



ROCK1 Rabbit mAb

Catalog No	YP-rAb-17978
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,IP,ELISA
Gene Name	ROCK1
Protein Name	Rho-associated protein kinase 1
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:200-1:1000; WB 1:1000-1:5000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200, Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	ROCK1 ; Rho-associated protein kinase 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
Observed Band	158kD
Calculated Molecular Weight	158kD
Cell Pathway	Cytoplasm, Membrane
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 apoptosis. This leads to constitutive activation of the kinase and membrane blebbing.,similarity:Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family.,similarity:Contains 1 AGC-kinase C-terminal domain.,similarity:Contains 1 PH domain.,similarity:Contains 1 phorbol-ester/DAG-type zinc finger.,similarity:Contains 1 protein kinase domain.,similarity:Contains 1 REM (Hr1) repeat.,subcellular location:Associated with the mother centriole and an intercentriolar linker (By similarity). A small proportion is associated with Golgi membranes.,subunit:Binds RHOA (activated by GTP). Interacts with ADD1, GEM, RHOB, RHOC, MYLC2B and VIM (By similarity). Binds RHOE, PPP1R12A, LIMK1 and LIMK2. Interacts with TSG101.,tissue specificity:Detected in blood platelets.,

Background

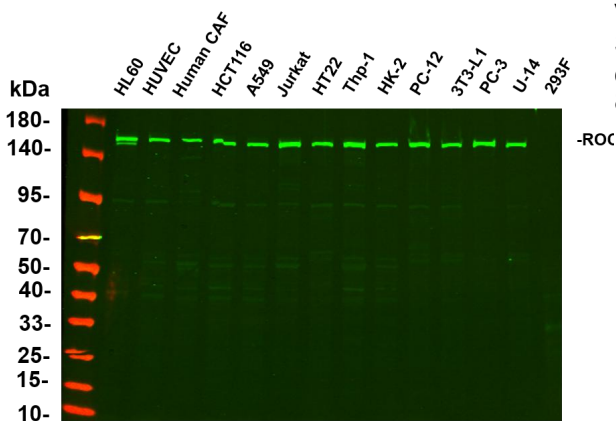
This gene encodes a protein serine/threonine kinase that is activated when bound to the GTP-bound form of Rho. The small GTPase Rho regulates formation of focal adhesions and stress fibers of fibroblasts, as well as adhesion and aggregation of platelets and lymphocytes by shuttling between the inactive 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

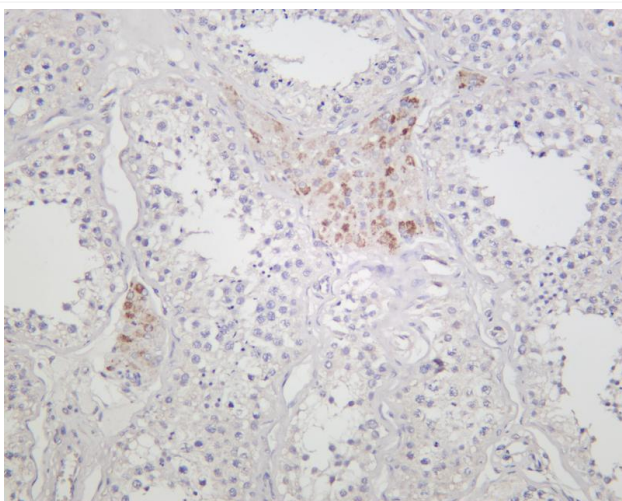
Avoid repeated freezing and thawing!

Usage suggestions

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

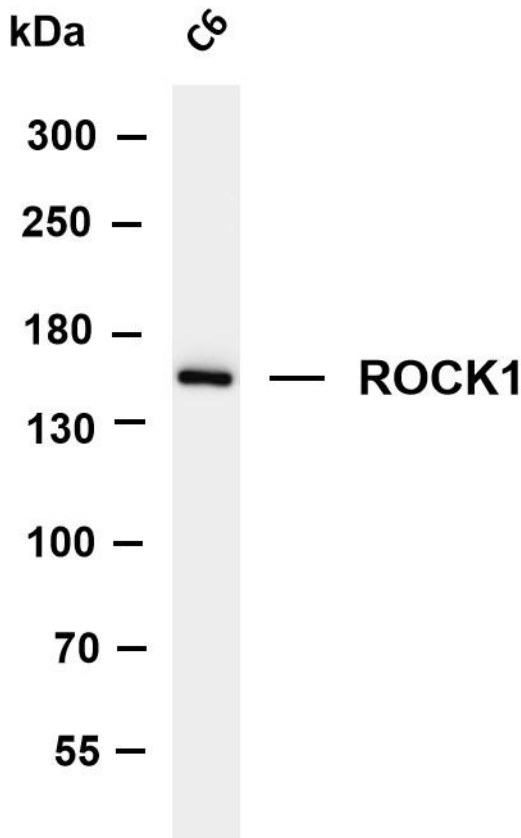


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the primary antibody was used at 4°C, over night with a 1:2500 dilution. The Dylight 800-conjugated Goat anti-Rabbit antibody

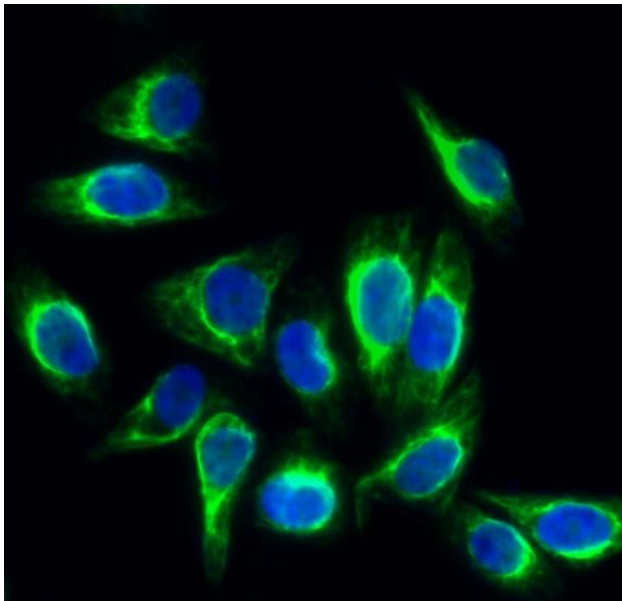


Human testis was stained with anti-ROCK1 rabbit antibody

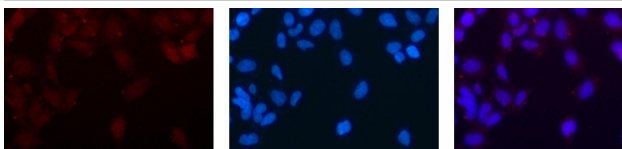




Various whole cell lysates were separated by 4-8% SDS-PAGE, and the membrane was blotted with anti-ROCK1 antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: C6 Predicted band size: 158kDa Observed band size: 158kDa



Immunofluorescence analysis of HeLa cell. 1, Rock-1 Antibody(green) was diluted at 1:200(4° overnight). 2, Goat Anti Rabbit Alexa Fluor 488 Catalog:RS3211 was diluted at 1:1000(room temperature, 50min). 3 DAPI(blue) 10min.



Immunofluorescence analysis of HEK293. Picture A: ROCK1 antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B

A

B

C

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