10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Phospho-Raf Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10373

Specification

Phospho-Raf Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P04049
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**73052**

Phospho-Raf Antibody - Additional Information

Gene ID 5894

Application & Usage	**Western blotting (0.5-4 µg/ml) and Immunohistochemistry (20-40 µg/ml). However, the optimal conditions should be determined individually. The antibody detects ~74 kDa c-Raf when phosphorylated at Ser259.**

Other Names
RAF1 , cRaf , Raf-1 , c-Raf , RAF , CRAF , C-RAF, RAF proto-oncogene serine/threonine-protein kinase; Proto-oncogene c-RAF; cRaf; Raf-1

Target/Specificity
Phospho-Raf (THR259)

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) affinity purified rabbit anti-Phospho-Raf (Ser259) polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 50% glycerol, 1% BSA, 0.02% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
Phospho-Raf Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-Raf Antibody - Protein Information

Name RAF1 (HGNC:9829)

Synonyms RAF

Function
Serine/threonine-protein kinase that acts as a regulatory link between the membrane-associated Ras GTPases and the MAPK/ERK cascade, and this critical regulatory link functions as a switch determining cell fate decisions including proliferation, differentiation, apoptosis, survival and oncogenic transformation. RAF1 activation initiates a mitogen-activated protein kinase (MAPK) cascade that comprises a sequential phosphorylation of the dual-specific MAPK kinases (MAP2K1/MEK1 and MAP2K2/MEK2) and the extracellular signal- regulated kinases (MAPK3/ERK1 and MAPK1/ERK2). The phosphorylated form of RAF1 (on residues Ser-338 and Ser-339, by PAK1) phosphorylates BAD/Bcl2-antagonist of cell death at 'Ser-75'. Phosphorylates adenylyl cyclases: ADCY2, ADCY5 and ADCY6, resulting in their activation. Phosphorylates PPP1R12A resulting in inhibition of the phosphatase activity. Phosphorylates TNNT2/cardiac muscle troponin T. Can promote NF-kB activation and inhibit signal transducers involved in motility (ROCK2), apoptosis (MAP3K5/ASK1 and STK3/MST2), proliferation and angiogenesis (RB1). Can protect cells from apoptosis also by translocating to the mitochondria where it binds BCL2 and displaces BAD/Bcl2-antagonist of cell death. Regulates Rho signaling and migration, and is required for normal wound healing. Plays a role in the oncogenic transformation of epithelial cells via repression of the TJ protein, occludin (OCLN) by inducing the up-regulation of a transcriptional repressor SNAI2/SLUG, which induces down-regulation of OCLN. Restricts caspase activation in response to selected stimuli, notably Fas stimulation, pathogen-mediated macrophage apoptosis, and erythroid differentiation.

Cellular Location
Cytoplasm. Cell membrane. Mitochondrion. Nucleus. Note=Colocalizes with RGS14 and BRAF in both the cytoplasm and membranes. Phosphorylation at Ser-259 impairs its membrane accumulation. Recruited to the cell membrane by the active Ras protein Phosphorylation at Ser-338 and Ser-339 by PAK1 is required for its mitochondrial localization. Retinoic acid-induced Ser-621 phosphorylated form of RAF1 is predominantly localized at the nucleus

Tissue Location
In skeletal muscle, isoform 1 is more abundant than isoform 2.

Phospho-Raf Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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Phospho-Raf Antibody - Images

Phospho-Raf Antibody - Background

c-Raf is a mitogen-activated protein kinase. Binding of Raf to 14-3-3 is required for c-Raf kinase activity, and also blocks the ability of phosphatase to inhibit c-Raf. 14-3-3 binds c-Raf at two phospho-serine residues: Ser259 and Ser621. Mutation of Ser259 to alanine constitutively activates Raf kinase activity, but mutation of Ser621 to alanine results in an inactive kinase.