SANTA CRUZ BIOTECHNOLOGY, INC.

Ksr-1 (H-70): sc-25416

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 (H-70) is a rabbit polyclonal antibody raised against amino acids 525-592 mapping within an internal region 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.

APPLICATIONS

Ksr-1 (H-70) 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), immunohistochemistry (including paraffin-embedded sections) (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 (H-70) is also recommended for detection of Ksr-1 in additional species, including equine.

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: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or mouse brain extract: sc-2253.

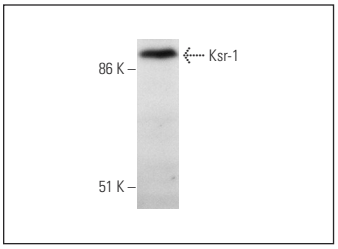
STORAGE

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

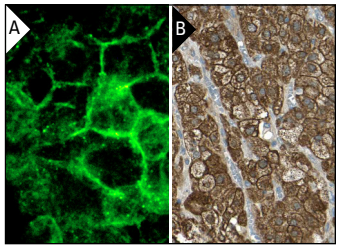
RESEARCH USE

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

DATA



Ksr-1 (H-70): sc-25416. Western blot analysis of Ksr-1 expression in mouse brain tissue extract.



Ksr-1 (H-70): sc-25416. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing membrane and cytoplasmic staining of cortical cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Yan, F., et al. 2004. Kinase suppressor of Ras-1 protects intestinal epithelium from cytokine-mediated apoptosis during inflammation. J. Clin. Invest. 114: 1272-1280.
2. Shalin, S.C., et al. 2006. Kinase suppressor of Ras1 compartmentalizes hippocampal signal transduction and subserves synaptic plasticity and memory formation. Neuron 50: 765-779.
3. Gringhuis, S.I., et al. 2009. Carbohydrate-specific signaling through the DC-SIGN signalosome tailors immunity to *Mycobacterium tuberculosis*, HIV-1 and *Helicobacter pylori*. Nat. Immunol. 10: 1081-1088.
4. Fisher, K.W., et al. 2011. Kinase suppressor of ras 1 (KSR1) regulates PGC1α and estrogen-related receptor α to promote oncogenic Ras-dependent anchorage-independent growth. Mol. Cell. Biol. 31: 2453-2461.
5. 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.