

phospho-RhoA (Ser-188) Blocking Peptide

Cat. # RX1365

Size 50 µg

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.

Peptide Sequence:

Phospho-RhoA (Ser-188) synthetic peptide corresponds to amino acid residues around serine 188 of human RhoA. This peptide sequence is highly conserved in rat and mouse RhoA, but is not found in RhoB or RhoC proteins.

Buffer and Storage:

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Applications:

Antibody Blocking 1 µg/ml¹
ELISA 10-100 ng/well²

End user should determine optimal concentration dependent on the concentration of the antibody.

¹Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.

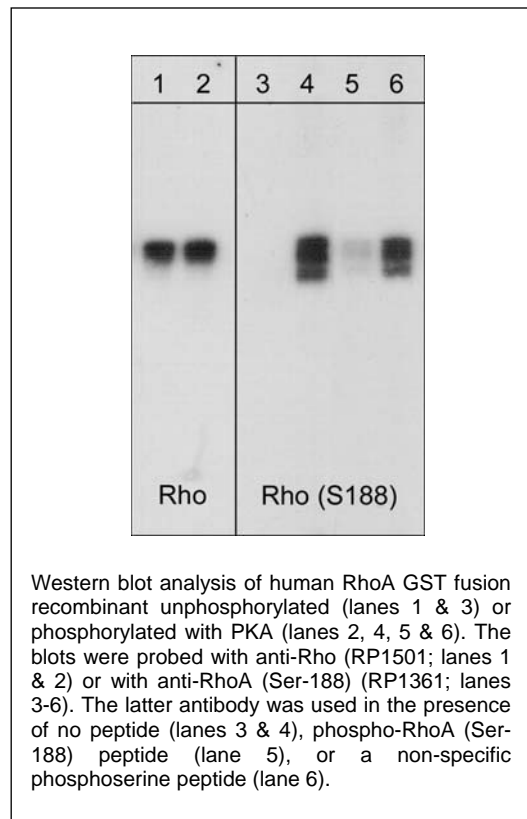
²Established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

Specificity:

The peptide is specifically recognized by anti-RhoA (Ser-188) phospho-specific antibody (RP1361) in ELISA, and has been shown to block the reactivity of RP1361 during Western blot. In addition, the peptide is recommended for use in blocking RP1361 reactivity in immunocytochemistry.

Related Products:

RP1501 Rho (Central region) Rabbit Polyclonal CM1521 Cdc42 Mouse Monoclonal
RP1361 RhoA (Ser-188), phospho-specific Rabbit Polyclonal



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