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Store at -20C
#9029

ROCK2 (D1B1) Rabbit mAb

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 160	Source/Isotype: Rabbit IgG	UniProt ID: #O75116	Entrez-Gene Id: 9475
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Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

ROCK2 (D1B1) Rabbit mAb recognizes endogenous levels of total ROCK2 protein.

Species predicted to react based on 100% sequence homology

Hamster, Dog

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human ROCK2 protein.

Background

ROCK (Rho-associated kinase), a family of serine/threonine kinases, is an important downstream target of Rho-GTPase and plays an important role in Rho-mediated signaling. Two isoforms of ROCK have been identified: ROCK1 and ROCK2. ROCK is composed of N-terminal catalytic, coiled-coil, and C-terminal PH (pleckstrin homology) domains. The C-terminus of ROCK negatively regulates its kinase activity (1,2). ROCK1 is cleaved by caspase-3 at a conserved DETD1113/G sequence resulting in loss of its C-terminal inhibitory domain (3). ROCK2 is directly cleaved by granzyme B (grB). Cleavage activates ROCK and leads to phosphorylation of myosin light chain (MLC) and inhibition of myosin phosphatase (4). This phosphorylation may account for the mechanism by which Rho regulates cytokinesis, cell motility, cell membrane blebbing during apoptosis, and smooth muscle contraction (5-7).

Background References

- Nakagawa, O. et al. (1996) *FEBS Lett.* 392, 189-193.
- Lee, J.H. et al. (2004) *J. Cell. Biol.* 167, 327-337.
- Sebbagh, M. et al. (2005) *J. Exp. Med.* 201, 465-471.
- Sebbagh, M. et al. (2001) *Nat Cell Biol* 3, 346-52.
- Amano, M. et al. (1996) *J. Biol. Chem.* 271, 20246-20249.
- Kureishi, Y. et al. (1997) *J. Biol. Chem.* 272, 12257-12260.
- Totsukawa, G. et al. (2000) *J. Cell Biol.* 150, 797-806.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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