

Rho D (A-18): sc-27882

BACKGROUND

Upon activation, the small GTPase Rho D contributes to rearrangement of the actin cytoskeleton and cell surface and also governs endosome motility and distribution. The effects of Rho D antagonize those of its family member, Rho A, by disassembling actin stress fibers normally enhanced by Rho A. Additionally, Rho D disengages focal adhesions, resulting in retardation of cell migration. Accordingly, transfection of a constitutively active form of Rho D (designated Rho D G26V) reverses the invasive phenotype of G-protein $\alpha(\text{olf})$ induced cells, implying the possibility of a therapeutic use for activated Rho D in counteracting tumor metastasis.

REFERENCES

1. Paradis, G., Bazin, R. and Lemieux, R. 1986. Protective effect of the membrane skeleton on the immunologic reactivity of the human red cell Rho D antigen. *J. Immunol.* 137: 240-244.
2. Mohandas, K., Najfield, V., Gilbert, H., Azar, P. and Skerrett, D. 1994. Loss and reappearance of Rho D antigen on the red blood cells of an individual with acute myelogenous leukemia. *Immunohematology* 10: 134-345.
3. Murphy, C., Saffrich, R., Grummt, M., Gournier, H., Rybin, V., Rubino, M., Auvinen, P., Lutcke, A., Parton, R.G. and Zerial, M. 1996. Endosome dynamics regulated by a Rho protein. *Nature* 384: 427-432.
4. Shimizu, F., Watanabe, T.K., Okuno, S., Omori, Y., Fujiwara, T., Takahashi, E. and Nakamura, Y. 1997. Isolation of a novel human cDNA (RhoHP1) homologous to Rho genes. *Biochim. Biophys. Acta* 1351: 13-16.
5. Tsubakimoto, K., Matsumoto, K., Abe, H., Ishii, J., Amano, M., Kaibuchi, K., Endo, T. 1999. Small GTPase Rho D suppresses cell migration and cytokinesis. *Oncogene* 18: 2431-2440.
6. Regnaud, K., Nguyen, Q.D., Vakaet, L., Bruyneel, E., Launay, J.M., Endo, T., Mareel, M., Gespach, C., Emami, S. 2002. G-protein $\alpha(\text{olf})$ subunit promotes cellular invasion, survival, and neuroendocrine differentiation in digestive and urogenital epithelial cells. *Oncogene* 21: 4020-4031.

CHROMOSOMAL LOCATION

Genetic locus: Rhod (mouse) mapping to 19 A.

SOURCE

Rho D (A-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Rho D 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.

Blocking peptide available for competition studies, sc-27882 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Rho D (A-18) is recommended for detection of Rho D of mouse and rat 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 Rho D siRNA (m): sc-60033, Rho D shRNA Plasmid (m): sc-60033-SH and Rho D shRNA (m) Lentiviral Particles: sc-60033-V.

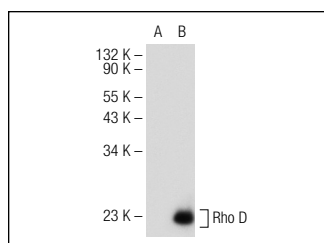
Molecular Weight of Rho D: 23 kDa.

Positive Controls: Rho D (h): 293 Lysate: sc-110628.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Rho D (A-18): sc-27882. Western blot analysis of Rho D expression in non-transfected: sc-110760 (A) and human Rho D transfected: sc-110628 (B) 293 whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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