

Ksr-1 (15): sc-136192

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 (TGF β -activated kinase) has been shown to participate in the activation of the MAP kinase family in response to TGF β stimulation.

REFERENCES

- Huleihel, M., et al. 1986. Characterization of murine A-Raf, a new oncogene related to the v-Raf oncogene. *Mol. Cell. Biol.* 6: 2655-2662.
- Ray, L.B., et al. 1988. Insulin-stimulated microtubule-associated protein kinase is phosphorylated on tyrosine and threonine *in vivo*. *Proc. Natl. Acad. Sci. USA* 85: 3753-3757.
- 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.
- Pelech, S.L., et al. 1990. Protein kinase cascades in meiotic and mitotic cell cycle control. *Biochem. Cell Biol.* 68: 1297-1330.
- Downward, J. 1995. Ksr: a novel player in the Ras pathway. *Cell* 83: 831-834.
- Therrien, M., et al. 1995. Ksr, a novel protein kinase required for Ras signal transduction. *Cell* 83: 879-888.
- 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.
- Yamaguchi, K., et al. 1995. Identification of a member of the MAPKKK family as a potential mediator of TGF- β signal transduction. *Science* 270: 2008-2011.
- Giblett, S.M., et al. 2002. Expression of kinase suppressor of Ras in the normal adult and embryonic mouse. *Cell Growth Differ.* 13: 307-313.

CHROMOSOMAL LOCATION

Genetic locus: Ksr1 (mouse) mapping to 11 B5.

SOURCE

Ksr-1 (15) is a mouse monoclonal antibody raised against amino acids 90-203 of Ksr-1 of mouse origin.

RESEARCH USE

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

PRODUCT

Each vial contains 50 μ g IgG₁ in 500 μ l PBS with < 0.1% sodium azide and 0.1% gelatin.

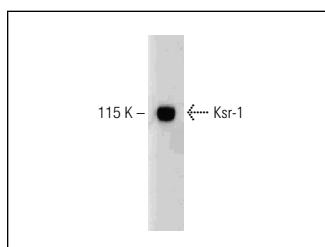
APPLICATIONS

Ksr-1 (15) is recommended for detection of Ksr-1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for Ksr-1 siRNA (m): sc-35763, Ksr-1 siRNA (r): sc-270592, Ksr-1 shRNA Plasmid (m): sc-35763-SH, Ksr-1 shRNA Plasmid (r): sc-270592-SH, 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.

DATA



Ksr-1 (15): sc-136192. Western blot analysis of Ksr-1 expression in RSV-3T3 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.

PROTOCOLS

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