


Anti-ROCK1 antibody ab97592

[18 References](#) [6 Images](#)

Overview

| | |
|----------------------------|---|
| Product name | Anti-ROCK1 antibody |
| Description | Rabbit polyclonal to ROCK1 |
| Host species | Rabbit |
| Tested applications | Suitable for: ICC/IF, WB, IHC-P |
| Species reactivity | Reacts with: Rat, Human Predicted to work with: Rabbit, Cow, Zebrafish  |
| Immunogen | Recombinant protein fragment containing a sequence corresponding to a region within amino acids 107 and 381 of human ROCK1 (Q13464) |
| Positive control | 293T , A431 , HeLa , HepG2 , NIH-3T3 , C2C12 , rat brain |
| General notes | <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p> |

Properties

| | |
|-----------------------------|---|
| Form | Liquid |
| Storage instructions | Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. |
| Storage buffer | pH: 7.00 Preservative: 0.025% Proclin 300 Constituents: 79% PBS, 20% Glycerol (glycerin, glycerine) |
| Purity | Immunogen affinity purified |
| Clonality | Polyclonal |
| Isotype | IgG |

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab97592 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|-------------|-----------|--|
| ICC/IF | | 1/100 - 1/1000. |
| WB | | 1/500 - 1/3000. Predicted molecular weight: 158 kDa. |
| IHC-P | | 1/100 - 1/1000. Antigen Retrieval: EDTA based, pH 8.0 buffer, 15min |

Target

Function

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.

Tissue specificity

Detected in blood platelets.

Sequence similarities

Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family.
Contains 1 AGC-kinase C-terminal domain.
Contains 1 PH domain.
Contains 1 phorbol-ester/DAG-type zinc finger.
Contains 1 protein kinase domain.
Contains 1 REM (Hr1) repeat.

Domain

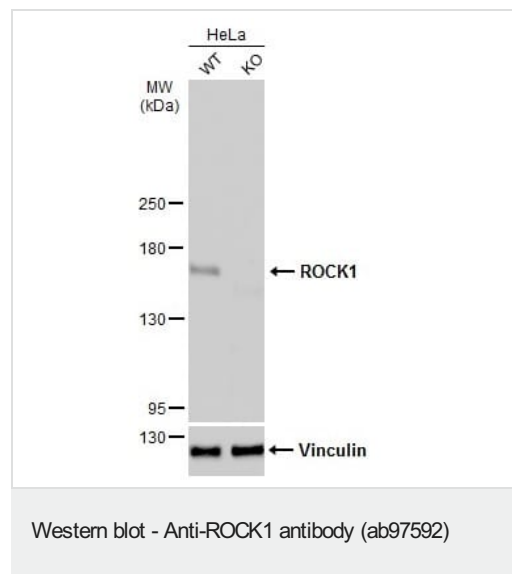
The C-terminal auto-inhibitory domain interferes with kinase activity. RHOA binding leads to a conformation change and activation of the kinase. Truncated ROCK1 is constitutively activated.

Post-translational modifications

Autophosphorylated on serine and threonine residues.
Cleaved by caspase-3 during apoptosis. This leads to constitutive activation of the kinase and membrane blebbing.

Cellular localization

Cytoplasm. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole. Golgi apparatus membrane. Cell projection, bleb. Cytoplasm, cytoskeleton. Cell membrane. Cell projection, lamellipodium. Cell projection, ruffle. Associated with the mother centriole and an intercentriolar linker. Colocalizes with ITGB1BP1 and ITGB1 at the cell membrane predominantly in lamellipodia and membrane ruffles, but also in retraction fibers. Localizes at the cell membrane in an ITGB1BP1-dependent manner (By similarity). A small proportion is associated with Golgi membranes.



All lanes : Anti-ROCK1 antibody (ab97592) at 1/1000 dilution

Lane 1 : Wild-type HeLa whole cell lysate

Lane 2 : ROCK1 knockout HeLa whole cell lysate

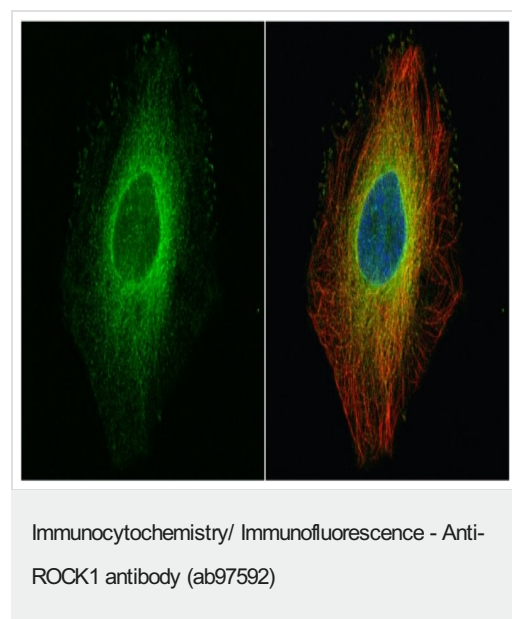
Lysates/proteins at 30 µg per lane.

