

**ROCK1 Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP51480****Specification**

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**ROCK1 Antibody - Product Information**

Application	<b>WB, ICC, E</b>
Primary Accession	<a href="#">O13464</a>
Reactivity	<b>Human, Mouse, Rat</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Calculated MW	<b>158 KDa</b>

**ROCK1 Antibody - Additional Information****Gene ID** 6093**Other Names**

Rho-associated protein kinase 1, Renal carcinoma antigen NY-REN-35, Rho-associated, coiled-coil-containing protein kinase 1, Rho-associated, coiled-coil-containing protein kinase I, ROCK-I, p160 ROCK-1, p160ROCK, ROCK1

**Format**

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

**Storage**

Store at -20 °C. Stable for 12 months from date of receipt

**ROCK1 Antibody - Protein Information****Name** ROCK1**Function**

Protein kinase which is a key regulator of the actin cytoskeleton and cell polarity (PubMed: [10436159](http://www.uniprot.org/citations/10436159), PubMed: [10652353](http://www.uniprot.org/citations/10652353), PubMed: [11018042](http://www.uniprot.org/citations/11018042), PubMed: [11283607](http://www.uniprot.org/citations/11283607), PubMed: [17158456](http://www.uniprot.org/citations/17158456), PubMed: [18573880](http://www.uniprot.org/citations/18573880), PubMed: [19131646](http://www.uniprot.org/citations/19131646), PubMed: [8617235](http://www.uniprot.org/citations/8617235), PubMed: [9722579](http://www.uniprot.org/citations/9722579)). Involved in regulation of smooth muscle contraction, actin cytoskeleton organization, stress fiber and focal adhesion formation, neurite retraction, cell adhesion and motility via phosphorylation of DAPK3, GFAP, LIMK1, LIMK2, MYL9/MLC2, TPPP, PFN1 and PPP1R12A (PubMed: [10436159](http://www.uniprot.org/citations/10436159), PubMed: [10652353](http://www.uniprot.org/citations/10652353), PubMed: [10436159](http://www.uniprot.org/citations/10436159), PubMed: [10652353](http://www.uniprot.org/citations/10652353), PubMed: [10652353](http://www.uniprot.org/citations/10652353)).

href="http://www.uniprot.org/citations/11018042" target="\_blank">11018042</a>, PubMed:<a href="http://www.uniprot.org/citations/11283607" target="\_blank">11283607</a>, PubMed:<a href="http://www.uniprot.org/citations/17158456" target="\_blank">17158456</a>, PubMed:<a href="http://www.uniprot.org/citations/18573880" target="\_blank">18573880</a>, PubMed:<a href="http://www.uniprot.org/citations/19131646" target="\_blank">19131646</a>, PubMed:<a href="http://www.uniprot.org/citations/23093407" target="\_blank">23093407</a>, PubMed:<a href="http://www.uniprot.org/citations/23355470" target="\_blank">23355470</a>, PubMed:<a href="http://www.uniprot.org/citations/8617235" target="\_blank">8617235</a>, PubMed:<a href="http://www.uniprot.org/citations/9722579" target="\_blank">9722579</a>). Phosphorylates FHOD1 and acts synergistically with it to promote SRC-dependent non-apoptotic plasma membrane blebbing (PubMed:<a href="http://www.uniprot.org/citations/18694941" target="\_blank">18694941</a>). Phosphorylates JIP3 and regulates the recruitment of JNK to JIP3 upon UVB-induced stress (PubMed:<a href="http://www.uniprot.org/citations/19036714" target="\_blank">19036714</a>). Acts as a suppressor of inflammatory cell migration by regulating PTEN phosphorylation and stability (By similarity). Acts as a negative regulator of VEGF-induced angiogenic endothelial cell activation (PubMed:<a href="http://www.uniprot.org/citations/19181962" target="\_blank">19181962</a>). Required for centrosome positioning and centrosome-dependent exit from mitosis (By similarity). Plays a role in terminal erythroid differentiation (PubMed:<a href="http://www.uniprot.org/citations/21072057" target="\_blank">21072057</a>). Inhibits podocyte motility via regulation of actin cytoskeletal dynamics and phosphorylation of CFL1 (By similarity). Promotes keratinocyte terminal differentiation (PubMed:<a href="http://www.uniprot.org/citations/19997641" target="\_blank">19997641</a>). Involved in osteoblast compaction through the fibronectin fibrillogenesis cell-mediated matrix assembly process, essential for osteoblast mineralization (By similarity). May regulate closure of the eyelids and ventral body wall by inducing the assembly of actomyosin bundles (By similarity).

#### Cellular Location

Cytoplasm. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole {ECO:0000250|UniProtKB:P70335}. Golgi apparatus membrane; Peripheral membrane protein. Cell projection, bleb. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:P70335}. Cell membrane {ECO:0000250|UniProtKB:P70335}. Cell projection, lamellipodium {ECO:0000250|UniProtKB:P70335}. Cell projection, ruffle {ECO:0000250|UniProtKB:P70335}. Note=A small proportion is associated with Golgi membranes (PubMed:12773565). Associated with the mother centriole and an intercentriolar linker (By similarity). Colocalizes with ITGB1BP1 and ITGB1 at the cell membrane predominantly in lamellipodia and membrane ruffles, but also in retraction fibers (By similarity). Localizes at the cell membrane in an ITGB1BP1-dependent manner (By similarity). {ECO:0000250|UniProtKB:P70335, ECO:0000269|PubMed:12773565}

#### Tissue Location

Detected in blood platelets.

#### ROCK1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### ROCK1 Antibody - Images

## **ROCK1 Antibody - Background**

Protein kinase which is a key regulator of actin cytoskeleton and cell polarity. Involved in regulation of smooth muscle contraction, actin cytoskeleton organization, stress fiber and focal adhesion formation, neurite retraction, cell adhesion and motility via phosphorylation of DAPK3, GFAP, LIMK1, LIMK2, MYL9/MLC2, PFN1 and PPP1R12A. Phosphorylates FHOD1 and acts synergistically with it to promote SRC-dependent non-apoptotic plasma membrane blebbing. Phosphorylates JIP3 and regulates the recruitment of JNK to JIP3 upon UVB-induced stress. Acts as a suppressor of inflammatory cell migration by regulating PTEN phosphorylation and stability. Acts as a negative regulator of VEGF-induced angiogenic endothelial cell activation. Required for centrosome positioning and centrosome-dependent exit from mitosis. Plays a role in terminal erythroid differentiation. May regulate closure of the eyelids and ventral body wall by inducing the assembly of actomyosin bundles. Promotes keratinocyte terminal differentiation. Involved in osteoblast compaction through the fibronectin fibrillogenesis cell-mediated matrix assembly process, essential for osteoblast mineralization.

## **ROCK1 Antibody - References**

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Bienvenut W.V., et al. Submitted (MAR-2009) to UniProtKB.  
Totoki Y., et al. Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases.  
Van Eyk J.E., et al. J. Biol. Chem. 273:23433-23439(1998).  
Scanlan M.J., et al. Int. J. Cancer 83:456-464(1999).