SANTA CRUZ BIOTECHNOLOGY, INC.

Raf-1 (540): sc-52827

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 $pp60^{v\text{-}Src}$ expression. There is accumulating evidence that Ras p21 may play a role in activation of Raf-1 and may play the role of the messenger from membrane tyrosine kinases to Raf-1.

CHROMOSOMAL LOCATION

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

SOURCE

Raf-1 (540) is a mouse monoclonal antibody raised against purified recombinant Raf-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

Raf-1 (540) 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) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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 Weigh of Raf-1: 80 kDa.

Positive Controls: Raf-1 (h): 293 Lysate: sc-158911, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

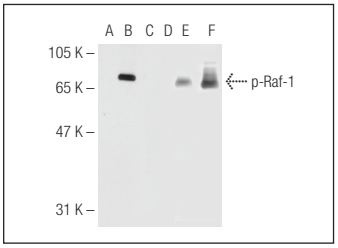
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

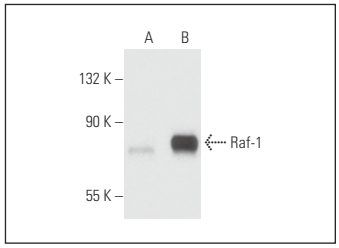
STORAGE

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

DATA



Western blot analysis of Raf-1 phosphorylation in non-transfected: sc-117752 (**A**,**D**), untreated mouse Raf-1 transfected: sc-122942 (**B**,**E**) and lambda protein phosphatase treated mouse Raf-1 transfected: sc-122942 (**C**,**F**) 293T whole cell lysates. Antibodies tested include p-Raf-1 (6B4): sc-81513 (**A**,**B**,**C**) and Raf-1 (540): sc-52827 (**D**,**E**,**F**).



Raf-1 (540): sc-52827. Western blot analysis of Raf-1 expression in non-transfected: sc-110760 (**A**) and human Raf-1 transfected: sc-158911 (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhang, Q., et al. 2011. Activation of the Ras/Raf/MEK pathway facilitates HCV replication via attenuation of the IFN-JAK-Stat pathway. J. Virol. 86: 1544-1554.
2. Anagnostopoulos, A.K., et al. 2015. Proteomic studies of pediatric medulloblastoma tumors with 17p deletion. J. Proteome Res. 14: 1076-1088.
3. Bartolomé, R.A., et al. 2017. VE-cadherin RGD motifs promote metastasis and constitute a potential therapeutic target in melanoma and breast cancers. Oncotarget 8: 215-227.
4. Song, Z., et al. 2017. Targeting $NRAS^{Q61K}$ mutant delays tumor growth and angiogenesis in non-small cell lung cancer. Am. J. Cancer Res. 7: 831-844.
5. Jiang, X., et al. 2017. VPS34 stimulation of p62 phosphorylation for cancer progression. Oncogene 36: 6850-6862.
6. Yu, Q., et al. 2017. Downregulation of RIKP by miR-200a promotes the invasive ability of esophageal cancer cells by upregulating the expression of LIN28 and MMP-14. Int. J. Clin. Exp. Pathol. 10: 8452-8460.
7. Wang, X., et al. 2019. Mitofusin2 regulates the proliferation and function of fibroblasts: the possible mechanisms underlying pelvic organ prolapse development. Mol. Med. Rep. 20: 2859-2866.
8. Song, W., et al. 2020. Long non-coding RNA BANCR mediates esophageal squamous cell carcinoma progression by regulating the IGF1R/Raf/MEK/ERK pathway via miR-338-3p. Int. J. Mol. Med. 46: 1377-1388.

CONJUGATES

See **Raf-1 (E-10): sc-7267** for Raf-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.