

# phostensin (M-300): sc-99168

## 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 phosphatase 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: KIAA1949 (human) mapping to 6p21.33; Ppp1r18 (mouse) mapping to 17 B1.

## SOURCE

phostensin (M-300) is a rabbit polyclonal antibody raised against amino acids 121-420 mapping within an internal region of phostensin of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG 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.

## APPLICATIONS

phostensin (M-300) is recommended for detection of phostensin of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, 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 (h): sc-95055, phostensin siRNA (m): sc-152234, phostensin shRNA Plasmid (h): sc-95055-SH, phostensin shRNA Plasmid (m): sc-152234-SH, phostensin shRNA (h) Lentiviral Particles: sc-95055-V and phostensin shRNA (m) Lentiviral Particles: sc-152234-V.

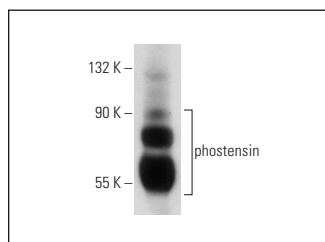
Molecular Weight of phostensin isoforms: 26/68 kDa.

Positive Controls: mouse lung extract: sc-2390 or I-11.15 whole cell lysate: sc-364370.

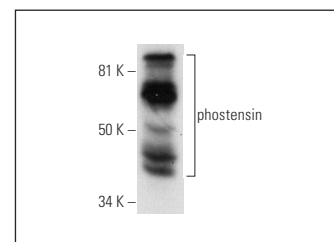
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



phostensin (M-300): sc-99168. Western blot analysis of phostensin expression in mouse lung tissue extract.



phostensin (M-300): sc-99168. Western blot analysis of phostensin expression in I-11.15 whole cell lysate.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.