

Rabbit C-RAF Polyclonal Antibody | anti-RAF1 antibody

Phospho-C-RAF(Ser301) Antibody

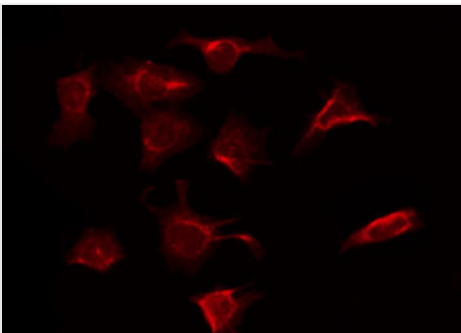
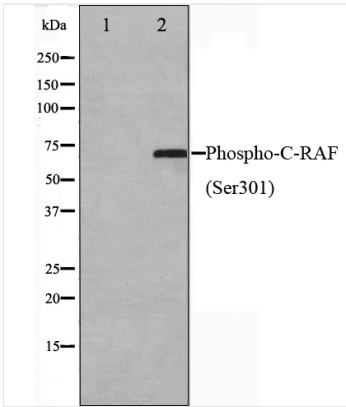
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA320739	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

C-RAF; Polyclonal Antibody; Phospho-C-RAF(Ser301) Antibody; c Raf; C-raf; C-Raf proto-oncogene; serine/threonine kinase; CMD1NN; Cra1 transforming gene; cRaf; Cra1 transforming gene; EC 2.7.11.1; kinase Raf1; Murine sarcoma 3611 oncogene 1; NS5; Oncogene MIL; Oncogene RAF1; OTTHUMP00000160218; OTTHUMP00000207813; OTTHUMP00000209389; Protein kinase raf 1; Proto-oncogene c-RAF; Raf 1; Raf 1 proto oncogene serine/threonine kinase; RAF; Raf proto oncogene serine/threonine protein kinase; RAF proto-oncogene serine/threonine-protein kinase; RAF-1; RAF1; RAF1_HUMAN; Similar to murine leukemia viral (V-raf-1) oncogene homolog 1; TRANSFORMING REPLICATION-DEFECTIVE MURINE RETROVIRUS 3611-MSV; v raf 1 murine leukemia viral oncogene homolog 1; v-raf murine sarcoma viral oncogene homolog 1; v-raf-1 murine leukemia viral oncogene-like protein 1; vraf1 murine leukemia viral oncogene homolog 1; anti-RAF1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-C-RAF(Ser301) antibody detects endogenous levels of C-RAF only when phosphorylated at Sersine 301
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	648
Applicable Applications for anti-RAF1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human C-RAF around the phosphorylation site of Sersine 301
Subcellular Location	Cytoplasm. Cell Membrane. Colocalizes with RGS14 and BRAF in both the cytoplasm and membranes.
Tissue Specificity	In skeletal muscle, isoform 1 is more abundant than isoform 2.
Conjugation	Unconjugated
Epitope	Phospho Ser301
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IF (Immunofluorescence)
AAA320739 staining HeLa by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

Related Product Information for anti-RAF1 antibody

Description: Raf-1 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 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.

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-κB 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.

