

Anti-phospho-RAF1 (Ser301)

Rabbit Polyclonal Antibody

Catalog # R01-65R

Lot # J1274-32

Cited Applications

WB

Suggested Dilutions:
WB 1:1,000

Ideal working dilutions for each application should be empirically determined by the investigator.

Specificity

Recognizes the RAF1 protein phosphorylated at serine 301

Cross Reactivity

Human, Mouse, Rat, Bovine, Canine, non-Human Primates, Xenopus and Zebrafish

Host/Isotype/Clone#

Rabbit, IgG

Immunogen

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser301 conjugated to KLH

Formulation

100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol.

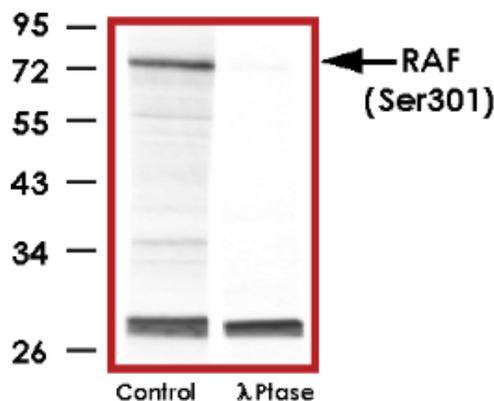
Scientific Background

The Ras pathway is a critical signal transduction cascade that regulates cellular proliferation, differentiation, survival, and oncogenic transformation. The Ras family of membrane associated GTPases directly binds RAF1, its direct downstream effector (1). Activated RAF1 phosphorylates the dual specificity protein kinases MEK1 and MEK2, which in turn phosphorylate the downstream serine/threonine specific protein kinases ERK1 and ERK2. Activated ERKs are pleiotropic effectors of cell physiology and play an important role in the control of gene expression involved in the cell division cycle, apoptosis, cell differentiation and cell migration (2). Downregulation of RAF1 is regulated by phosphorylation at Ser301 and Ser642 (3).

References

1. Rapp, U. et al: Structure and biological activity of v-raf, a unique oncogene transduced by a retrovirus. Proc. Nat. Acad. Sci. 80: 4218-4222, 1983.
2. Li, P. et al: Raf-1: a kinase currently without a cause but not lacking in effects. Cell 64: 479-482, 1991.
3. Dougherty M.K. et al: Regulation of Raf-1 by Direct Feedback Phosphorylation. Mol Cell 17:215-224, 2005.

Sample Data



Western blot of UV treated human Jurkat cell lysate showing specific immunolabeling of the ~74kDaRAF1 protein (Control). The phosphospecificity of this labeling is shown in the second lane (lambda-phosphatase: lambda-Ptase). The blot is identical to the control except that it was incubated in lambda-Ptase (1200 units for 30 min) before being exposed to the Anti-phospho-RAF1 (Ser301) antibody. The immunolabeling of RAF1 is completely eliminated by treatment with lambda-Ptase.

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Purification
Stability
Storage & Shipping

Affinity chromatography
1yr at -20°C from date of shipment
Store product at -20°C. For optimal storage, aliquot antibody into smaller quantities after centrifugation and store at recommended temperature. For optimal performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped on ice packs.

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