

Rho D (H-1): sc-376340

BACKGROUND

Upon activation, the small GTPase Rho D (also designated RhoHP1 and ARHD) 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 $G_{\alpha_{olf}}$ induced cells, implying the possibility of a therapeutic use for activated Rho D in counteracting tumor metastasis.

REFERENCES

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2. Ruiz-Argüelles, G.J., et al. 1993. The infusion of anti-Rho-(D) opsonized erythrocytes may be useful in the treatment of patients, splenectomized or not, with chronic, refractory autoimmune thrombocytopenic purpura—a prospective study. *Am. J. Hematol.* 43: 72-73.
3. Mohandas, K., et al. 1994. Loss and reappearance of Rho(D) antigen on the red blood cells of an individual with acute myelogenous leukemia. *Immunohematology* 10: 134-135.
4. Murphy, C., et al. 1996. Endosome dynamics regulated by a Rho protein. *Nature* 384: 427-432.
5. Shimizu, F., et al. 1997. Isolation of a novel human cDNA (RhoHP1) homologous to Rho genes. *Biochim. Biophys. Acta* 1351: 13-16.
6. Tsubakimoto, K., et al. 1999. Small GTPase RhoD suppresses cell migration and cytokinesis. *Oncogene* 18: 2431-2440.
7. Kim, H.S., et al. 2000. Assignment of the human RhoHP1 gene (ARHD) to chromosome 11q14.3 by radiation hybrid mapping. *Cytogenet. Cell Genet.* 89: 53.
8. Regnaud, K., et al. 2002. G-protein α_{olf} subunit promotes cellular invasion, survival, and neuroendocrine differentiation in digestive and urogenital epithelial cells. *Oncogene* 21: 4020-4031.

CHROMOSOMAL LOCATION

Genetic locus: RHOD (human) mapping to 11q13.2.

SOURCE

Rho D (H-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-29 at the N-terminus of Rho D of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} 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-376340 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Rho D (H-1) is recommended for detection of Rho D of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (h): sc-60032, Rho D shRNA Plasmid (h): sc-60032-SH and Rho D shRNA (h) Lentiviral Particles: sc-60032-V.

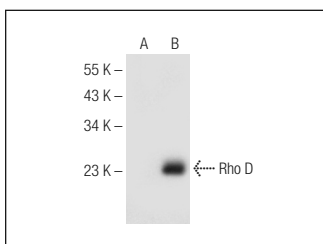
Molecular Weight of Rho D: 23 kDa.

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

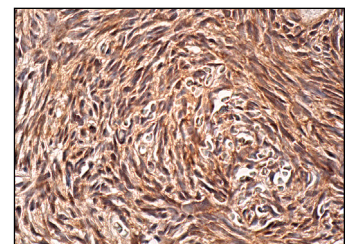
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Rho D (H-1): sc-376340. 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.



Rho D (H-1): sc-376340. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic staining of ovarian stroma cells.

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.

PROTOCOLS

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