

Anti-ROCK2 Monoclonal Antibody

Catalog # ABO14435

Product Information

Application	WB, IF, ICC
Primary Accession	O75116
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-ROCK2 Monoclonal Antibody . Tested in WB, ICC/IF applications. This antibody reacts with Human, Mouse, Rat.

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	WB 1:1000-1:5000 ICC/IF 1:50-1:200
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names Immunogen	Clone: ACDH-18 A synthesized peptide derived from human ROCK2 Regulates the assembly of the actin cytoskeleton. Promotes formation of stress fibers and of focal adhesion complexes. Plays a role in smooth muscle contraction.
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

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).

Images

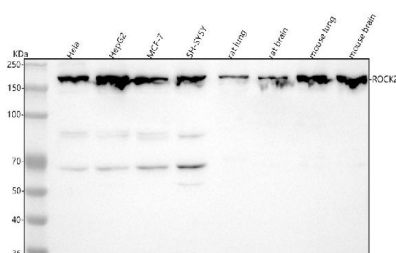


Figure 1. Western blot analysis of ROCK2 using anti-ROCK2 antibody (M01023).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human Hela whole cell lysates,
Lane 2: human HepG2 whole cell lysates,
Lane 3: human MCF-7 whole cell lysates,
Lane 4: human SH-SY5Y whole cell lysates,
Lane 5: rat lung tissue lysates,
Lane 6: rat brain tissue lysates,
Lane 7: mouse lung tissue lysates,
Lane 8: mouse brain tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ROCK2 antigen affinity purified monoclonal antibody (Catalog # M01023) at 1:1000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for ROCK2 at approximately 161 kDa. The expected band size for ROCK2 is at 161 kDa.