Revision 7

Store at -20C

#2117

# RhoA (67B9) Rabbit mAb

Cell Signaling TECHNOLOGY®

**Orders:** 877-616-CELL (2355)
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com
cellsignal.com

**3 Trask Lane | Danvers | Massachusetts | 01923 | USA**

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

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---|---|---|---|---|---|---|
| W, W-S, IHC-P, IF-IC | H M R Mk B | Endogenous | 21 | Rabbit IgG | #P61586 | 387 |

## Product Usage Information

| Application | Dilution |
|---|---|
| Western Blotting | 1:1000 |
| Simple Western™ | 1:50 - 1:250 |
| Immunohistochemistry (Paraffin) | 1:800 |
| Immunofluorescence (Immunocytochemistry) | 1:200 |

## 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.

For a carrier free (BSA and azide free) version of this product see product #60382.

## Specificity/Sensitivity

RhoA (67B9) Rabbit mAb recognizes endogenous levels of total RhoA protein. The antibody does not recognize the related proteins RhoB or RhoC.

## Source / Purification

Monoclonal antibody is produced by immunizing animals with synthetic peptides corresponding to residues near the carboxy terminus of human RhoA.

## 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).

Functions of RhoA, the most highly studied of these three, include regulation of actomyosin contractility (4), cytokinesis (5), focal adhesion assembly (6) and cell polarity (7).

## 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. Bi, D. et al. (2005) *Circ Res* 96, 890-7.
5. Kimura, K. et al. (2000) *J Biol Chem* 275, 17233-6.
6. Barry, S.T. and Critchley, D.R. (1994) *J Cell Sci* 107 ( Pt 7), 2033-45.
7. Van Keymeulen, A. et al. (2006) *J Cell Biol* 174, 437-45.

## 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 **W-S:** Simple Western™ **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry)

## Cross-Reactivity Key

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

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