly functioning as a scaffold protein that may promote Actin polymerization. Defects in the gene encoding PSTPIP1 are the cause of PAPA syndrome (PAPAS), an autosomal dominant disease characterized by recurring inflammatory episodes that affect skin and joint tissue. Multiple isoforms of PSTPIP1 exist due to alternative splicing events.

REFERENCES

1. Spencer, S., et al. 1997. PSTPIP: a tyrosine phosphorylated cleavage furrow-associated protein that is a substrate for a PEST tyrosine phosphatase. J. Cell Biol. 138: 845-860.
2. Li, J., et al. 1998. A Cdc15-like adaptor protein (CD2BP1) interacts with the CD2 cytoplasmic domain and regulates CD2-triggered adhesion. EMBO J. 17: 7320-7336.
3. Dowbenko, D., et al. 1998. Identification of a novel polyproline recognition site in the cytoskeletal associated protein, proline serine threonine phosphatase interacting protein. J. Biol. Chem. 273: 989-996.
4. Wu, Y., et al. 1998. Tyrosine phosphorylation regulates the SH3-mediated binding of the Wiskott-Aldrich syndrome protein to PSTPIP, a cytoskeletal-associated protein. J. Biol. Chem. 273: 5765-5770.
5. Cong, F., et al. 2000. Cytoskeletal protein PSTPIP1 directs the PEST-type protein tyrosine phosphatase to the c-Abl kinase to mediate Abl dephosphorylation. Mol. Cell 6: 1413-1423.
6. Wise, C.A., et al. 2002. Mutations in CD2BP1 disrupt binding to PTP PEST and are responsible for PAPA syndrome, an autoinflammatory disorder. Hum. Mol. Genet. 11: 961-969.
7. Côté, J.F., et al. 2002. PSTPIP is a substrate of PTP-PEST and serves as a scaffold guiding PTP-PEST toward a specific dephosphorylation of WASP. J. Biol. Chem. 277: 2973-2986.

CHROMOSOMAL LOCATION

Genetic locus: PSTPIP1 (human) mapping to 15q24.3.

SOURCE

PSTPIP1 (B-10) is a mouse monoclonal antibody raised against amino acids 1-94 mapping at the N-terminus of PSTPIP1 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PSTPIP1 (B-10) is available conjugated to agarose (sc-390727 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390727 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390727 PE), fluorescein (sc-390727 FITC), Alexa Fluor® 488 (sc-390727 AF488), Alexa Fluor® 546 (sc-390727 AF546), Alexa Fluor® 594 (sc-390727 AF594) or Alexa Fluor® 647 (sc-390727 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390727 AF680) or Alexa Fluor® 790 (sc-390727 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

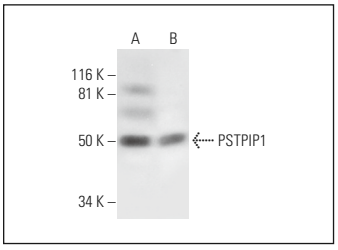
PSTPIP1 (B-10) is recommended for detection of PSTPIP1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PSTPIP1 siRNA (h): sc-90246, PSTPIP1 shRNA Plasmid (h): sc-90246-SH and PSTPIP1 shRNA (h) Lentiviral Particles: sc-90246-V.

Molecular Weight of PSTPIP1: 50 kDa.

Positive Controls: THP-1 cell lysate: sc-2238 or AML-193 whole cell lysate: sc-364182.

DATA



PSTPIP1 (B-10): sc-390727. Western blot analysis of PSTPIP1 expression in THP-1 (**A**) and AML-193 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Aristorena, M., et al. 2014. Expression of endoglin isoforms in the myeloid lineage and their role during aging and macrophage polarization. J. Cell Sci. 127: 2723-2735.

RESEARCH USE

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