

# cleaved Rock-1 (h1113): sc-34326

## 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 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. During apoptosis, Rock-1 is cleaved by caspase-3, leading to kinase activation and membrane blebbing.

## REFERENCES

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2. Leung, T., et al. 1995. A novel serine/threonine kinase binding the Ras-related RhoA GTPase which translocates the kinase to peripheral membranes. *J. Biol. Chem.* 270: 29051-29054.
3. Watanabe, G., et al. 1996. Protein kinase N (PKN) and PKN-related protein rhotekin as targets of small GTPase Rho. *Science* 271: 645-648.
4. Amano, M., et al. 1996. Identification of a putative target for Rho as the serine-threonine kinase protein kinase N. *Science* 271: 648-650.
5. Mukai, H., et al. 1996. PKN associates and phosphorylates the head-rod domain of neurofilament protein. *J. Biol. Chem.* 271: 9816-9822.
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7. Kitagawa, M., et al. 1996. The role of the unique motifs in the amino-terminal region of PKN on its enzymatic activity. *Biochem. Biophys. Res. Commun.* 220: 963-968.
8. Ishizaki, T., et al. 1996. The small GTP-binding protein Rho binds to and activates a 160 kDa Ser/Thr protein kinase homologous to myotonic dystrophy kinase. *EMBO J.* 15: 1885-1893.

## CHROMOSOMAL LOCATION

Genetic locus: ROCK1 (human) mapping to 18q11.1.

## SOURCE

cleaved Rock-1 (h1113) is a goat polyclonal antibody raised against a short amino acid sequence containing the neoepitope at Asp 1113 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.

Blocking peptide available for competition studies, sc-34326 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

cleaved Rock-1 (h1113) is recommended for detection of constitutively active 130 kDa Rock-1 kinase of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with full length Rock-1.

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

Molecular Weight of full length Rock-1: 158 kDa.

Molecular Weight of cleaved Rock-1: 130 kDa.

Molecular Weight of Rock-1 cleavage fragment: 32 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## 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) 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **cleaved Rock-1 (4H247): sc-71965**, our highly recommended monoclonal alternative to cleaved Rock-1 (h1113).