# SANTA CRUZ BIOTECHNOLOGY, INC.

# Rock-2 (30-J): sc-100425



## BACKGROUND

Rho, the Ras-related small GTPase, is responsible for the regulation of Actinbased 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 Rok $\alpha$ ) 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 (30-J) is a mouse monoclonal antibody raised against recombinant Rock-2 of human origin.

## PRODUCT

Each vial contains 100  $\mu g\, lgG_{2b}$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## **APPLICATIONS**

Rock-2 (30-J) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

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: HeLa whole cell lysate: sc-2200, A-673 cell lysate: sc-2414 or human colon extract: sc-363757.

# **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG K BP-HRP: sc-516102 or m-IgG K BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 K BP-FITC: sc-516140 or m-IgG K BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## STORAGE

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

## DATA





Rock-2 (30-J): sc-100425. Western blot analysis of Rock-2 expression in HeLa whole cell lysate.

Rock-2 (30-J): sc-100425. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization.

#### **SELECT PRODUCT CITATIONS**

- 1. Cao, H.H., et al. 2015. A three-protein signature and clinical outcome in esophageal squamous cell carcinoma. Oncotarget 6: 5435-5448.
- Datta, A., et al. 2017. Fibroblast-derived HGF drives acinar lung cancer cell polarization through integrin-dependent RhoA-Rock1 inhibition. Cell. Signal. 40: 91-98.
- Dai, K., et al. 2018. Fasudil exerts a cardio-protective effect on mice with coxsackievirus B3-induced acute viral myocarditis. Cardiovasc. Ther. 31: e12477.
- Lee, S.H., et al. 2018. HA1077 displays synergistic activity with daclatasvir against hepatitis C virus and suppresses the emergence of NS5A resistance-associated substitutions in mice. Sci. Rep. 8: 12469.
- Zhang, F., et al. 2020. 3-MST/H<sub>2</sub>S protects cerebral endothelial cells against OGD/R-induced injury via mitoprotection and inhibition of the RhoA/ROCK pathway. Am. J. Physiol., Cell Physiol. 319: C720-C733.
- Scheiblich, H., et al. 2021. Microglia jointly degrade fibrillar α-synuclein cargo by distribution through tunneling nanotubes. Cell 184: 5089-5106.e21.
- Zheng, H., et al. 2021. TMEM16A inhibits Angiotensin II-induced basilar artery smooth muscle cell migration in a WNK1-dependent manner. Acta Pharm. Sin. B 11: 3994-4007.

#### **RESEARCH USE**

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



See **Rock-2 (D-11): sc-398519** for Rock-2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.