

## Ksr-2 (H-80): sc-98448

### BACKGROUND

Kinase suppressor of Ras (Ksr) and MAP kinase kinase kinase (MEKK3) are integral members of the MAP kinase pathway. Ksr is a conserved protein that positively regulates Ras signaling and may function as a scaffold for Raf, MEK and ERK. There are two types of Ksr proteins: Ksr-1 and Ksr-2. These two are individually necessary for a few specific Ras-dependent processes, but they are required together for most aspects of Ras-mediated signaling. Ksr-2 plays a key role in Ras-mediated signaling during germline meiotic progression and functions redundantly with Ksr-1 during the development of the excretory system pathway, hermaphrodite vulva, and male spicules. Ksr-2 also functions as a negative regulator of the MEKK3-mediated activation of the MAP kinase pathways (specifically ERK and JNK) and of the NF $\kappa$ B pathways, and it simultaneously inhibits MEKK3-mediated Il-8 production.

### REFERENCES

1. Sundaram, M. and Han, M. 1996. The *C. elegans* Ksr-1 gene encodes a novel Raf-related kinase involved in Ras-mediated signal transduction. *Cell* 83: 889-901.
2. Denouel-Galy, A., et al. 1998. Murine Ksr interacts with MEK and inhibits Ras-induced transformation. *Curr. Biol.* 8: 46-55.
3. Yu, W., et al. 1998. Regulation of the MAP kinase pathway by mammalian Ksr through direct interaction with MEK and ERK. *Curr. Biol.* 8: 56-64.
4. Joneson, T., et al. 1998. Kinase suppressor of Ras inhibits the activation of extracellular ligand-regulated (ERK) mitogen-activated protein (MAP) kinase by growth factors, activated Ras and Ras effectors. *J. Biol. Chem.* 273: 7743-7748.
5. Sugimoto, T., et al. 1998. The kinase suppressor of Ras (Ksr) modulates growth factor and Ras signaling by uncoupling Elk-1 phosphorylation from MAP kinase activation. *EMBO J.* 17: 1717-1727.
6. Stewart, S., et al. 1999. Kinase suppressor of Ras forms a multiprotein signaling complex and modulates MEK localization. *Mol. Cell. Biol.* 19: 5523-5534.
7. Ohmachi, M., et al. 2002. *C. elegans* Ksr-1 and Ksr-2 have both unique and redundant functions and are required for MPK-1 ERK phosphorylation. *Curr. Biol.* 12: 427-433.
8. Channavajhala, P.L., et al. 2003. Identification of a novel human kinase supporter of Ras (hKSR-2) that functions as a negative regulator of Cot (Tpl2) signaling. *J. Biol. Chem.* 278: 47089-47097.

### CHROMOSOMAL LOCATION

Genetic locus: KSR2 (human) mapping to 12q24.22.

### SOURCE

Ksr-2 (H-80) is a rabbit polyclonal antibody raised against amino acids 339-414 mapping within an internal region of Ksr-2 of human origin.

### RESEARCH USE

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

### PRODUCT

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

### APPLICATIONS

Ksr-2 (H-80) is recommended for detection of Ksr-2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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-2 (H-80) is also recommended for detection of Ksr-2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Ksr-2 siRNA (h): sc-60901, Ksr-2 shRNA Plasmid (h): sc-60901-SH and Ksr-2 shRNA (h) Lentiviral Particles: sc-60901-V.

Molecular Weight of Ksr-2: 94 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.


 MONOS  
Satisfaction  
Guaranteed

Try **Ksr-2 (K75): sc-100421**, our highly recommended monoclonal alternative to Ksr-2 (H-80).