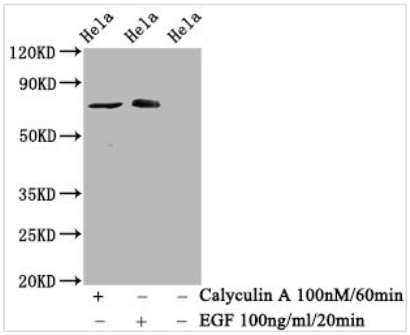
Phospho-RAF1 (S621) Antibody

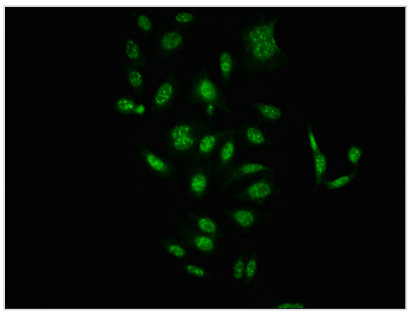
Product Code	CSB-RA019284A621phHU
Abbreviation	RAF proto-oncogene serine/threonine-protein kinase
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P04049
Immunogen	A synthesized peptide derived from Human Phospho-RAF1 (S621)
Species Reactivity	Human
Tested Applications	ELISA, WB, IF; Recommended dilution: WB:1:500-1:5000, IF:1:20-1:200
Relevance	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.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	RAF proto-oncogene serine/threonine-protein kinase, Proto-oncogene c-RAF, cRaf, Raf-1, RAF1, RAF

Immunogen Species	Homo sapiens (Human)
Research Area	Signal Transduction
Gene Names	RAF1
Accession NO.	1C2

Image



Western Blot
Positive WB detected in Hela whole cell lysate(treated with Calyculin A or EGF)
All lanes Phospho-RAF1 antibody at 1.525µg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 73 KDa
Observed band size: 73 KDa



Immunofluorescence staining of HepG2 cells(treated with 50mM Calyculin A for 30min) with CSB-RA019284A621phHU at 1:100,counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG (H+L).

Description

CUSABIO designed the vector clones for the expression of a recombinant RAF1 antibody in mammalian cells. The vector clones were obtained by inserting the RAF1 antibody heavy and light chains into the plasma vectors. The recombinant RAF1 antibody was purified from the culture medium through affinity-chromatography. It can be used to detect RAF1 protein from Human in the ELISA, WB, IF.

RAF1 is a kinase that acts as the effector associating RAS with MEK/ERK activation. It is involved in multiple cellular activities such as cell proliferation, differentiation, cell death and survival, metabolism, and motility. RAF1 is essential for the development of skin and lung tumors and can negatively regulate hepatocarcinogenesis. RAF1 is regulated by phosphorylation, and phosphorylation at the S621 enhances RAF1 kinase activity by providing a second, positive binding site for 14-3-3, which is required for RAF1 kinase activity.