SANTA CRUZ BIOTECHNOLOGY, INC.

Ksr-1 (MINT/1/4): sc-56923

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.

REFERENCES

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2. Ray, L.B. and Sturgill, T.W. 1988. Insulin-stimulated microtubule-associated protein kinase is phosphorylated on tyrosine and threonine *in vivo*. Proc. Natl. Acad. Sci. USA 85: 3753-3757.
3. Morrison, D.K., et al. 1988. Signal transduction from membrane to cytoplasm: growth factors and membrane-bound oncogene products increase Raf-1 phosphorylation and associated protein kinase activity. Proc. Natl. Acad. Sci. USA 85: 8855-8859.
4. Pelech, S.L., et al. 1990. Protein kinase cascades in meiotic and mitotic cell cycle control. Biochem. Cell Biol. 68: 1297-1330.
5. Downward, J. 1995. KSR: a novel player in the Ras pathway. Cell 83: 831-834.
6. Therrien, M., et al. 1995. KSR, a novel protein kinase required for Ras signal transduction. Cell 83: 879-888.
7. Sundaram, M. and Han, M. 1995. The *C. elegans* Ksr-1 gene encodes a novel Raf-related kinase involved in Ras-mediated signal transduction. Cell 83: 889-901.
8. Yamaguchi, K., et al. 1995. Identification of a member of the MAPKKK family as a potential mediator of TGFβ signal transduction. Science 270: 2008-2011.

CHROMOSOMAL LOCATION

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

SOURCE

Ksr-1 (MINT/1/4) is a rat monoclonal antibody raised against recombinant Ksr-1-GST fusion protein of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

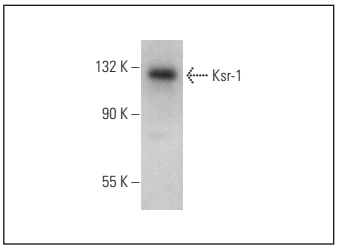
Ksr-1 (MINT/1/4) is recommended for detection of Ksr-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Ksr-1 siRNA (h): sc-35762, Ksr-1 siRNA (m): sc-35763, Ksr-1 siRNA (r): sc-270592, Ksr-1 shRNA Plasmid (h): sc-35762-SH, Ksr-1 shRNA Plasmid (m): sc-35763-SH, Ksr-1 shRNA Plasmid (r): sc-270592-SH, Ksr-1 shRNA (h) Lentiviral Particles: sc-35762-V, Ksr-1 shRNA (m) Lentiviral Particles: sc-35763-V and Ksr-1 shRNA (r) Lentiviral Particles: sc-270592-V.

Molecular Weight of Ksr-1: 97 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

DATA



Ksr-1 (MINT/1/4): sc-56923. Western blot analysis of Ksr-1 expression in 3T3-L1 whole cell lysate.

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.

PROTOCOLS

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