

**Anti-ROCK2 Picoband Antibody**  
**Catalog # ABO12078****Specification**

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**Anti-ROCK2 Picoband Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	<a href="#">O75116</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Rho-associated protein kinase 2(ROCK2) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-ROCK2 Picoband Antibody - Additional Information**

**Gene ID** 9475

**Other Names**

Rho-associated protein kinase 2, 2.7.11.1, Rho kinase 2, Rho-associated, coiled-coil-containing protein kinase 2, Rho-associated, coiled-coil-containing protein kinase II, ROCK-II, p164 ROCK-2, ROCK2, KIAA0619

**Calculated MW**

160900 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**

Cytoplasm. Cell membrane ; Peripheral membrane protein . Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasmic, and associated with actin microfilaments and the plasma membrane. .

**Protein Name**

Rho-associated protein kinase 2

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**Immunogen**

E.coli-derived human ROCK2 recombinant protein (Position: E652-D923). Human ROCK2 shares 94.9% and 95.2% amino acid (aa) sequence identity with mouse and rat ROCK2, respectively.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins.

**Storage**

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Sequence Similarities**

Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family.

**Anti-ROCK2 Picoband Antibody - Protein Information**

**Name** ROCK2

**Synonyms** KIAA0619

**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 ADD1, BRCA2, CNN1, EZR, DPYSL2, EP300, MSN, MYL9/MLC2, NPM1, RDX, PPP1R12A and VIM. Phosphorylates SORL1 and IRF4. Acts as a negative regulator of VEGF-induced angiogenic endothelial cell activation. Positively regulates the activation of p42/MAPK1- p44/MAPK3 and of p90RSK/RPS6KA1 during myogenic differentiation. Plays an important role in the timely initiation of centrosome duplication. Inhibits keratinocyte terminal differentiation. May regulate closure of the eyelids and ventral body wall through organization of actomyosin bundles. Plays a critical role in the regulation of spine and synaptic properties in the hippocampus. Plays an important role in generating the circadian rhythm of the aortic myofilament Ca(2+) sensitivity and vascular contractility by modulating the myosin light chain phosphorylation.

**Cellular Location**

Cytoplasm. Cell membrane; Peripheral membrane protein. Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome Note=Cytoplasmic, and associated with actin microfilaments and the plasma membrane.

**Tissue Location**

Expressed in the brain (at protein level).

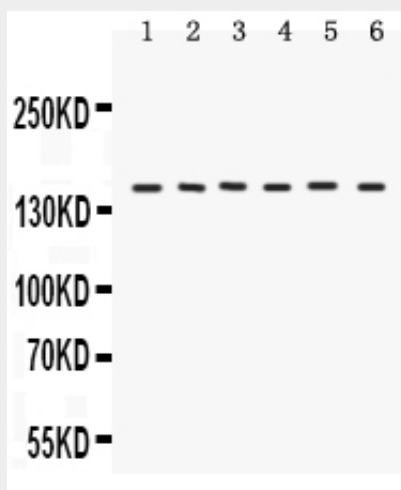
**Anti-ROCK2 Picoband Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

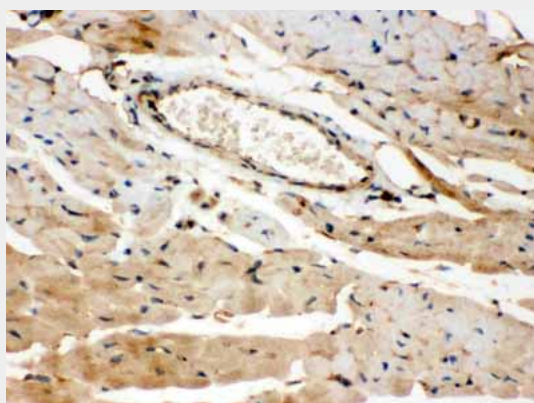
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)

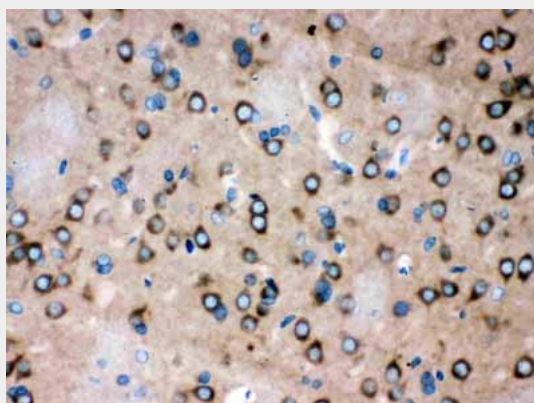
## Anti-ROCK2 Picoband Antibody - Images



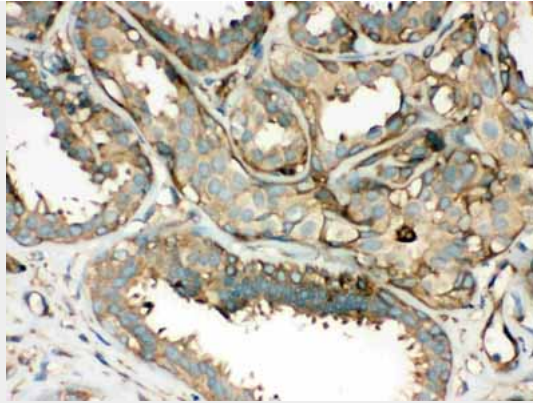
Anti- ROCK2 Picoband antibody, ABO12078, Western blotting All lanes: Anti ROCK2 (ABO12078) at 0.5ug/ml  
Lane 1: Rat Brain Tissue Lysate at 50ug  
Lane 2: Rat Liver Tissue Lysate at 50ug  
Lane 3: HELA Whole Cell Lysate at 40ug  
Lane 4: CEM Whole Cell Lysate at 40ug  
Lane 5: A549 Whole Cell Lysate at 40ug  
Lane 6: MCF-7 Whole Cell Lysate at 40ug  
Predicted bind size: 161KD  
Observed bind size: 161KD



Anti- ROCK2 Picoband antibody, ABO12078, IHC(P) IHC(P): Mouse Cardiac Muscle Tissue



Anti- ROCK2 Picoband antibody, ABO12078, IHC(P) IHC(P): Rat Brain Tissue



Anti- ROCK2 Picoband antibody, ABO12078,IHC(P)IHC(P): Human Mammary Cancer Tissue

#### **Anti-ROCK2 Picoband Antibody - Background**

Rho-associated kinase (ROCK), including the ROCK-I and ROCK-II isoforms, is a protein kinase involved in signaling from Rho to actin cytoskeleton. Serine/threonine kinase ROCK II/Rho kinase, which is an isozyme of ROCK I, is one of the targets for the small GTPase Rho. ROCK II regulates the formation of actin stress fibers and focal adhesions, cytokinesis, smooth muscle contraction, and the activation of c-fos serum response element. Sequencing analysis has shown that human ROCK II contains 1388 amino acid residues with a calculated molecular mass of approximately 161 kDa. Fluorescence in situ hybridization analysis showed that the human ROCK II gene is located on chromosome 2p24. Thumkeo et al. concluded that ROCK-II is essential in inhibiting blood coagulation and maintaining blood flow in the endothelium-free labyrinth layer and that loss of ROCK-II leads to thrombus formation, placental dysfunction, intrauterine growth retardation, and fetal death.