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ROCK1

Reactivity: Human Mouse Rat

Tested applications:WB IHC

Recommended Dilution:WB 1:500 - 1:2000 IHC 1:50 - 1:100

Calculated MW:158kDa

Observed MW: Refer to Figures

Immunogen:

Recombinant protein of human ROCK1

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Concentration:

bdr

Synonym:

ROCK-I; P160ROCK;

Catalog #:A1008

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID:6093

Isotype: IgG

Swiss Prot:Q13464

Purity: Affinity purification

For research use only.

Background:

Rho-associated kinase I (ROCK1, ROK beta, p160ROCK) is a serine-threonine protein kinase and an effector of the small GTPase Rho. With N-terminus protein kinase domain and C-terminus Rho-binding domain/pleckstrin homology domain, ROCK1 can be activated by either RhoA or RhoB. In Rho specific ROCK1 activation, a Rho protein binds to the Rho-binding domain and induces a conformational change which opens the kinase domain for the phosphorylation of downstream effectors (1). Activated ROCK1 phosphorylates various signaling proteins, such as myosin light chain phosphatase, LIM kinases, and ezrin-radixin-moesin proteins. Caspase-3 also activates ROCK1; Caspase-3 cleaves ROCK1 at DETD1113/G sequence and removes its inhibitory c-terminal domain. This activation, independent of Rho activity, leads to apoptotic membrane blebbing (2). ROCK1 is involved in regulating actin cytoskeleton assembly, cell migration, centromere positing, smooth muscle contraction, and neurite outgrowth. Its involvement in tumor invasion, hypertension, and bronchial asthma makes ROCK1 an ideal target for drug development (3).

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