

Datasheet for ABIN968386

anti-ROCK1 antibody (AA 906-1012)



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Overview

Quantity:	50 µg
Target:	ROCK1
Binding Specificity:	AA 906-1012
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This ROCK1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF)

Product Details

Immunogen:	Mouse ROCK-I aa. 906-1012
Clone:	46-ROCK
Isotype:	IgG1
Cross-Reactivity:	Human, Rat (Rattus)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity

Product Details

chromatography.

Target Details

Target:	ROCK1
Alternative Name:	ROCK-I (ROCK1 Products)
Background:	ROCK-I is a Rho-associated serine/threonine kinase isozyme that mediates RhoA-induced assembly of focal adhesions and actin stress fibers. It contains an N-terminal kinase domain, a central 600 amino acid long coiled-coil region, a C-terminal pleckstrin homology region (PH) and a Cys-rich zinc finger motif. The ROCK-I kinase domain is approximately 90% identical to that of ROCK-II. ROCK-I binds GTP-bound Rho through a Rho-binding domain (RBD). As a result, the kinase activity of ROCK-I is moderately stimulated. The ROCK isozymes regulate cell contractility through phosphorylation of the myosin light chain. This effect results from either the inhibition of the myosin phosphatase or by direct phosphorylation of the myosin light chain, thus bypassing the myosin light chain kinase. In addition, ROCK-I activates the ubiquitously expressed Na-H exchanger (NHE1) via a number of mechanisms including RhoA. NHE1 may mediate ROCK-I-induced changes in the actin cytoskeleton. Therefore, ROCK-I plays an important role in the regulation of focal adhesion and stress fiber formation. Synonyms: ROKbeta
Molecular Weight:	160 kDa
Pathways:	Microtubule Dynamics , WNT Signaling , M Phase , Maintenance of Protein Location , Signaling Events mediated by VEGFR1 and VEGFR2 , Thromboxane A2 Receptor Signaling

Application Details

Comment:	Related Products: ABIN968542 , ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide

Handling

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: -20 °C

Storage Comment: Store undiluted at -20°C.

Publications

Product cited in: Pawlak, Helfman: "Post-transcriptional down-regulation of ROCKI/Rho-kinase through an MEK-dependent pathway leads to cytoskeleton disruption in Ras-transformed fibroblasts." in: **Molecular biology of the cell**, Vol. 13, Issue 1, pp. 336-47, (2002) ([PubMed](#)).

Wang, Eto, Steers, Somlyo, Somlyo: "RhoA-mediated Ca²⁺ sensitization in erectile function." in: **The Journal of biological chemistry**, Vol. 277, Issue 34, pp. 30614-21, (2002) ([PubMed](#)).

Sahai, Olson, Marshall: "Cross-talk between Ras and Rho signalling pathways in transformation favours proliferation and increased motility." in: **The EMBO journal**, Vol. 20, Issue 4, pp. 755-66, (2001) ([PubMed](#)).

Ishizaki, Maekawa, Fujisawa, Okawa, Iwamatsu, Fujita, Watanabe, Saito, Kakizuka, Morii, Narumiya: "The small GTP-binding protein Rho binds to and activates a 160 kDa Ser/Thr protein kinase homologous to myotonic dystrophy kinase." in: **The EMBO journal**, Vol. 15, Issue 8, pp. 1885-93, (1996) ([PubMed](#)).

Nakagawa, Fujisawa, Ishizaki, Saito, Nakao, Narumiya: "ROCK-I and ROCK-II, two isoforms of Rho-associated coiled-coil forming protein serine/threonine kinase in mice." in: **FEBS letters**, Vol. 392, Issue 2, pp. 189-93, (1996) ([PubMed](#)).



Western Blotting

Image 1. Western blot analysis of ROCK-I on mouse kidney lysate. Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-ROCK-I antibody.