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ROCK2 Antibody
Catalog # ASC11319

Specification

ROCK2 Antibody - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	O75116
Other Accession	NP_004841, 41872583
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 153 kDa** **Observed: 160 kDa KDa**
Application Notes	**ROCK2 antibody can be used for detection of ROCK2 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

ROCK2 Antibody - Additional Information

Gene ID **9475**

Target/Specificity
ROCK2; Three isoforms of ROCK2 are known to exist; this antibody recognizes all three isoforms. ROCK2 antibody is predicted to not cross-react with other ROCK protein family members.

Reconstitution & Storage
ROCK2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
ROCK2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ROCK2 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.

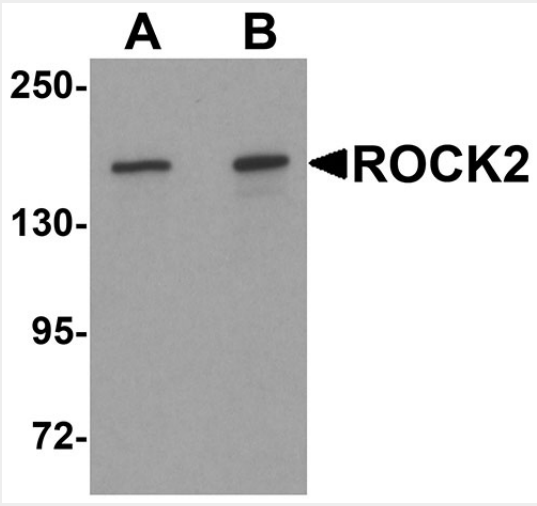
Tissue Location
Expressed in the brain (at protein level).

ROCK2 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 Cytomety
- Cell Culture

ROCK2 Antibody - Images



Western blot analysis of ROCK2 in mouse brain tissue lysate with ROCK2 antibody at (A) 1 and (B) 2 µg/mL

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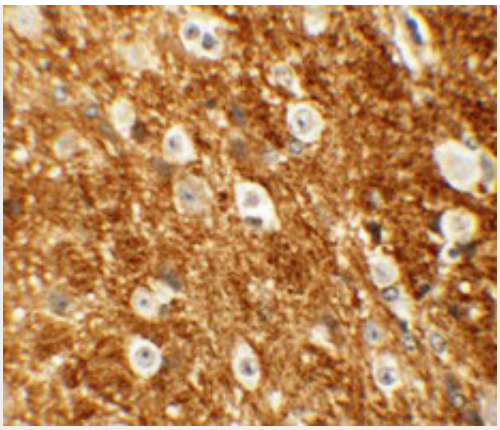
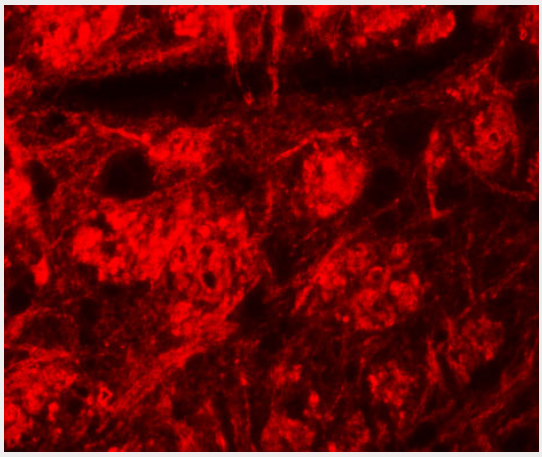


Immunohistochemistry of ROCK2 in mouse brain tissue with ROCK2 antibody at 5 µg/mL.



Immunofluorescence of ROCK2 in mouse brain tissue with ROCK2 antibody at 20 µg/mL.

ROCK2 Antibody - Background

ROCK2 Antibody: ROCK2 is a member of the AGC serine/threonine protein kinase family that regulates the assembly of the actin cytoskeleton. ROCK2 contains a protein kinase domain, a coiled-coil region and a zinc finger region and appears to be present as a dimer. ROCK2, like its isozyme ROCK1, is a downstream target of the small G-protein Rho and plays a role in smooth muscle contraction, malignant cell transformation, tumor invasion and metastasis, and mediates the cellular morphological changes during apoptosis.

ROCK2 Antibody - References

Leung T, Chen XQ, Manser E, et al. The p160 RhoA-binding kinase ROK alpha is a member of a kinase family and is involved in the reorganization of the cytoskeleton. Mol. Cell Biol. 1996; 16:5313-27.
Takahashi N, Tuiki H, Saya H, et al. Localization of the gene coding for ROCK II/Rho kinase on human chromosome 2p24. Genomics 1999; 55:235-7
Ishizaki T, Maekawa M, Fujisawa K, et al. The small GTP-binding protein Rho binds to and activates a 160 kDa Ser/Thr protein kinase homologous to myotonic dystrophy kinase. EMBO J. 1996; 15:1885-93.