Secondary

All lanes : HRP-conjugated anti-rabbit IgG

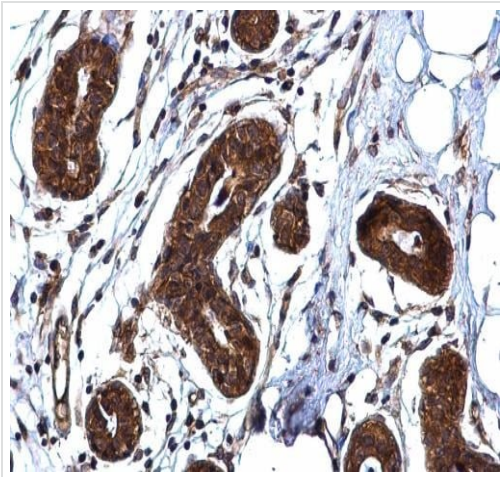
Predicted band size: 158 kDa

5% SDS-PAGE



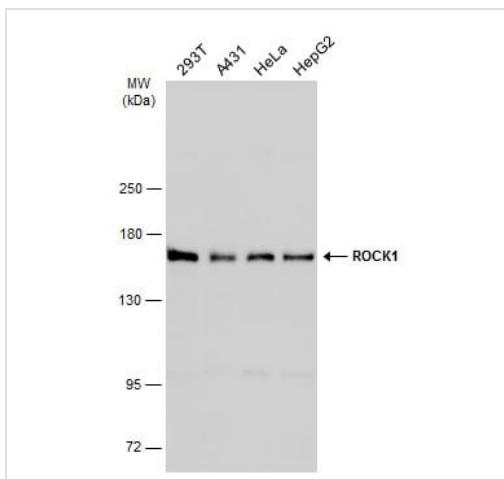
Immunofluorescence staining of paraformaldehyde-fixed (4% paraformaldehyde, 15 minutes at RT) HeLa cells stained for ROCK1 with ab97592 at 1:500 dilution. Red: alpha Tubulin, a cytoskeleton marker, stained by an alpha Tubulin antibody diluted at 1:500.

Blue: Hoechst 33342 staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ROCK1 antibody (ab97592)

Immunohistochemical analysis of paraffin embedded human breast carcinoma tissue labelling ROCK1 with ab97592 antibody at 1/500 dilution.



Western blot - Anti-ROCK1 antibody (ab97592)

All lanes :

Lane 1 : 293T whole cell extracts

Lane 2 : A431 whole cell extracts

Lane 3 : HeLa whole cell extracts

Lane 4 : HepG2 whole cell extracts

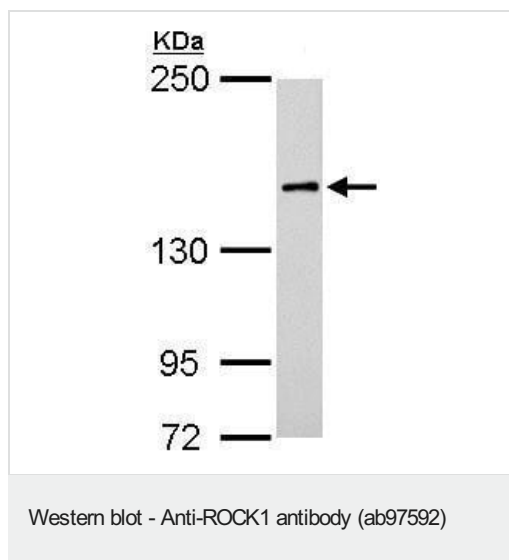
Lysates/proteins at 30 µg per lane.

Secondary

All lanes : HRP-conjugated anti-rabbit IgG

Predicted band size: 158 kDa

5% SDS-PAGE

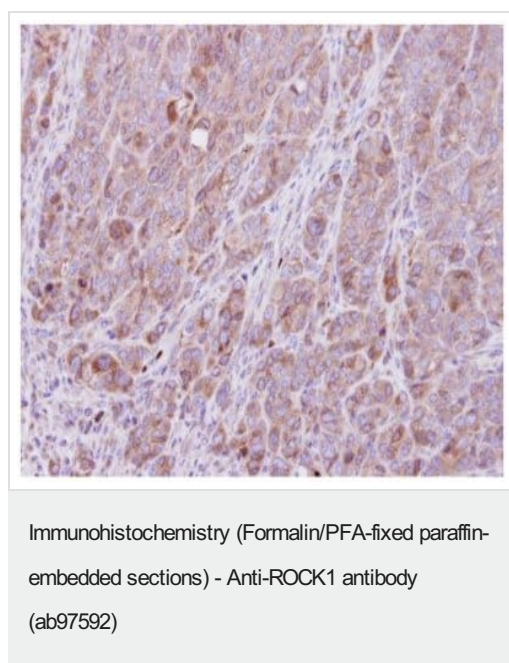


Anti-ROCK1 antibody (ab97592) at 1/500 dilution + Rat brain lysate at 50 µg

Secondary

HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 158 kDa



ab97592, at a 1/500 dilution, staining human ROCK1 in DLD1 xenograft, using Immunohistochemistry, Formalin/PFA-fixed paraffin-embedded tissue.

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