

# ROCK1 Rabbit mAb

Catalog # AP76030

## Product Information

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<b>Application</b>	WB, IHC-P, FC, IP
<b>Primary Accession</b>	<a href="#">Q13464</a>
<b>Reactivity</b>	Rat, Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal Antibody
<b>Isotype</b>	IgG
<b>Conjugate</b>	Unconjugated
<b>Purification</b>	Affinity Purified
<b>Calculated MW</b>	158175

## Additional Information

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<b>Gene ID</b>	6093
<b>Other Names</b>	ROCK1
<b>Dilution</b>	WB~~1:500-1:1000 IHC-P~~N/A FC~~1:50-1:100 IP~~1:50-1:100
<b>Format</b>	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

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<b>Name</b>	ROCK1
<b>Function</b>	Protein kinase which is a key regulator of the actin cytoskeleton and cell polarity (PubMed: <a href="#">10436159</a> , PubMed: <a href="#">10652353</a> , PubMed: <a href="#">11018042</a> , PubMed: <a href="#">11283607</a> , PubMed: <a href="#">17158456</a> , PubMed: <a href="#">18573880</a> , PubMed: <a href="#">19131646</a> , PubMed: <a href="#">8617235</a> , PubMed: <a href="#">9722579</a> ). 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: <a href="#">10436159</a> , PubMed: <a href="#">10652353</a> , PubMed: <a href="#">11018042</a> , PubMed: <a href="#">11283607</a> , PubMed: <a href="#">17158456</a> , PubMed: <a href="#">18573880</a> , PubMed: <a href="#">19131646</a> , PubMed: <a href="#">23093407</a> , PubMed: <a href="#">23355470</a> , PubMed: <a href="#">8617235</a> , PubMed: <a href="#">9722579</a> ). Phosphorylates FHOD1 and acts synergistically with it to promote SRC-dependent non-apoptotic plasma membrane blebbing (PubMed: <a href="#">18694941</a> ). Phosphorylates JIP3 and regulates the recruitment of JNK to JIP3 upon UVB-induced stress (PubMed: <a href="#">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:[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}

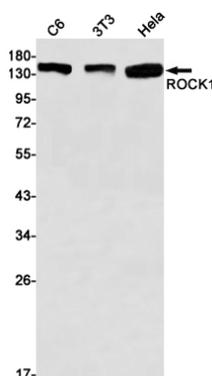
### Tissue Location

Detected in blood platelets.

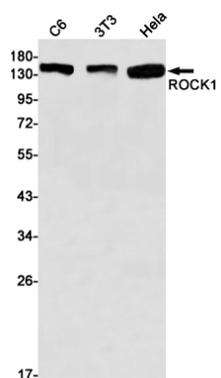
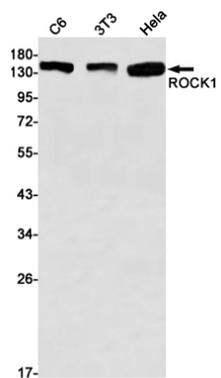
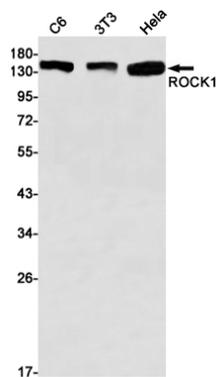
## Background

ROCK1 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.

## Images



Western blot analysis of ROCK1 in C6, 3T3, HeLa lysates using ROCK1 antibody.



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