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Anti-ROCK2 Antibody

Catalog # AP51921

Product Information

Application	WB, IHC, IF/IC
Primary Accession	O75116
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	160900

Additional Information

Gene ID	9475
Other Names	KIAA0619; Rho-associated protein kinase 2; Rho kinase 2; Rho-associated coiled-coil-containing protein kinase 2; Rho-associated coiled-coil-containing protein kinase II; ROCK-II; p164 ROCK-2
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human ROCK2. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

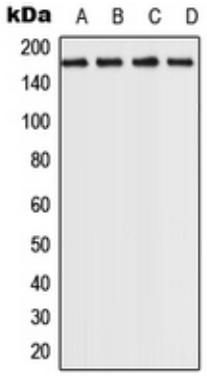
Name	ROCK2
Synonyms	KIAA0619
Function	Protein kinase which is a key regulator of actin cytoskeleton and cell polarity. Involved in regulation of smooth muscle contraction, actin cytoskeleton organization, stress fiber and focal adhesion formation, neurite retraction, cell adhesion and motility via phosphorylation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

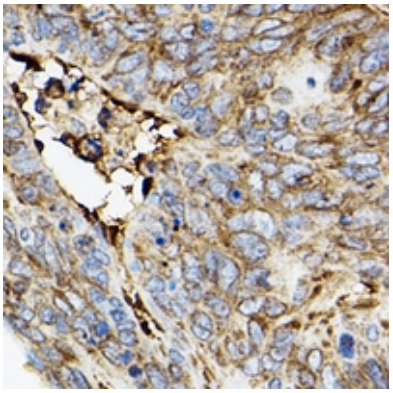
References

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Hillier L.W.,et al.Nature 434:724-731(2005).
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Images

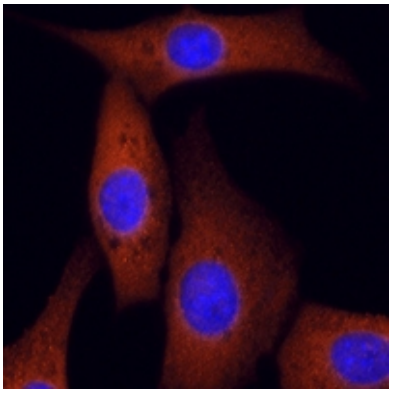


Western blot analysis of ROCK2 expression in MCF7 (A), HeLa (B), NIHC3T3 (C), PC12 (D) whole cell lysates. (Predicted band size: 160 kD; Observed band size: 161 kD)



Immunohistochemical analysis of ROCK2 staining in human colon formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunofluorescent analysis of ROCK2 staining in NIH3T3 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the



cell nuclei (blue).

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