SANTA CRUZ BIOTECHNOLOGY, INC.

Ksr-1 (C-19): sc-9317

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 has intrinsic kinase activity towards serine/threonine residues and is widely expressed in many tissue types and cell lines. Raf-1 activation is dependent on the small molecular weight GTPase Ras, but the means by which this activation occurs is poorly understood. Two proteins putatively involved in this process are Ksr-1 and Tak1. Ksr-1 (kinase suppressor of Ras) is a novel Raf-related protein kinase whose function is required for Ras signal transduction. Whether Ksr-1 lies directly downstream of Ras or acts in a parallel pathway is not yet known. Tak1 (TGFβ-activated kinase) has been shown to participate in the activation of the MAP kinase family in response to TGFβ stimulation.

CHROMOSOMAL LOCATION

Genetic locus: KSR1 (human) mapping to 17q11.1; Ksr1 (mouse) mapping to 11 B5.

SOURCE

Ksr-1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Ksr-1 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-9317 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

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

Ksr-1 (C-19) is also recommended for detection of Ksr-1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Ksr-1 siRNA (h): sc-35762, Ksr-1 siRNA (m): sc-35763, Ksr-1 shRNA Plasmid (h): sc-35762-SH, Ksr-1 shRNA Plasmid (m): sc-35763-SH, Ksr-1 shRNA (h) Lentiviral Particles: sc-35762-V and Ksr-1 shRNA (m) Lentiviral Particles: sc-35763-V.

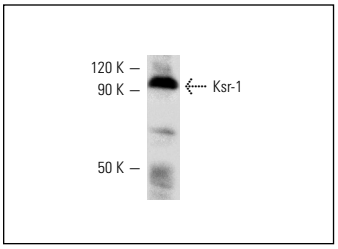
Molecular Weight of Ksr-1: 97 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

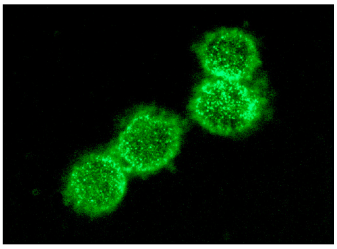
RESEARCH USE

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

DATA



Ksr-1 (C-19): sc-9317. Western blot analysis of Ksr-1 expression in HeLa whole cell lysate.



Ksr-1 (C-19): sc-9317. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane staining.

SELECT PRODUCT CITATIONS

1. Nguyen, A., et al. 2002. Kinase suppressor of Ras (KSR) is a scaffold which facilitates mitogen-activated protein kinase activation *in vivo*. Mol. Cell. Biol. 22: 3035-3045.
2. Lozano, J., et al. 2003. Deficiency of kinase suppressor of Ras1 prevents oncogenic Ras signaling in mice. Cancer Res. 63: 4232-4238.
3. Channavajhala, P.L., et al. 2005. hKSR-2 inhibits MEKK3-activated MAP kinase and NFκB pathways in inflammation. Biochem. Biophys. Res. Commun. 334: 1214-1218.
4. Martín-Encabo, S., et al. 2007. C3G mediated suppression of malignant transformation involves activation of PP2A phosphatases at the subcortical actin cytoskeleton. Exp. Cell Res. 313: 3881-3891.
5. Fernández, I.F., et al. 2010. VRK2 inhibits mitogen-activated protein kinase signaling and inversely correlates with ErbB2 in human breast cancer. Mol. Cell. Biol. 30: 4687-4697.
6. Rufino-Palomares, E., et al. 2011. Proteomics in the liver of gilthead sea bream *(Sparus aurata)* to elucidate the cellular response induced by the intake of maslinic acid. Proteomics 11: 3312-3325.
7. Llobet, D., et al. 2011. KSR1 is overexpressed in endometrial carcinoma and regulates proliferation and TRAIL-induced apoptosis by modulating FLIP levels. Am. J. Pathol. 178: 1529-1543.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **Ksr-1 (15): sc-136192**, our highly recommended monoclonal alternative to Ksr-1 (C-19).