

# Rock-2 (C-20): sc-1851

## 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 rhotaphilin, 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: ROCK2 (human) mapping to 2p25.1; Rock2 (mouse) mapping to 12 A1.1.

## SOURCE

Rock-2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Rock-2 of rat 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-1851 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Rock-2 (C-20) is recommended for detection of Rock-2 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-2 (C-20) is also recommended for detection of Rock-2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Rock-2 siRNA (h): sc-29474, Rock-2 siRNA (m): sc-36433, Rock-2 shRNA Plasmid (h): sc-29474-SH, Rock-2 shRNA Plasmid (m): sc-36433-SH, Rock-2 shRNA (h) Lentiviral Particles: sc-29474-V and Rock-2 shRNA (m) Lentiviral Particles: sc-36433-V.

Molecular Weight of Rock-2: 160 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, mouse brain extract: sc-2253 or A-10 cell lysate: sc-3806.

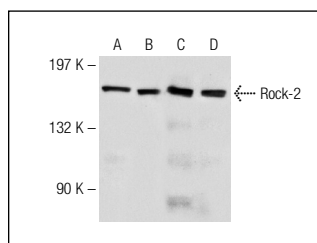
## STORAGE

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

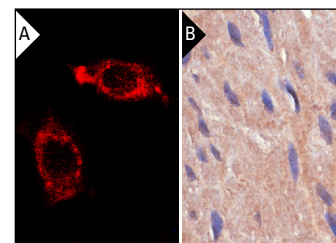
## RESEARCH USE

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

## DATA



Rock-2 (C-20): sc-1851. Western blot analysis of Rock-2 expression in Sol 8 (A) and A10 (B) whole cell lysates and mouse (C) and rat (D) brain extracts.



Rock-2 (C-20): sc-1851. Immunofluorescence staining of methanol-fixed A-10 cells showing cytoplasmic staining (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon tissue showing cytoplasmic staining (B).

## SELECT PRODUCT CITATIONS

- 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.
- Singh, U.S., et al. 2001. Role of transglutaminase II in retinoic acid-induced activation of Rho A-associated kinase-2. *EMBO J.* 20: 2413-2423.
- Vemula, S., et al. 2010. Rock-1 functions as a suppressor of inflammatory cell migration by regulating PTEN phosphorylation and stability. *Blood* 115: 1785-1796.
- Kilic, E., et al. 2010. Role of Nogo-A in neuronal survival in the reperfused ischemic brain. *J. Cereb. Blood Flow Metab.* 30: 969-984.
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- Burmeister, D., et al. 2012. Impact of partial urethral obstruction on bladder function: time-dependent changes and functional correlates of altered expression of Ca<sup>2+</sup> signaling regulators. *Am. J. Physiol. Renal Physiol.* 302: F1517-F1528.

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Try **Rock-2 (D-11): sc-398519** or **Rock-2 (D-2): sc-365275**, our highly recommended monoclonal alternatives to Rock-2 (C-20).