SANTA CRUZ BIOTECHNOLOGY, INC.

phostensin (B-11): sc-376833

BACKGROUND

In eukaryotes, the phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions, including division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the protein phosphatases, specifically PP1 (protein phosphhatase 1), which is targeted to different substrates throughout the cell. Phostensin, also known as KIAA1949, is a 613 amino acid protein that localizes to both the cytoplasm and the cytoskeleton. Expressed predominately in spleen, ovary, lung and liver tissue, phostensin functions as a regulatory subunit that interacts with and targets PP1 to F-Actin in the cytoskeleton. Two isoforms of phostensin exist due to alternative splicing events.

REFERENCES

1. Nagase, T., et al. 2001. Prediction of the coding sequences of unidentified human genes. XXII. The complete sequences of 50 new cDNA clones which code for large proteins. DNA Res. 8: 319-327.
2. Terry-Lorenzo, R.T., et al. 2002. Neurabins recruit protein phosphatase-1 and inhibitor-2 to the Actin cytoskeleton. J. Biol. Chem. 277: 46535-46543.
3. Oliver, C.J., et al. 2002. Targeting protein phosphatase 1 (PP1) to the Actin cytoskeleton: the Neurabin I/PP1 complex regulates cell morphology. Mol. Cell. Biol. 22: 4690-4701.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610990. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Olsen, J.V., et al. 2006. Global, *in vivo,* and site-specific phosphorylation dynamics in signaling networks. Cell 127: 635-648.
6. Kao, S.C., et al. 2007. Identification of phostensin, a PP1 F-Actin cytoskeleton targeting subunit. Biochem. Biophys. Res. Commun. 356: 594-598.

CHROMOSOMAL LOCATION

Genetic locus: Ppp1r18 (mouse) mapping to 17 B1.

SOURCE

phostensin (B-11) is a mouse monoclonal antibody raised against amino acids 121-420 mapping within an internal region of phostensin of mouse origin.

PRODUCT

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

STORAGE

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

PROTOCOLS

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

APPLICATIONS

phostensin (B-11) is recommended for detection of phostensin of mouse 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 phostensin siRNA (m): sc-152234, phostensin shRNA Plasmid (m): sc-152234-SH and phostensin shRNA (m) Lentiviral Particles: sc-152234-V.

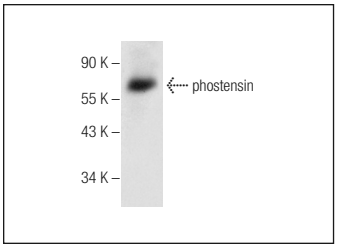
Molecular Weight of phostensin isoforms: 26/68 kDa.

Positive Controls: c4 whole cell lysate: sc-364186 or mouse lung extract: sc-2390.

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



phostensin (B-11): sc-376833. Western blot analysis of phostensin expression in c4 whole cell lysate.

RESEARCH USE

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