**Product Name: Rock-1 Rabbit Polyclonal Antibody**
**Catalog #: APRab17313**

## Summary

| | |
|---|---|
| **Production Name** | Rock-1 Rabbit Polyclonal Antibody |
| **Description** | Rabbit Polyclonal Antibody |
| **Host** | Rabbit |
| **Application** | IF,WB,IHC,ELISA |
| **Reactivity** | Human,Mouse,Rat,Monkey |

## Performance

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|---|---|
| **Conjugation** | Unconjugated |
| **Modification** | Unmodified |
| **Isotype** | IgG |
| **Clonality** | Polyclonal |
| **Form** | Liquid |
| **Storage** | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. |
| **Buffer** | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N. |
| **Purification** | Affinity purification |

## Immunogen

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|---|---|
| **Gene Name** | ROCK1 |
| **Alternative Names** | 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 |
| **Gene ID** | 6093.0 |
| **SwissProt ID** | Q13464.The antiserum was produced against synthesized peptide derived from human Rock-1. AA range:262-311 |

## Application

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|---|---|
| **Dilution Ratio** | IF 1:50-200 WB 1:500 - 1:2000. IHC 1:100 - 1:300. Immunocytochemistry: 1:200 - 1:1000. ELISA: 1:20000. Not yet tested in other applications. |

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| | |
|---|---|
| **Molecular Weight** | 158kD |

## 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],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.,

## Research Area

Chemokine;Vascular smooth muscle contraction;WNT;WNT-T CELLTGF-beta;Axon guidance;Focal adhesion;Leukocyte transendothelial migration;Regulates Actin and Cytoskeleton;Pathogenic Escherichia coli infection;

## Image Data

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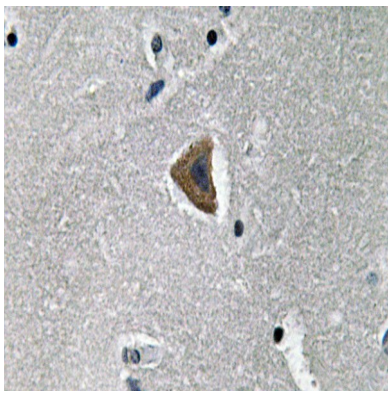
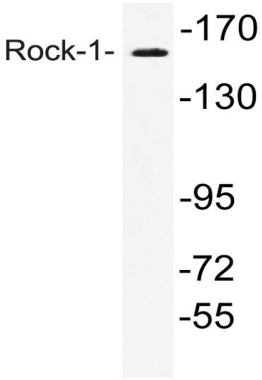
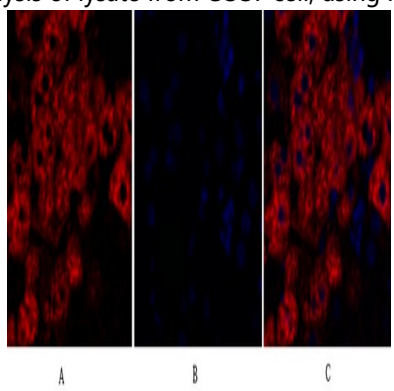


Immunohistochemistry analysis of Rock-1 antibody in paraffin-embedded human brain tissue.




Western blot analysis of lysate from COS7 cell, using Rock-1 antibodys.




Immunofluorescence analysis of mouse-liver tissue. 1,Rock-1 Polyclonal Antibody（red） was diluted at 1:200（4°C,overnight）. 2, Cy3 labled Secondary antibody was diluted at 1:300（room temperature, 50min）.3, Picture B: DAPI（blue） 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B

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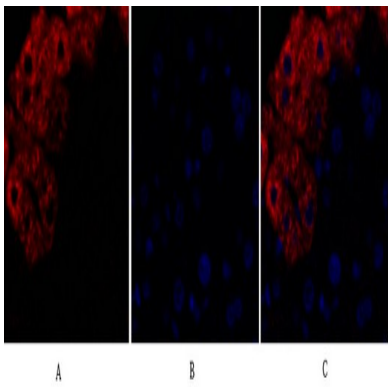


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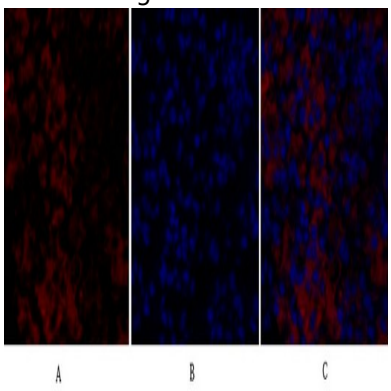
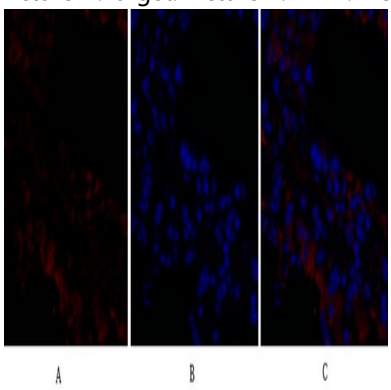



Immunofluorescence analysis of mouse-lung tissue. 1,Rock-1 Polyclonal Antibody（red） was diluted at 1:200（4°C,overnight）. 2, Cy3 labled Secondary antibody was diluted at 1:300（room temperature, 50min）.3, Picture B: DAPI（blue） 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B

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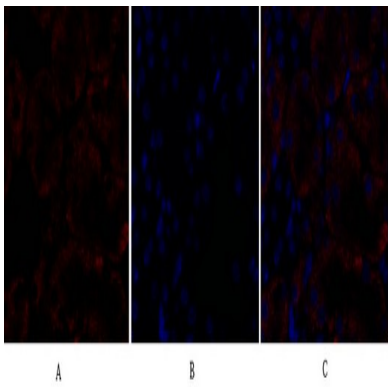
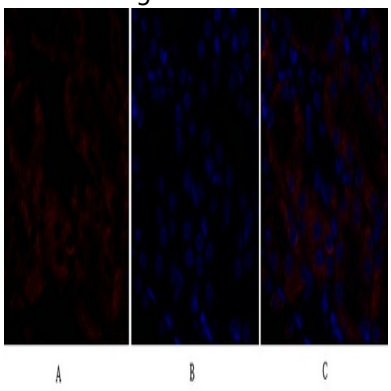



Immunofluorescence analysis of mouse-kidney tissue. 1,Rock-1 Polyclonal Antibody（red） was diluted at 1:200（4°C,overnight）. 2, Cy3 labled Secondary antibody was diluted at 1:300（room temperature, 50min）.3, Picture B: DAPI（blue） 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B

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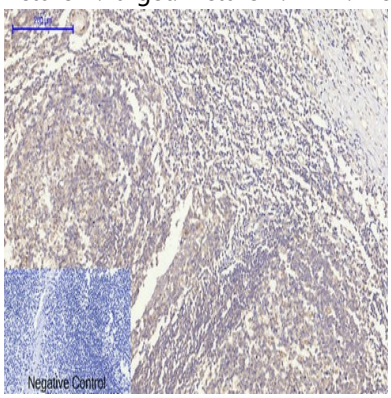


Immunohistochemical analysis of paraffin-embedded Human-Tonsil tissue. 1,Rock-1 Polyclonal Antibody was diluted at 1:200（4°C,overnight）. 2, Sodium citrate pH 6.0 was used for antibody retrieval（>98°C,20min）. 3,Secondary antibody was diluted at 1:200（room tempeRature, 30min）. Negative control was used by secondary antibody only.

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## Note

For research use only.