Rabbit ROCK1 Polyclonal Antibody | anti-ROCK1 antibody

Phospho-ROCK1 (Tyr913) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329403	**Rabbit**	**Human, Mouse, RatPredicted Reactivity: Pig (100%), Bovine (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (89%)**	**ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

ROCK1; Polyclonal Antibody; Phospho-ROCK1 (Tyr913) Antibody; coiled-coil-containing protein kinase 1; coiled-coil-containing protein kinase I; MGC131603; MGC43611; p160 Rhoassociated coiled coil-forming protein kinase; p160 ROCK-1; p160 ROCK1; p160ROCK; PRO0435; Renal carcinoma antigen NY REN 35; Renal carcinoma antigen NY-REN-35; Rho associated coiled coil containing protein kinase 1; Rho associated protein kinase 1; Rho kinase; Rho-alpha kinase; Rho-associated; Rho-associated protein kinase 1; ROCK I; ROCK-I; ROCK1_HUMAN; Rok; rokalpha; anti-ROCK1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Bovine (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (89%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-ROCK1 (Tyr913) Antibody detects endogenous levels of ROCK1 only when phosphorylated at Tyr913. Tissue Specificity: Detected in blood platelets.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-ROCK1 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human ROCK1 around the phosphorylation site of Tyr913.
Conjugation	Unconjugated
Fragment	Fab fragment
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.
Subunit Structure	Homodimer. Interacts with RHOB, RHOC, MYLC2B and PTEN. Interacts with ITGB1BP1 (via N-terminus and PTB domain) (By similarity). Interacts with RHOA (activated by GTP), CHORDC1, DAPK3, GEM, JIP3, RHOE, PPP1R12A, PFN1, LIMK1, LIMK2 and TSG101. Interacts with FHOD1 in a Src-dependent manner. Interacts with SHROOM3.
Similarity	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.Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family.

Subcellular Location	Cytoplasm. Cytoplasm>Cytoskeleton>Microtubule organizing center>Centrosome>Centriole. Golgi apparatus membrane>Peripheral membrane protein. Cell projection>Bleb. Cytoplasm>Cytoskeleton. Cell membrane. Cell projection>Lamellipodium. Cell projection>Ruffle. Note: 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.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

Application Data
At 25 degree C. Samples were then incubated with primary Ab(At 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody.The nuclear counter stain is DAPI(blue).

IHC (Immunohiostchemistry)
Staining Mouse colorectal tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

WB (Western Blot)
Western blot analysis of extracts from cos-7, using Phospho-ROCK1(Tyr913) Antibody. Lane1 was treated with phospho-blocking peptide, Lane2 was treated with non-phospho-blocking peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-ROCK1 antibody	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, TPPP, 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 (By similarity). Acts as a negative regulator of VEGF-induced angiogenic endothelial cell activation. Required for centrosome positioning and centrosome-dependent exit from mitosis (By similarity). Plays a role in terminal erythroid differentiation. May regulate closure of the eyelids and ventral body wall by inducing the assembly of actomyosin bundles (By similarity). Promotes keratinocyte terminal differentiation. Involved in osteoblast compaction through the fibronectin fibrillogenesis cell-mediated matrix assembly process, essential for osteoblast mineralization (By similarity).

NCBI AND UNIPROT INFORMATION

NCBI GI #	47605999
NCBI GeneID	6093
UniProt Accession #	Q13464; Q2KHM4; Q59GZ4; B0YJ91
Molecular Weight	1354
NCBI Official Full Name	Rho-associated protein kinase 1
NCBI Official Synonym Full Names	Rho-associated, coiled-coil containing protein kinase 1
NCBI Official Symbol	ROCK1
NCBI Official Synonym Symbols	ROCK-I; P160ROCK

NCBI Protein Information	rho-associated protein kinase 1; p160-ROCK; Rho kinase; p160 ROCK-1; renal carcinoma antigen NY-REN-35; rho-associated, coiled-coil-containing protein kinase 1; rho-associated, coiled-coil-containing protein kinase I
UniProt Protein Name	Rho-associated protein kinase 1
UniProt Gene Name	**ROCK1**
UniProt Synonym Gene Names	ROCK-I; p160ROCK
UniProt Entry Name	ROCK1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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