

Anti-ROCK2 Picoband Antibody

Catalog # ABO12078

Product Information

Application	WB, IHC-P
Primary Accession	O75116
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.

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
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat
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. .
Source	Eukaryota
Protein Name	Rho-associated protein kinase 2
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
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.

Protein Information

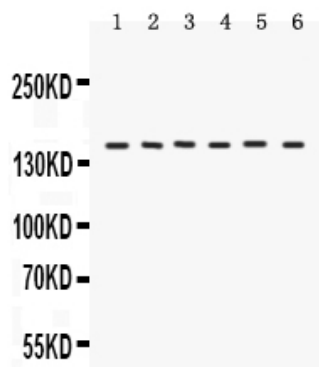
Name	ROCK2
Synonyms	KIAA0619
Function	Protein kinase which is a key regulator of actin cytoskeleton and cell polarity. Involved in regulation of smooth muscle contraction, actin cytoskeleton organization, stress fiber and focal adhesion formation, neurite retraction, cell adhesion and motility via phosphorylation 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).

Background

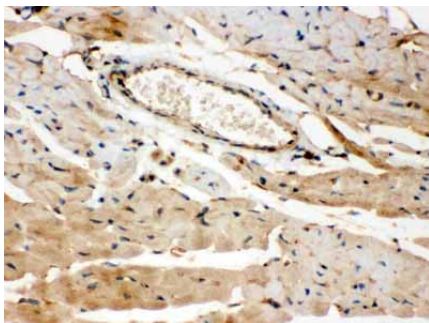
Rho-associated kinase (ROCK), including the ROCK-I and ROCK-II isoforms, is a protein kinase involved in signaling from Rho to actin cytoskeleton. Serine/threonine kinase ROCK II/Rho kinase, which is an isozyme of ROCK I, is one of the targets for the small GTPase Rho. ROCK II regulates the formation 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.

Images

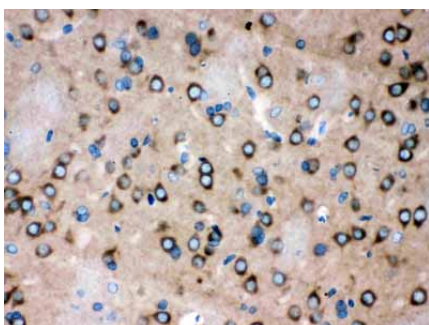
Anti- ROCK2 Picoband antibody, ABO12078, Western blotting
All lanes: Anti ROCK2 (ABO12078) at 0.5ug/ml
Lane 1: Rat Brain Tissue Lysate at 50ug
Lane 2: Rat Liver Tissue Lysate at 50ug
Lane 3: HELA Whole Cell Lysate at 40ug
Lane 4: CEM Whole Cell Lysate at 40ug
Lane 5: A549 Whole Cell Lysate at 40ug
Lane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



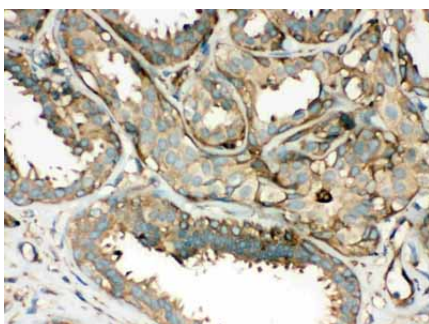
at 40ug
 Predicted bind size: 161KD
 Observed bind size: 161KD



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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.