SANTA CRUZ BIOTECHNOLOGY, INC.

PSTPIP1 (Q-13): sc-104631

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.
8. Yu, J.W., et al. 2007. Pyrin activates the ASC pyroptosome in response to engagement by autoinflammatory PSTPIP1 mutants. Mol. Cell. 28: 214-227.
9. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 606347. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: PSTPIP1 (human) mapping to 15q24.3; Pstpip1 (mouse) mapping to 9 B.

SOURCE

PSTPIP1 (Q-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PSTPIP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104631 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PSTPIP1 (Q-13) is recommended for detection of PSTPIP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 siRNA (m): sc-106460, PSTPIP1 shRNA Plasmid (h): sc-90246-SH, PSTPIP1 shRNA Plasmid (m): sc-106460-SH, PSTPIP1 shRNA (h) Lentiviral Particles: sc-90246-V and PSTPIP1 shRNA (m) Lentiviral Particles: sc-106460-V.

Molecular Weight of PSTPIP1: 50 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.