SANTA CRUZ BIOTECHNOLOGY, INC.

Raf-B (C-19): sc-166



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-A, a second member of the Raf gene family of serine/threonine protein kinases, exhibits substantial homology to Raf-1 within the kinase domain of the two molecules, but less homology elsewhere. Expression of Raf-B is highly restricted with highest levels in the cerebrum and testis.

CHROMOSOMAL LOCATION

Genetic locus: BRAF (human) mapping to 7q34; Braf (mouse) mapping to 6 B1.

SOURCE

Raf-B (C-19) is available as either rabbit (sc-166) or goat (sc-166-G) affinity purified polyclonal antibody raised against a peptide mapping at the C-terminus of Raf-B of human origin.

PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as phycoerythrin (sc-166 PE) conjugate for flow cytometry, 100 tests; as fluorescein (sc-166 FITC) or rhodamine (sc-166 TRITC) conjugates for immunofluorescence, 200 µg/1 ml; and as Alexa Fluor® 405 (sc-166 AF405), Alexa Fluor® 488 (sc-166 AF488) or Alexa Fluor® 647 (sc-166 AF647) conjugates for flow cytometry or immunofluorescence; 100 µg/2 ml.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Raf-B (C-19) is recommended for detection of Raf-B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Raf-B (C-19) is also recommended for detection of Raf-B in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Raf-B isoforms: 95/62 kDa.

RESEARCH USE

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

STORAGE

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

DATA





Raf-B (C-19)-G: sc-166-G. Western blot analysis of Raf-B expression in PC-12 whole cell lysate.

Raf-B (C-19): sc-166. Immunofluorescence staining of methanol-fixed A-431 cells showing cytoplasmic localization using indirect FITC (A) staining and HeLa cells using direct Alexa Fluor® 488 (B) staining.

SELECT PRODUCT CITATIONS

- 1. Vossler, M.R., et al. 1997. cAMP activates MAP kinase and Elk-1 through a B-Raf- and Rap 1 dependent pathway. Cell 89: 73-82.
- 2. Chen, J., et al. 2009. Dopamine promotes striatal neuronal apoptotic death via ERK signaling cascades. Eur. J. Neurosci. 29: 287-306.
- 3. Kaplan, F.M., et al. 2010. Hyperactivation of MEK-ERK1/2 signaling and resistance to apoptosis induced by the oncogenic B-RAF inhibitor, PLX4720, in mutant N-RAS melanoma cells. Oncogene 30: 366-371.
- 4. de Keizer, P.L., et al. 2010. Activation of forkhead box O transcription factors by oncogenic BRAF promotes p21cip1-dependent senescence. Cancer Res. 70: 8526-8536.
- 5. Langlois, B., et al. 2010. LRP-1 promotes cancer cell invasion by supporting ERK and inhibiting JNK signaling pathways. PLoS ONE 5: e11584.
- Polzien, L., et al. 2011. Bad contributes to RAF-mediated proliferation and cooperates with B-RAF-V600E in cancer signaling. J. Biol. Chem. 286: 17934-17944.
- Goettel, J.A., et al. 2011. KSR1 is a functional protein kinase capable of serine autophosphorylation and direct phosphorylation of MEK1. Exp. Cell Res. 317: 452-463.
- Xavier, C.P., et al. 2012. Hypericum androsaemum water extract inhibits proliferation in human colorectal cancer cells through effects on MAP kinases and PI3K/Akt pathway. Food Funct. 3: 844-852.

MONOS Satisfation Guaranteed

Try Flotillin-2 (B-6): sc-28320 or Flotillin-2 (A-3): sc-48398, our highly recommended monoclonal aternatives to Flotillin-2 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see Flotillin-2 (B-6): sc-28320.