

Rhotekin (h): 293T Lysate: sc-112761

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., 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.
2. Leung, T., Manser, E., Tan, L. and Lim, L. 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. 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 raphilin as targets of small GTPase Rho. *Science* 271: 645-648.
4. Amano, M., Mukai, H., Ono, Y., Chihara, K., Matsui, T., Hamajima, Y., Okawa, K., Iwamatsu, A. and Kaibuchi, K. 1996. Identification of a putative target for Rho as the serine-threonine kinase protein kinase N. *Science* 271: 648-650.
5. 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.
6. Shibata, H., Mukai, H., Inagaki, Y., Homma, Y., Kimura, K., Kaibuchi, K., Narumiya, S. and Ono, Y. 1996. Characterization of the interaction between Rho A and the amino-terminal region of PKN. *FEBS Lett.* 385: 221-224.
7. Kitagawa, M., Shibata, H., Toshimori, M., Mukai, H. and Ono, Y. 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.

CHROMOSOMAL LOCATION

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

PRODUCT

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

APPLICATIONS

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

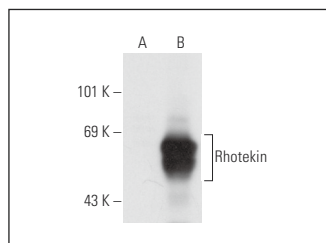
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Rhotekin (AA-18): sc-100426 is recommended as a positive control antibody for Western Blot analysis of enhanced human Rhotekin expression in Rhotekin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

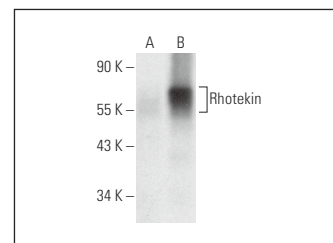
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Rhotekin (AA-18): sc-100426. Western blot analysis of Rhotekin expression in non-transfected: sc-117752 (A) and human Rhotekin transfected: sc-112761 (B) 293T whole cell lysates.



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

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.

RESEARCH USE

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

PROTOCOLS

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