Rho (Central Region)

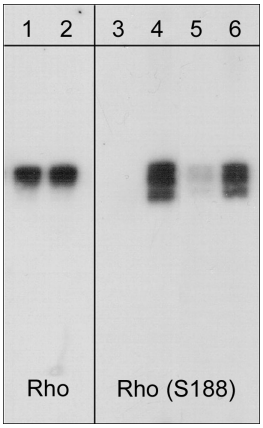
Cat. # RP1501
Host Rabbit Polyclonal
Size 100 µl

Background:

Rho (A, B, & C) proteins are members of the Ras superfamily of GTPases. These proteins regulate a variety of cellular functions, including cell cycle progression, cytoskeletal rearrangement, and gene expression. Rho cycles between the active GTP-bound form and an inactive GDP-bound form. Interconversion between these forms is controlled by guanine nucleotide exchange factors (GEFs) and GTPase-activating proteins (GAPs). The Rho proteins RhoA, RhoB, and RhoC are highly homologous and contain the consensus amino acid sequences necessary for GDP/GTP-binding and GTPase activity. Post-translational regulation of Rho activity has been shown specifically for RhoA. This Rho protein is phosphorylated *in vitro* on serine 188 by cAMP- and cGMP-dependent kinases (PKA and PKG). Ser-188 phosphorylation enhances RhoGDI binding and inhibits RhoA-mediated stress fiber formation. Thus, Ser-188 is an important site for negative regulation of RhoA activity.

References

Lang, P. et al. (1996) EMBO J. 15:510.
Dong, J.M. et al. (1998) J. Biol. Chem. 273(35):22554.
Sawada, N. et al. (2001) Biochem. Biophys. Res. Commun. 280:798.
Ellerbroek, S.M. et al. (2003) J. Biol. Chem. 278(21):19023.



Western blot analysis of human RhoA GST fusion recombinant unphosphorylated (lanes 1 & 3) or phosphorylated with PKA (lanes 2, 4, 5 & 6). The blots were probed with anti-Rho (RP1501; lanes 1 & 2) or with anti-RhoA (Ser-188) (RP1361; lanes 3-6). The latter antibody was used in the presence of no peptide (lanes 3 & 4), phospho-Rho (Ser-188) peptide (lane 5), or a non-specific phosphoserine peptide (lane 6).

Immunogen:

A synthetic peptide corresponding to amino acid residues in the central region of human RhoA. This peptide sequence is highly conserved in rat and mouse RhoA, B, and C.

Buffer and Storage:

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Do not aliquot. Stable for 1 year.

Applications:

WB	1:1000
ELISA	1:2000

End user should determine optimal dilution for their particular applications and experiments. Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1hour at room temperature.

Specificity:

This antibody was protein A purified. The antibody detects a 22 kDa* band corresponding to the apparent molecular weight of Rho in human Jurkat cells and mouse brain.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Related Products:

RP1361 RhoA (Ser-188), phospho-specific Rabbit Polyclonal
RX1365 phospho-RhoA (Ser-188) Peptide
CM1521 Cdc42 Mouse Monoclonal
RM2721 ROCK-I Mouse Monoclonal
RM2741 ROCK-I (C-terminal), cleavage-specific Mouse Monoclonal
RM2761 ROCK-II (Central region) Mouse Monoclonal

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