

Rho Kinase / ROCK1 Antibody
Rabbit Polyclonal Antibody
Catalog # ALS15218**Specification**

Rho Kinase / ROCK1 Antibody - Product Information

Application	WB
Primary Accession	Q13464
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	158kDa KDa

Rho Kinase / ROCK1 Antibody - Additional Information**Gene ID** 6093**Other Names**

Rho-associated protein kinase 1, 2.7.11.1, 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

Reconstitution & Storage

Long term: -20°C; Short term: -20°C

Precautions

Rho Kinase / ROCK1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Rho Kinase / 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:[10436159](http://www.uniprot.org/citations/10436159), PubMed:[10436159](http://www.uniprot.org/citations/10436159)).

href="http://www.uniprot.org/citations/10652353" target="_blank">10652353, PubMed:11018042, PubMed:11283607, PubMed:17158456, PubMed:18573880, PubMed:19131646, PubMed:8617235, PubMed:9722579, PubMed:23093407, PubMed:23355470).

Phosphorylates FHOD1 and acts synergistically with it to promote SRC-dependent non-apoptotic plasma membrane blebbing (PubMed:18694941). Phosphorylates JIP3 and regulates the recruitment of JNK to JIP3 upon UVB-induced stress (PubMed:19036714). 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:19181962). Required for centrosome positioning and centrosome-dependent exit from mitosis (By similarity). Plays a role in terminal erythroid differentiation (PubMed:21072057). Inhibits podocyte motility via regulation of actin cytoskeletal dynamics and phosphorylation of CFL1 (By similarity). Promotes keratinocyte terminal differentiation (PubMed:19997641). 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.

Volume

50 µl

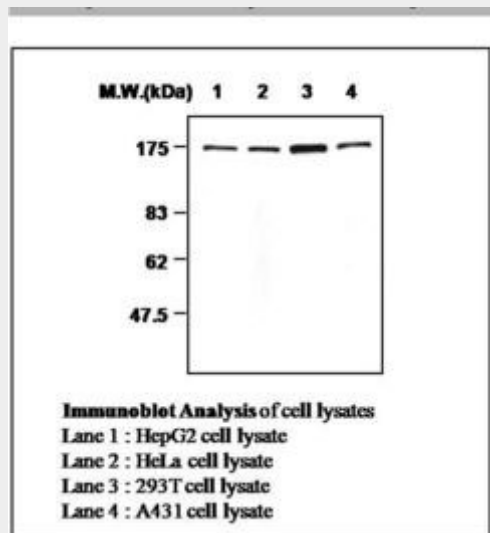
Rho Kinase / ROCK1 Antibody - Protocols

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](#)

Rho Kinase / ROCK1 Antibody - Images



0

Rho Kinase / 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.

Rho Kinase / ROCK1 Antibody - References

- Ishizaki T., et al. EMBO J. 15:1885-1893(1996).
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).