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C-raf Antibody

Catalog # ASC11142

Product Information

Application	WB, E
Primary Accession	P04049
Other Accession	NP_002871, 4506401
Reactivity	Human, Mouse, Rat
Host	Chicken
Clonality	Polyclonal
Isotype	IgY
Calculated MW	73052
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	C-raf antibody can be used for detection of C-raf by Western blot at 1 - 2 g/mL.

Additional Information

Gene ID	5894
Other Names	RAF proto-oncogene serine/threonine-protein kinase, 2.7.11.1, Proto-oncogene c-RAF, cRaf, Raf-1, RAF1, RAF
Target/Specificity	RAF1;
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.

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.

Background

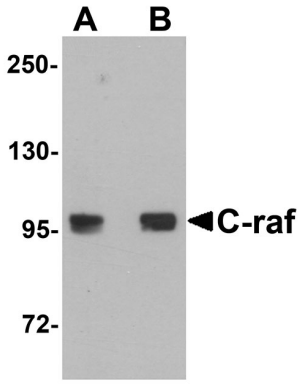
C-raf Antibody: C-raf is the cellular homolog of viral raf gene (v-raf) and encodes a MAP kinase kinase kinase (MAP3K), which functions downstream of the Ras family of membrane associated GTPases. Once activated, C-raf phosphorylates and activates the protein kinases MEK1 and MEK2, which in turn phosphorylate 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.

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.

Images

Western blot analysis of C-raf in 3T3 cell lysate with C-raf antibody at (A) 0.5 and (B) 1 µg/mL.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.