

# Rhotekin (B-4): sc-393833

## 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. Two additional Rho-activated serine/threonine kinases have been described, designated Rock-1 and Rock-2 (also referred to as Roka) for Rho-associated coil-containing protein kinase. Rock-1 and Rock-2 share a structural similarity with myotonic dystrophy kinase.

## REFERENCES

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

## CHROMOSOMAL LOCATION

Genetic locus: RTKN (human) mapping to 2p13.1; Rtkn (mouse) mapping to 6 C3.

## SOURCE

Rhotekin (B-4) is a mouse monoclonal antibody raised against amino acids 216-467 mapping within an internal region of Rhotekin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rhotekin (B-4) is available conjugated to agarose (sc-393833 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393833 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393833 PE), fluorescein (sc-393833 FITC), Alexa Fluor® 488 (sc-393833 AF488), Alexa Fluor® 546 (sc-393833 AF546), Alexa Fluor® 594 (sc-393833 AF594) or Alexa Fluor® 647 (sc-393833 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393833 AF680) or Alexa Fluor® 790 (sc-393833 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Rhotekin (B-4) is recommended for detection of Rhotekin 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).

Suitable for use as control antibody for Rhotekin siRNA (h): sc-39223, Rhotekin siRNA (m): sc-39224, Rhotekin shRNA Plasmid (h): sc-39223-SH, Rhotekin shRNA Plasmid (m): sc-39224-SH, Rhotekin shRNA (h) Lentiviral Particles: sc-39223-V and Rhotekin shRNA (m) Lentiviral Particles: sc-39224-V.

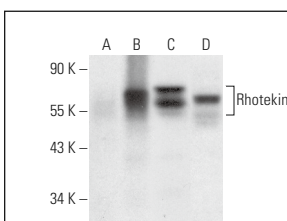
Molecular Weight of Rhotekin: 62 kDa.

Positive Controls: Rhotekin (h): 293T Lysate: sc-112761, A-431 whole cell lysate: sc-2201 or Jurkat whole cell lysate: sc-2204.

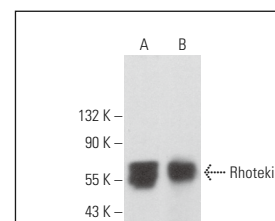
## RECOMMENDED SUPPORT REAGENTS

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



Rhotekin (B-4): sc-393833. Western blot analysis of Rhotekin expression in non-transfected 293T: sc-117752 (A), human Rhotekin transfected 293T: sc-112761 (B), A-431 (C) and Jurkat (D) whole cell lysates.



Rhotekin (B-4): sc-393833. Western blot analysis of Rhotekin expression in PC-12 (A) and SK-BR-3 (B) whole cell lysates.

## 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.

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