

Rock-1 (H-85): sc-5560

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 rhotillin, 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.

CHROMOSOMAL LOCATION

Genetic locus: ROCK1 (human) mapping to 18q11.1; Rock1 (mouse) mapping to 18 A1.

SOURCE

Rock-1 (H-85) is a rabbit polyclonal antibody raised against amino acids 755-840 mapping within an internal region of Rock-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Rock-1 (H-85) is recommended for detection of Rock-1 of mouse, rat and human 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), 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).

Rock-1 (H-85) is also recommended for detection of Rock-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Rock-1 siRNA (h): sc-29473, Rock-1 siRNA (m): sc-36432, Rock-1 siRNA (r): sc-72179, Rock-1 shRNA Plasmid (h): sc-29473-SH, Rock-1 shRNA Plasmid (m): sc-36432-SH, Rock-1 shRNA Plasmid (r): sc-72179-SH, Rock-1 shRNA (h) Lentiviral Particles: sc-29473-V, Rock-1 shRNA (m) Lentiviral Particles: sc-36432-V and Rock-1 shRNA (r) Lentiviral Particles: sc-72179-V.

Molecular Weight of Rock-1: 160 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, Caki-1 cell lysate: sc-2224 or mouse liver extract: sc-2256.

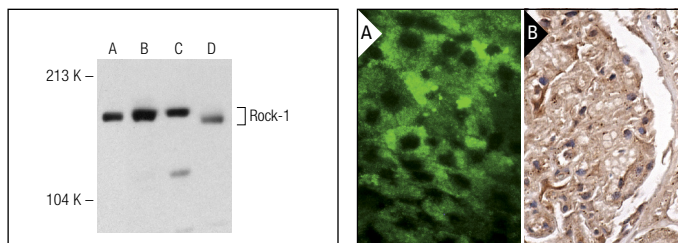
STORAGE

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.

DATA



Rock-1 (H-85): sc-5560. Western blot analysis of Rock-1 expression in Caki-1 (A), KNRK (B) and c4 (C) whole cell lysates and mouse liver tissue extract (D).

Rock-1 (H-85): sc-5560. Immunofluorescence staining of normal mouse liver frozen section showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in glomeruli and tubules (B).

SELECT PRODUCT CITATIONS

- McElhinney, B., et al. 2003. Eosinophil peroxidase catalyzes JNK-mediated membrane blebbing in a Rho kinase-dependent manner. *J. Leukoc. Biol.* 74: 897-907.
- Lai, J.M., et al. 2003. Caspase activation during phorbol ester-induced apoptosis requires Rock-dependent Myosin-mediated contraction. *J. Cell Sci.* 116: 3491-3501.
- Sato, K., et al. 2003. Spike formation by fibroblasts adhering to fibrillar collagen I gel. *Cell Struct. Funct.* 28: 229-241.
- Vemula, S., et al. 2010. ROCK1 functions as a suppressor of inflammatory cell migration by regulating PTEN phosphorylation and stability. *Blood* 115: 1785-1796.
- Rolando, M., et al. 2010. Transcriptome dysregulation by anthrax lethal toxin plays a key role in induction of human endothelial cell cytotoxicity. *Cell. Microbiol.* 12: 891-905.
- Vogel, S., et al. 2010. Prolyl hydroxylase domain (PHD) 2 affects cell migration and F-actin formation via RhoA/rho-associated kinase-dependent cofilin phosphorylation. *J. Biol. Chem.* 285: 33756-33763.
- Vemula, S., et al. 2010. ROCK1 functions as a suppressor of inflammatory cell migration by regulating PTEN phosphorylation and stability. *Blood* 115: 1785-1796.
- Li, D., et al. 2011. Dishevelled-associated activator of morphogenesis 1 (Daam1) is required for heart morphogenesis. *Development* 138: 303-315.


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