

C-Raf (Ser-471), phospho-specific

[Conserved site: B-Raf (Ser-579)/A-Raf (Ser-432)]

Cat. # RP2901
Host Rabbit Polyclonal
Size 100 µl

Background:

The Ras-Raf-MAP kinase signaling pathway is involved in control of cell proliferation and differentiation. The Raf kinase family includes A-Raf, B-Raf, and C-Raf. Each family member has three highly conserved regions (CR1-3). The N-terminal CR1 contains the Ras-GTP-binding domain. The CR2 contains a negative regulatory serine residue (C-Raf (S259)/B-Raf (S365)) that may bind 14-3-3 proteins. The CR3 is the catalytic domain that contains phosphorylation sites for Raf-regulating enzymes within two segments, the N-region and the activation segment. Activation of C-Raf involves phosphorylation at many sites including Ser-338, Tyr-341, and Ser-471. The latter site is phosphorylated after EGF stimulation and may be important for MEK interaction in both C-Raf and A-Raf. In B-Raf, multiple phosphorylation sites have been identified, but their specific roles are uncertain. Phosphorylation of Ser-446 may prime B-Raf for activation, and Ser-446 and/or Ser-447 phosphorylation may be critical for B-Raf biological activity during PC12 differentiation. Ser-579 is required for growth factor activation and kinase activity.

References

- Mason, C.S. et al. (1999) EMBOJ 18(8):2137.
Baljuls, A. et al. (2008) J Biol Chem 283(40):27239.
Zhu et al. (2005) Mol. Biol. Cell 16:4733.
Karbowiczek, M. et al. (2006) J Biol Chem 281(35):25447.
Brummer, T. et al. (2006) Oncogene 25(47):6262.

Immunogen:

A synthetic peptide (coupled to KLH) corresponding to amino acid residues surrounding Ser-471 in human C-Raf. This sequence has high homology with similar regions in rat and mouse C-Raf, and has high homology to the conserved sites in B-Raf (Ser-579) and A-Raf (Ser-432).

Applications:

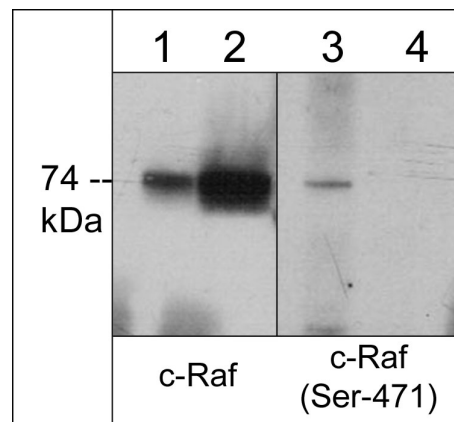
WB 1:1000
ELISA 1:2000

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 1 hour at room temperature.

Related Products:

- RM2081 C-Raf (N-terminal region) Mouse Monoclonal
RP2071 C-Raf (C-terminus) Rabbit Polyclonal
RP2011 B-Raf (N-terminus) Rabbit Polyclonal
RP2031 B-Raf (Ser-446)/C-Raf (Ser-338), phospho-specific
RM2891 A-Raf (N-terminal region) Mouse Monoclonal
RX2905 phospho-C-Raf (Ser-471) Peptide

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Western blot of human Jurkat cells treated with calyculin A (100 nM) for 30 min. The blots were untreated (lanes 1 & 3) or treated (lanes 2 & 4) with lambda phosphatase and probed with anti-C-Raf (N-terminal region) (lanes 1 & 2) or anti-C-Raf (Ser-471) (lanes 3 & 4).

Buffer and Storage:

The rabbit polyclonal, affinity-purified antibody fractions and Peptides are supplied in 100µl phosphate-buffered saline and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Specificity:

This antibody was cross-adsorbed to phospho-C-Raf (Ser-338) peptide before affinity purification using phospho-C-Raf (Ser-471) peptide. The purified antibody detects a band at 74 kDa* corresponding to C-Raf in western blots of human Jurkat cells treated with Calyculin A, but is not observed after lambda phosphatase treatment.

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

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