

## Anti-Phospho-RAF1 (Ser621) Antibody (2K681)

### Product Details

|               |                         |
|---------------|-------------------------|
| Ig Type:      | Rabbit IgG              |
| Reactivity:   | Human                   |
| Conjugation:  | Unconjugated            |
| Clone:        | 2K681                   |
| Purification: | Affinity-chromatography |

### Applications

|                    |  |
|--------------------|--|
| Verified Activity: | <p>1. Western Blot</p> <ul style="list-style-type: none"><li>-Positive WB detected in Hela whole cell lysate(treated with Calyculin A or EGF)</li><li>-All lanes Phospho-RAF1 antibody at 1.525µg/ml</li><li>-Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution</li><li>-Predicted band size: 73 KDa</li></ul> <p>-Observed band size: 73 KDa</p> <p>2. Immunofluorescence staining of HepG2 cells(treated with 50mM Calyculin A for 30min) with TMAH-00955 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-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).</p> |
| Application:       | ELISA, WB, IF  |
| Recommended        | WB:1:500-1:5000; IF:1:20-1:200.  |

### Properties

|                      |   |
|----------------------|---|
| Stability & Storage: | Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. |
| Shipping:            | Shipping with blue ice.   |

### Antigen Details

|                  |   |
|------------------|---|
| Immunogen:       | A synthetic peptide: Human Phospho-RAF1 (S621)                                  |
| Antigen Species: | Human   |
| Gene ID:         | 5894  |
| Uniprot ID:      | P04049  |
| Synonyms:        | Phospho-RAF1 (S621);RAF1 (p-S621);RAF1 (p-Ser621);p-RAF1 (S621);p-RAF1 (Ser621) |
| Biology Area:    | Signal Transduction   |

### Research Background

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

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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.

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481