# Rhotekin (h3): 293 Lysate: sc-171081



The Power to Question

#### **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 rhophilin, 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**

- Kitagawa, M., Mukai, H., Shibata, H. and Ono, Y. 1995. Purification and characterization of a fatty acid-activated protein kinase (PKN) from rat testis. Biochem. J. 310: 657-664.
- Leung, T., Manser, E., Tan, L. and Lim, L. 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.
- Watanabe, G., Saito, Y., Madaule, P., Ishizaki, T., Fujisawa, K., Morii, N., Mukai, H., Ono, Y., Kakizuka, A. and Narumiya, S. 1996. Protein kinase N (PKN) and PKN-related protein rhophilin as targets of small GTPase Rho. Science 271: 645-648.
- 4. Amano, M., et al. 1996. Identification of a putative target for Rho as the serine-threonine kinase protein kinase N. Science 271: 648-650.
- Mukai, H., Toshimori, M., Shibata, H., Kitagawa, M., Shimakawa, M., Miyahara, M., Sunakawa, H. and Ono, Y. 1996. PKN associates and phosphorylates the head-rod domain of neurofilament protein. J. Biol. Chem. 271: 9816-9822.
- Shibata, H., Mukai, H., Inagaki, Y., Homma, Y., Kimura, K., Kaibuchi, K., Narumiya, S. and Ono, Y. 1996. Characterization of the interaction between RhoA and the amino-terminal region of PKN. FEBS Lett. 385: 221-224.
- Kitagawa, M., Mukai, H., Ono, Y., Chihara, K., Matsui, T., Hamajima, Y., Okawa, K., Iwamatsu, A. and Kaibuchi, K. 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.
- 8. Ishizaki, T., Maekawa, M., Fujisawa, K., Okawa, K., Iwamatsu, A., Fujita, A., Watanabe, N., Saito, Y., Kakizuka, A., Morii, N. and Narumiya, S. 1996. The small GTP-binding protein Rho binds to and activates a 160 kDa Ser/Thr protein kinase homologous to myotonic dystrophy kinase. EMBO J. 15: 1885-1893.

## **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

#### **PROTOCOLS**

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

#### **CHROMOSOMAL LOCATION**

Genetic locus: RTKN (human) mapping to 2p13.1.

### **PRODUCT**

Rhotekin (h3): 293 Lysate represents a lysate of human Rhotekin transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

#### **APPLICATIONS**

Rhotekin (h3): 293 Lysate is suitable as a Western Blotting positive control for human reactive Rhotekin antibodies. Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

## **RESEARCH USE**

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com