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Product datasheet for TA336423

ROCK1 Mouse Monoclonal Antibody [Clone ID: 154C1465]

Product data:

Product Type:	Primary Antibodies
Clone Name:	154C1465
Applications:	WB
Recommend Dilution:	WB: 1-2 ug/ml
Reactivity:	Canine, Human, Mouse, Primate, Rabbit, Rat
Host:	Mouse
Isotype:	IgG
Clonality:	Monoclonal
Immunogen:	This antibody was generated by immunizing mice with a synthetic peptide sequence corresponding to amino acids 1114-1126 GNLPESRIEGWLS of human ROCK-1. This sequence is 100% conserved between human, chimpanzee, mouse, rat, dog, and rabbit. This immunogen
Formulation:	PBS containing 0.05% BSA, 0.05% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	0.5 mg/ml
Purification:	Protein G purified
Gene Name:	Rho associated coiled-coil containing protein kinase 1
Database Link:	NP_005397 Entrez Gene 19877 MouseEntrez Gene 81762 RatEntrez Gene 6093 Human

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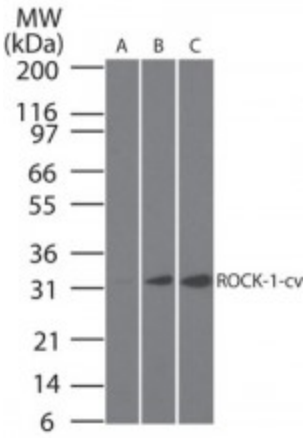
Background: The Rho target protein, Rho-associated coiled coil-containing protein kinase (ROCK)-1 has been found to be a new Caspase-3 substrate. ROCK, one of the effectors of the small GTPase Rho, has recently been shown to contribute significantly to myosin light chain (MLC) activation through two pathways: direct phosphorylation of MLC and phosphorylation of MLC phosphatase, leading to its inhibition. The increase in cellular contractility that is necessary for apoptotic membrane blebbing implies sustained augmentation of MLC phosphorylation. ROCK-1 consists of an amino-terminal kinase domain and an inhibitory cysteine/histidine-rich C-terminal domain that is located within a pleckstrin-homology region. They are joined by a variable region that contains the Rho-binding domain. During apoptosis, ROCK-I is cleaved by caspase-3 at a conserved DETD1113/G sequence and its carboxy-terminal inhibitory domain is removed, resulting in deregulated and constitutive kinase activity. The caspase-3-mediated cleavage and activation of ROCK I induces phosphorylation of MLC and membrane blebbing, one of the first events in the execution phase of apoptosis.

Synonyms: P160ROCK; ROCK-I

Protein Families: Druggable Genome, Protein Kinase

Protein Pathways: Axon guidance, Chemokine signaling pathway, Focal adhesion, Leukocyte transendothelial migration, Pathogenic Escherichia coli infection, Regulation of actin cytoskeleton, TGF-beta signaling pathway, Vascular smooth muscle contraction, Wnt signaling pathway

Product images:



Western Blot: cleaved ROCK1 Antibody (154C1465) TA336423 - Analysis of cleaved ROCK-1 in A) untreated, B) 1 hour and C) 4 hour staurosporin-treated (2 uM) Jurkat cells using this antibody. Goat anti-mouse Ig HRP secondary antibody and PicoTect ECL subst