

Ksr-1 (M-18): sc-1837

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.

CHROMOSOMAL LOCATION

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

SOURCE

Ksr-1 (M-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Ksr-1 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1837 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ksr-1 (M-18) 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), 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).

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

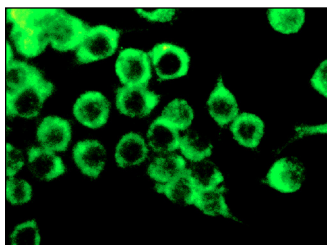
Molecular Weight of Ksr-1: 97 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Ksr-1 (M-18): sc-1837. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane localization.

SELECT PRODUCT CITATIONS

- Mizutani, S., et al. 1998. Isolation of a new protein factor required for activation of Raf-1 by Ha-Ras: partial purification from rat brain cytosols. *Oncogene* 16: 2781-2786.
- Stewart, S., et al. 1999. Kinase suppressor of Ras forms a multiprotein signaling complex and modulates MEK localization. *Mol. Cell. Biol.* 19: 5523-5534.
- 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.

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.



Try **Ksr-1 (15): sc-136192**, our highly recommended monoclonal alternative to Ksr-1 (M-18).