Subunit Structure: Monomer. Homodimer. Heterodimerizes with BRAF and this heterodimer possesses a highly increased kinase activity compared to the respective homodimers or monomers (PubMed:16508002). Heterodimerization is mitogen-regulated and enhanced by 14-3-3 proteins (PubMed:16508002). MAPK1/ERK2 activation can induce a negative feedback that promotes the dissociation of the heterodimer (PubMed:16508002). Forms a multiprotein complex with Ras (M-Ras/MRAS), SHOC2 and protein phosphatase 1 (PPP1CA, PPP1CB and PPP1CC) (PubMed:16630891). Interacts with Ras proteins; the interaction is antagonized by RIN1 (PubMed:11784866). Weakly interacts with RIT1. Interacts (via N-terminus) with RGS14 (via RBD domains); the interaction mediates the formation of a ternary complex with BRAF, a ternary complex inhibited by GNAI1 (By similarity). Probably forms a complex composed of chaperones HSP90 and HSP70, co-chaperones CDC37, PPP5C, TSC1 and client protein TSC2, CDK4, AKT, RAF1 and NR3C1; this complex does not contain co-chaperones STIP1/HOP and PTGES3/p23 (PubMed:29127155). Interacts with STK3/MST2; the interaction inhibits its pro-apoptotic activity (PubMed:15618521). Interacts (when phosphorylated at Ser-259) with YWHAZ (unphosphorylated at Thr-232) (PubMed:9360956). Interacts with MAP2K1/MEK1 and MAP2K2/MEK2 (By similarity). Interacts with MAP3K5/ASF1 (via N-terminus) and this interaction inhibits the proapoptotic function of MAP3K5/ASK1 (PubMed:11427728). Interacts with PAK1 (via kinase domain) (PubMed:11733498). The phosphorylated form interacts with PIN1 (By similarity). The Ser-338 and Ser-339 phosphorylated form (by PAK1) interacts with BCL2 (PubMed:15849194). Interacts with PEBP1/RKIP and this interaction is enhanced if RAF1 is phosphorylated on residues Ser-338, Ser-339, Tyr-340 and Tyr-341 (PubMed:18294816). Interacts with ADCY2, ADCY5, ADCY6, DGKH, RCAN1/DSCR1, PPP1R12A, PKB/AKT1, PPP2CA, PPP2R1B, SPRY2, SPRY4, CNKSR1/CNK1, KSR2 and PHB/prohibitin (PubMed:10801873, PubMed:11719507, PubMed:12717443, PubMed:15385642, PubMed:15935327, PubMed:19710016, PubMed:10576742). Interacts with ROCK2 (By similarity). In its active form, interacts with PRMT5 (PubMed:21917714). Interacts with FAM83B; displaces 14-3-3 proteins from RAF1 and activates RAF1 (PubMed:22886302). Interacts with PDE8A; the interaction promotes RAF1 activity (PubMed:23509299).

Post-translational Modifications: Phosphorylation at Thr-269, Ser-338, Tyr-341, Thr-491 and Ser-494 results in its activation. Phosphorylation at Ser-29, Ser-43, Ser-289, Ser-296, Ser-301 and Ser-642 by MAPK1/ERK2 results in its inactivation. Phosphorylation at Ser-259 induces the interaction with YWHAZ and inactivates kinase activity. Dephosphorylation of Ser-259 by the complex containing protein phosphatase 1, SHOC2 and M-Ras/MRAS relieves inactivation, leading to stimulate RAF1 activity. Phosphorylation at Ser-338 by PAK1 and PAK5 and Ser-339 by PAK1 is required for its mitochondrial localization. Phosphorylation at Ser-621 in response to growth factor treatment stabilizes the protein, possibly by preventing proteasomal degradation. Phosphorylation at Ser-289, Ser-296, Ser-301, Ser-338 and Ser-621 are somehow linked to the methylation potential of cells. Treatment of cells with HGF in the presence of the methylation inhibitor 5'-methylthioadenosine (MTA) results in increased phosphorylation at Ser-338 and Ser-621 and decreased phosphorylation at Ser-296, Ser-301 and Ser-338. Dephosphorylation at Ser-338 by PPP5C results in an activity decrease. Methylated at Arg-563 in response to EGF treatment. This modification leads to destabilization of the protein, possibly through proteasomal degradation.

Similarity: Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. RAF subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4506401
NCBI GeneID	5894
NCBI Accession #	NP_002871.1
NCBI GenBank Nucleotide #	NM_002880.3
UniProt Accession #	P04049; Q15278; Q9UC20; B0LPH8; B2R5N3
Molecular Weight	Observed: 73 kDa Predicted: 74 kDa
NCBI Official Full Name	RAF proto-oncogene serine/threonine-protein kinase isoform b
NCBI Official Synonym Full Names	Raf-1 proto-oncogene, serine/threonine kinase
NCBI Official Symbol	RAF1
NCBI Official Synonym Symbols	NS5; CRAF; Raf-1; c-Raf; CMD1NN
NCBI Protein Information	RAF proto-oncogene serine/threonine-protein kinase
UniProt Protein Name	RAF proto-oncogene serine/threonine-protein kinase
UniProt Gene Name	RAF1
UniProt Synonym Gene Names	RAF; cRaf

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/c-raf-antibody-immunocytochemistry-immunofluorescence-western-blot-elisa/320739>