SANTA CRUZ BIOTECHNOLOGY, INC.

Rock-1 (C-19): sc-6055

SANTA CRUZ BIOTECHNOLOGY

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.

CHROMOSOMAL LOCATION

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

SOURCE

Rock-1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Rock-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6055 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rock-1 (C-19) 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 (C-19) is also recommended for detection of Rock-1 in additional species, including equine, canine, bovine, porcine and avian.

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: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or HEK293 whole cell lysate: sc-45136.

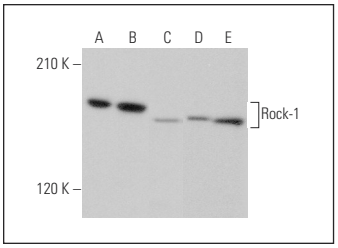
STORAGE

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

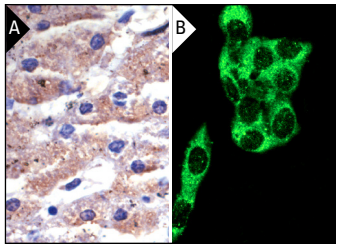
RESEARCH USE

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

DATA



Rock-1 (C-19): sc-6055. Western blot analysis of Rock-1 expression in Jurkat (**A**), K-562 (**B**), NIH/3T3 (**C**), MOLT-4 (**D**) and HEK293 (**E**) whole cell lysates.



Rock-1 (C-19): sc-6055. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human liver tissue showing cytoplasmic staining (**A**). Immunofluorescence staining of methanol-fixed Hep G2 cells showing cytoplasmic localization (**B**).

SELECT PRODUCT CITATIONS

1. Sebbagh, M., et al. 2001. Caspase-3-mediated cleavage of Rock-1 induces MLC phosphorylation and apoptotic membrane blebbing. Nat. Cell Biol. 3: 346-352.
2. Rashid-Doubell, F., et al. 2007. Caveolin-1 and lipid rafts in confluent BeWo trophoblasts: evidence for Rock-1 association with caveolin-1. Placenta 28: 139-151.
3. Song, J., et al. 2008. Effects of mycophenolate mofetil on chronic allograft nephropathy by affecting RHO/ROCK signal pathways. Transplant. Proc. 40: 2790-2794.
4. Malaval, C., et al. 2009. RhoA/ROCK I signalling downstream of the P2Y13 ADP-receptor controls HDL endocytosis in human hepatocytes. Cell. Signal. 21: 120-127.
5. Kollins, K.M., et al. 2009. Myosin-II negatively regulates minor process extension and the temporal development of neuronal polarity. Dev. Neurobiol. 69: 279-298.
6. Talens-Visconti, R., et al. 2010. RhoE stimulates neurite-like outgrowth in PC12 cells through inhibition of the RhoA/ROCK-I signalling. J. Neurochem. 112: 1074-1087.
7. Goetsch, K.P., et al. 2011. Decorin modulates collagen I-stimulated, but not fibronectin-stimulated, migration of C2C12 myoblasts. Matrix Biol. 30: 109-117.
8. Zheng, H.Z., et al. 2011. Rat bone marrow mesenchymal stem cells-differentiated endothelial like cells facilitate angiogenesis and the Rho kinase contribution. Sheng Li Xue Bao 63: 359-366.

MONOS Satisfaction Guaranteed

Try **Rock-1 (G-6): sc-17794** or **Rock-1 (B-1): sc-374388**, our highly recommended monoclonal alternatives to Rock-1 (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Rock-1 (G-6): sc-17794**.