# SANTA CRUZ BIOTECHNOLOGY, INC.

# Raf-1 (E-10): sc-7267



## BACKGROUND

Several serine/threonine protein kinases have been implicated as intermediates in signal transduction pathways. These include ERK/MAP kinases, ribosomal S6 kinase (Rsk) and Raf-1. Raf-1 is a cytoplasmic protein with intrinsic serine/threonine activity. It is broadly expressed in nearly all cell lines tested to date and is the cellular homolog of v-Raf, the product of the transforming gene of the 3611 strain of murine sarcoma virus. The unregulated kinase activity of the v-Raf protein has been associated with transformation and mitogenesis while the activity of Raf-1 is normally suppressed by a regulatory N-terminal domain. Raf-1 is activated in response to activation of a variety of tyrosine kinase receptors as well as in response to pp60v-Src expression. There is accumulating evidence that Ras p21 may play a role in activation of Raf-1 and may even play the role of the messenger from membrane tyrosine kinases to Raf-1.

# REFERENCES

- Rapp, U.R., et al. 1983. Structure and biological activation of v-Raf, a unique oncogene transduced by a retrovirus. Proc. Natl. Acad. Sci. USA 80: 4218-4222.
- Huleihel, M., et al. 1986. Characterization of murine A-Raf, a new oncogene related to the v-Raf oncogene. Mol. Cell. Biol. 6: 2655-2662.
- Ray, L.B., et al. 1988. Insulin-stimulated microtubule-associated protein kinase is phosphorylated on tyrosine and threonine *in vivo*. Proc. Natl. Acad. Sci. USA 85: 3753-3757.

## **CHROMOSOMAL LOCATION**

Genetic locus: RAF1 (human) mapping to 3p25.2; Raf1 (mouse) mapping to 6 E3.

## SOURCE

Raf-1 (E-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 625-648 at the C-terminus of Raf-1 of human origin.

# PRODUCT

Each vial contains 200  $\mu g\, lg G_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Raf-1 (E-10) is available conjugated to agarose (sc-7267 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7267 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7267 PE), fluorescein (sc-7267 FITC), Alexa Fluor<sup>®</sup> 488 (sc-7267 AF488), Alexa Fluor<sup>®</sup> 546 (sc-7267 AF546), Alexa Fluor<sup>®</sup> 594 (sc-7267 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-7267 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-7267 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-7267 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-7267 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### **APPLICATIONS**

Raf-1 (E-10) is recommended for detection of Raf-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Raf-1 (E-10) is also recommended for detection of Raf-1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Raf-1 siRNA (h): sc-29462, Raf-1 siRNA (m): sc-29463, Raf-1 shRNA Plasmid (h): sc-29462-SH, Raf-1 shRNA Plasmid (m): sc-29463-SH, Raf-1 shRNA (h) Lentiviral Particles: sc-29462-V and Raf-1 shRNA (m) Lentiviral Particles: sc-29463-V.

Molecular Weight of Raf-1: 80 kDa.

Positive Controls: F9 cell lysate: sc-2245, 3611-RF whole cell lysate: sc-2215 or KNRK whole cell lysate: sc-2214.

# DATA





Raf-1 (E-10) HRP: sc-7267 HRP. Direct western blot analysis of Raf-1 expression in F9 (**A**), 3611-RF (**B**), KNRK (**C**) and NIH/3T3 (**D**) whole cell lysates.

Raf-1 (E-10): sc-7267. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing cytoplasmic and membrane staining (**A**). Immunofluorescence staining of methanolfixed NIH/3T3 cells showing cytoplasmic and membrane staining (**B**).

#### SELECT PRODUCT CITATIONS

- Sinibaldi, D., et al. 2000. Induction of p21<sup>WAF1/CIP1</sup> and cyclin D1 expression by the Src oncoprotein in mouse fibroblasts: role of activated Stat3 signaling. Oncogene 19: 5419-5427.
- Park, S., et al. 2017. Proteasome inhibitor-induced cleavage of HSP90 is mediated by ROS generation and caspase 10-activation in human leukemic cells. Redox Biol. 13: 470-476.
- Eid, R.A., et al. 2018. Ghrelin prevents cardiac cell apoptosis during cardiac remodelling post experimentally induced myocardial infarction in rats via activation of Raf-MEK1/2-ERK1/2 signalling. Arch. Physiol. Biochem. 15: 1-11.

#### **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

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