



Rock-1 Monoclonal Antibody

Catalog No	YP-mAb-14979
Isotype	IgG
Reactivity	Human;Mouse;Rat
Applications	WB
Gene Name	ROCK1
Immunogen	The antiserum was produced against synthesized peptide derived from human Rock-1. AA range:262-311
Specificity	Rock-1 Monoclonal Antibody detects endogenous levels of Rock-1 protein.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Monoclonal, Mouse,IgG
Purification	The antibody was affinity-purified from mouse antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	WB 1:500-1:2000
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	Rho-associated protein kinase 1;Renal carcinoma antigen NY-REN-35; P160ROCK;p160 ROCK-1;p160 ROCK 1;Rock-1;ROCK1;Rho-associated;coiled-coil-containing protein kinase 1;coiled-coil-containing protein kinase I;ROCK-I; coiled-coil-containing protein kinase I
Observed Band	158kD
Calculated Molecular Weight	158kD
Cell Pathway	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 . 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). .
Tissue Specificity	Detected in blood platelets.

**Function**

catalytic activity:ATP + a protein = ADP + a phosphoprotein.,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.,enzyme regulation:Activated by RHOA binding.,function:Protein kinase that phosphorylates a large number of important signaling proteins, and thereby regulates the assembly of the actin cytoskeleton, cell migration, invasiveness of tumor cells, smooth muscle contraction and neurite outgrowth. Necessary for apoptotic membrane blebbing. Plays a role in smooth muscle contraction. Required for centromere positioning and centromere-dependent exit from mitosis.,miscellaneous:Inhibited by Y-27632.,PTM:Autophosphorylated on serine and threonine residues. Phosphorylated upon DNA damage, probably by ATM or ATR.,PTM:Cleaved by caspase-3 during ap

Background

This gene encodes a protein serine/threonine kinase that is activated when bound to the GTP-bound form of Rho. The small GTPase Rho regulates formation of focal adhesions and stress fibers of fibroblasts, as well as adhesion and aggregation of platelets and lymphocytes by shuttling between the inactive GDP-bound form and the active GTP-bound form. Rho is also essential in cytokinesis and plays a role in transcriptional activation by serum response factor. This protein, a downstream effector of Rho, phosphorylates and activates LIM kinase, which in turn, phosphorylates cofilin, inhibiting its actin-depolymerizing activity. A pseudogene, related to this gene, is also located on chromosome 18. [provided by RefSeq, Aug 2015],

matters needing attention

Avoid repeated freezing and thawing!

Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

Products Images