

Phospho-Raf1 (S259) Antibody

Rabbit mAb Catalog # AP90943

Product Information

ApplicationWB, IHCPrimary AccessionP04049

Reactivity Rat, Human, Mouse

Clonality Monoclonal

Other Names C-Raf; CRAF; Protein kinase raf 1; RAF1; Raf proto-oncogene

serine/threonine-protein kinase; kinase Raf1;

IsotypeRabbit IgGHostRabbitCalculated MW73052

Additional Information

Dilution WB 1:500~1:1000 IHC 1:50~1:100

Purification Affinity-chromatography

Immunogen A synthesized peptide derived from human Phospho-Raf1 (S259)

Description Once activated Raf-1 can phosphorylate to activate the dual specificity protein

kinases MEK1 and MEK2 which in turn phosphorylate to activate the

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.

Storage Condition and Buffer Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium

azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term.

Avoid freeze / thaw cycle.

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.

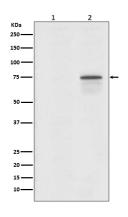
Cellular Location

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.

Images



Western blot analysis of Phospho-Raf1 (S259) expression in (1) 293T cell lysate; (2) 293T cell lysates treated with Okadaic Acid + Calyculin A.

Image not found: 202311/AP90943-wb6.jpg

Elevated H3K27me3 levels sensitize osteosarcoma to cisplatin. -Clinical Epigenetics

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