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

C-raf Antibody
Catalog # ASC11142

Specification

C-raf Antibody - Product Information

Application	**IF**
Primary Accession	P04049
Other Accession	NP_002871, 5894
Reactivity	**Human, Mouse, Rat**
Host	**Chicken**
Clonality	**Polyclonal**
Isotype	**IgY**
Application Notes	**C-raf antibody can be used for detection of C-raf by Western blot at 0.5 - 1 µg/mL.**

C-raf Antibody - Additional Information

Gene ID **5894**

Target/Specificity
C-raf antibody was raised against an 19 amino acid synthetic peptide near the amino terminus of human C-raf.

The immunogen is located within amino acids 30 - 80 of C-raf.

Reconstitution & Storage
C-raf antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

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

C-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

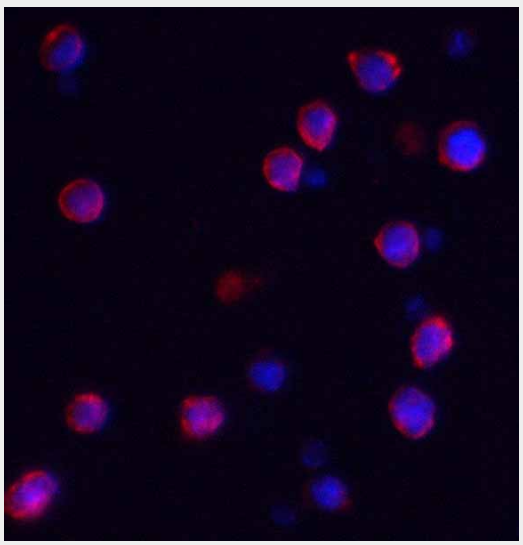
Tissue Location
In skeletal muscle, isoform 1 is more abundant than isoform 2.

C-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

C-raf Antibody - Images



Immunofluorescence of IQSEC1 in A-20 cells with IQSEC1 antibody at 2 µg/mL.

C-raf Antibody - Background

C-raf Antibody: C-raf is the cellular homolog of viral raf gene (v-raf) and encodes a MAP kinase kinase kinase (MAP3K), which functions downstream of the Ras family of membrane associated GTPases. Once activated, C-raf phosphorylates and activates the protein kinases MEK1 and MEK2, which in turn phosphorylate and activate the serine/threonine specific protein kinases, ERK1 and ERK2. These 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. Mutations in this gene are associated with Noonan syndrome 5 and LEOPARD syndrome 2.

C-raf Antibody - References

Howe LR, Leevers SJ, Gomez N, et al. Activation of the MAP kinase pathway by the protein kinase raf. Cell1992; 71:335-42.
Chang F, Steelman LS, Shelton JG, et al. Regulation of cell cycle progression and apoptosis by the Ras/Raf/MEK/ERK pathway. Int. J. Oncol.2003; 22:469-80.
Pandit B, Sarkozy A, Pennacchio LA, et al. Gain-of-function RAF1 mutations cause Noonan and LEOPARD syndromes with hypertrophic cardiomyopathy. Nat. Genet.2007; 39:1007-12.