

RhoE (4) Mouse mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H Mk	Endogenous	29	Mouse IgG1	#P61587	390

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

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

RhoE (4) Mouse mAb detects endogenous levels of total RhoE protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with full length recombinant human RhoE.

Background

Rho family small GTPases act as molecular switches that regulate processes such as cell migration, adhesion, proliferation and differentiation. Typically, they are activated by guanine nucleotide exchange factors (GEFs), which catalyze the exchange of bound GDP for GTP, and are inhibited by GTPase activating proteins (GAPs), which catalyze the hydrolysis of GTP to GDP (1). Rnd1, Rnd2 and RhoE/Rnd3 comprise the evolutionarily divergent Rnd family of Rho-type small GTPases, which lack GTPase activity and therefore remain in a GTP-bound state (2, reviewed in 3). RhoE/Rnd3 activity leads to a decrease in stress fibers and increased cell migration, at least in part through regulation of the Rho-dependent kinase ROCK1 (4). Activity of RhoE/Rnd3 itself is regulated by ROCK1, which phosphorylates RhoE/Rnd3 at Ser11, enhancing its activity (5). RhoE/Rnd3 has been implicated in inhibition of DNA-damage induced apoptosis (6) and cell cycle arrest (7). In keratinocytes, RhoE/Rnd3 regulates differentiation through its effects on both proliferation and adhesion (8).

Background References

1. DerMardirossian, C. and Bokoch, G.M. (2005) *Trends Cell Biol* 15, 356-63.
2. Foster, R. et al. (1996) *Mol Cell Biol* 16, 2689-99.
3. Riento, K. et al. (2005) *Biochem Soc Trans* 33, 649-51.
4. Riento, K. et al. (2003) *Mol Cell Biol* 23, 4219-29.
5. Riento, K. et al. (2005) *EMBO J* 24, 1170-80.
6. Boswell, S.A. et al. (2007) *J Biol Chem* 282, 4850-8.
7. Poch, E. et al. (2007) *Exp Cell Res* 313, 719-31.
8. Liebig, T. et al. (2009) *Mol Biol Cell* 20, 452-63.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **Mk:** Monkey

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