Revision 1

Store at -20C

#2098

RhoB Antibody

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk	Endogenous	21	Rabbit	#P62745	388

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

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

Specificity / Sensitivity

RhoB Antibody detects endogenous levels of total RhoB protein. The antibody does not cross-react with RhoA or RhoC.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human RhoB. Antibodies are purified using protein A and peptide affinity chromatography.

Background

Rho family small GTPases, including Rho, Rac and cdc42, act as molecular switches, regulating processes such as cell migration, adhesion, proliferation and differentiation. They are activated by guanine nucleotide exchange factors (GEFs), which catalyze the exchange of bound GDP for GTP, and inhibited by GTPase activating proteins (GAPs), which catalyze the hydrolysis of GTP to GDP. A third level of regulation is provided by the stoichiometric binding of Rho GDP dissociation inhibitor (RhoGDI) (1). RhoA, RhoB and RhoC are highly homologous, but appear to have divergent biological functions. Carboxy-terminal modifications and differences in subcellular localization allow these three proteins to respond to and act on distinct signaling molecules (2,3).
RhoB functions in the regulation of cell shape, migration and adhesion (4). RhoB activity has also been shown to play a role in protein trafficking (5,6) and in CXCR2-mediated chemotaxis (6). Inhibition of RhoB activity downstream of PKCι influences the degree of invasion and migration by glioblastoma cells (7), and RhoB expression has a negative affect on tumor growth in ovarian cancer (8).

Background References

1. DerMardirossian, C. and Bokoch, G.M. (2005) *Trends Cell Biol* 15, 356-63.
2. Wennerberg, K. and Der, C.J. (2004) *J Cell Sci* 117, 1301-12.
3. Wheeler, A.P. and Ridley, A.J. (2004) *Exp Cell Res* 301, 43-9.
4. Wheeler, A.P. and Ridley, A.J. (2007) *Exp Cell Res* 313, 3505-16.
5. Sandilands, E. et al. (2007) *J Cell Sci* 120, 2555-64.
6. Neel, N.F. et al. (2007) *J Cell Sci* 120, 1559-71.
7. Baldwin, R.M. et al. (2008) *Oncogene* 27, 3587-95.
8. Couderc, B. et al. (2008) *Cancer Gene Ther* 15, 456-64.

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

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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