

# PRK2 (C-6): sc-271526

## BACKGROUND

Rho, the Ras-related small GTPase, is responsible for the regulation of Actin-based cytoskeletal structures including stress fibers, focal adhesions and the contractile ring apparatus. Rho proteins function as molecular switches that are able to turn cytokinesis on and off. Although little is known about signaling downstream of Rho, a host of putative Rho effector proteins have been described, including raphilin, rhotekin, citron and the serine/threonine kinase, protein kinase N. Several related Rho-binding proteins have been identified, including the serine/threonine kinases PRK2 (PKC-related kinase 2, also designated PAK-2).

## REFERENCES

1. Leung, T., et al. 1995. A novel serine/threonine kinase binding the Ras-related RhoA GTPase which translocates the kinase to peripheral membranes. *J. Biol. Chem.* 270: 29051-29054.
2. Kitagawa, M., et al. 1995. Purification and characterization of a fatty acid-activated protein kinase (PKN) from rat testis. *Biochem. J.* 310: 657-664.
3. Mukai, H., et al. 1996. PKN associates and phosphorylates the head-rod domain of neurofilament protein. *J. Biol. Chem.* 271: 9816-9822.
4. Shibata, H., et al. 1996. Characterization of the interaction between RhoA and the amino-terminal region of PKN. *FEBS Lett.* 385: 221-224.
5. Kitagawa, M., et al. 1996. The role of the unique motifs in the amino-terminal region of PKN on its enzymatic activity. *Biochem. Biophys. Res. Commun.* 220: 963-968.
6. Watanabe, G., et al. 1996. Protein kinase N (PKN) and PKN-related protein raphilin as targets of small GTPase Rho. *Science* 271: 645-648.
7. Amano, M., et al. 1996. Identification of a putative target for Rho as the serine-threonine kinase protein kinase N. *Science* 271: 648-650.

## CHROMOSOMAL LOCATION

Genetic locus: PKN2 (human) mapping to 1p22.2; Pkn2 (mouse) mapping to 3 H1.

## SOURCE

PRK2 (C-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 949-978 at the C-terminus of PRK2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271526 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

PRK2 (C-6) is recommended for detection of PRK2 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).

PRK2 (C-6) is also recommended for detection of PRK2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PRK2 siRNA (h): sc-39219, PRK2 siRNA (m): sc-39220, PRK2 shRNA Plasmid (h): sc-39219-SH, PRK2 shRNA Plasmid (m): sc-39220-SH, PRK2 shRNA (h) Lentiviral Particles: sc-39219-V and PRK2 shRNA (m) Lentiviral Particles: sc-39220-V.

Molecular Weight of PRK2: 130 kDa.

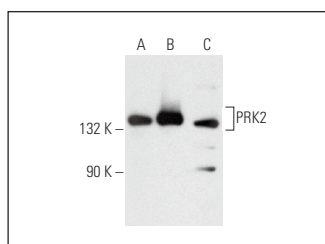
Positive Controls: COLO 320DM cell lysate: sc-2226, HeLa + Calyculin A cell lysate: sc-2271 or K-562 whole cell lysate: sc-2203.

## RECOMMENDED SUPPORT REAGENTS

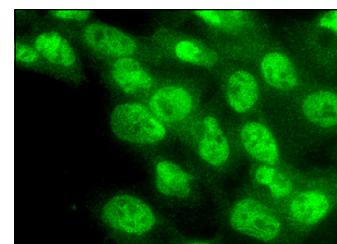
To ensure optimal results, the following support reagents are recommended:

- 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



PRK2 (C-6): sc-271526. Western blot analysis of PRK2 expression in COLO 320DM (A), Calyculin A (sc-24000) treated HeLa (B) and K-562 (C) whole cell lysates.



PRK2 (C-6): sc-271526. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

1. Shi, H., et al. 2012. Cell-based proteome profiling of potential dasatinib targets by use of affinity-based probes. *J. Am. Chem. Soc.* 134: 3001-3014.

## RESEARCH USE

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