

**RAF1 Antibody (S471) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP7816i****Specification**

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**RAF1 Antibody (S471) Blocking Peptide - Product Information**Primary Accession [P04049](#)**RAF1 Antibody (S471) Blocking Peptide - Additional Information****Gene ID** 5894**Other Names**

RAF proto-oncogene serine/threonine-protein kinase, Proto-oncogene c-RAF, cRaf, Raf-1, RAF1, RAF

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP7816i](/products/AP7816i) was selected from the S471 region of human RAF1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**RAF1 Antibody (S471) Blocking Peptide - 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- $\kappa$ B 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.

### **RAF1 Antibody (S471) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

### **RAF1 Antibody (S471) Blocking Peptide - Images**

### **RAF1 Antibody (S471) Blocking Peptide - Background**

RAF1 is a MAP kinase kinase kinase (MAP3K) which functions downstream of the Ras family of membrane associated GTPases to which it binds directly. Once activated, RAF1 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.

### **RAF1 Antibody (S471) Blocking Peptide - References**

Chong, H., et al., J. Biol. Chem. 278(38):36269-36276 (2003).Lee, M., et al., Cancer Lett. 193(1):57-64 (2003).Alavi, A., et al., Science 301(5629):94-96 (2003).Fringer, J., et al., J. Biol. Chem. 278(23):20612-20617 (2003).Oehrl, W., et al., J. Biol. Chem. 278(20):17819-17826 (2003).