



PhosphoSolutions®
Antibodies that work™

Colorado Biosciences Park
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Anti-Phospho-Ser³⁰¹ Raf-1

Catalog Number: p1555-301

Size: 100 µl

\$310.00

Product Description: Affinity purified rabbit polyclonal antibody

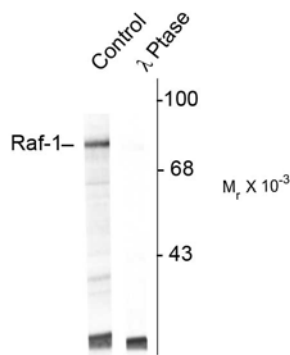
Applications: **WB:** 1:1000

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser³⁰¹ of rat Raf-1.

Species reactivity: The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with bovine, canine, chicken, human, mouse, non-human primate and *Xenopus* based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Biological Significance: The Ras pathway is a critical signal transduction cascade involved in regulating cellular proliferation, differentiation, survival, and oncogenic transformation. Members of the Raf serine/threonine kinase family are key intermediates in this cascade, functioning to relay signals from activated Ras to the downstream protein kinases MEK and ERK (Marshall, 1996). Previous studies have shown that phosphorylation is required for Raf-1 activation (Dhillon and Kolch, 2002; Chong et al., 2003). Recent work has demonstrated that phosphorylation also regulates the downregulation of Raf (Dougherty et al., 2005) with two sites participating: Ser³⁰¹ and Ser⁶⁴².

Anti-Phospho-Ser³⁰¹ Raf-1



Western blot of UV treated human Jurkat cell lysate showing specific immunolabeling of the ~74k Raf-1 protein (Control). The phosphospecificity of this labeling is shown in the second lane (*lambda*-phosphatase: λ-Ptase). The blot is identical to the control except that it was incubated in λ-Ptase (1200 units for 30 min) before being exposed to the phospho Ser³⁰¹ Raf-1 antibody. The immunolabeling of Raf-1 is completely eliminated by treatment with λ-Ptase.

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WB = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

Storage and Stability. For long term storage -20°C is recommended. Stable at -20°C for at least 1 year.

Shipment: Domestic - Blue Ice; International - Blue Ice or Dry Ice

Purification Method: Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and non-phosphopeptide affinity columns.

Antibody Specificity: Specific for the ~74k Raf-1 protein phosphorylated at Ser³⁰¹. Immunolabeling of the Raf-1 protein band is blocked by λ -phosphatase treatment.

Quality Control Tests: Western blots performed on each lot.

References:

Chong H, Vikis HG, Guan KL (2003) Mechanisms of regulating the Raf kinase family. Cellular Signalling 15:463-469.
Dhillon AS, Kolch W (2002) Untying the regulation of the Raf-1 kinase. Arch Biochem Biophys 404:3-9.
Dougherty MK, Muller J, Ritt DA, Zhou M, Zhou XZ, Copeland TD, Conrads TP, Veenstra TD, Lu KP, Morrison DK (2005) Regulation of Raf-1 by Direct Feedback Phosphorylation. Mol Cell 17:215-224.
Marshall CJ (1996) Ras effectors. current opinion in cell biology 8:197-204.

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