

SKRP1 (G-13): sc-47673

BACKGROUND

Mitogen-activated protein (MAP) kinases are a large class of proteins involved in signal transduction pathways that are activated by a range of stimuli and mediate a number of physiological and pathological changes in the cell. Dual specificity phosphatases (DSPs) are a subclass of the protein tyrosine phosphatase (PTP) gene superfamily, which are selective for dephosphorylating critical phosphothreonine and phosphotyrosine residues within MAP kinases. DSP gene expression is induced by a host of growth factors and/or cellular stresses, thereby negatively regulating MAP kinase superfamily members including MAPK/ERK, SAPK/JNK and p38. The stress-activated protein kinase (SAPK) pathway-regulating phosphatase 1 (SKRP1) binds to MAP kinase MKK-7 to regulate JNK.

REFERENCES

1. Keyse, S.M. 1995 An emerging family of dual specificity MAP kinase phosphatases. *Biochim. Biophys. Acta* 1265: 152-160.
2. Sun, H. 1998. Functional studies of dual-specificity phosphatases. *Methods Mol. Biol.* 84: 307-318.
3. Camps, M., Nichols, A. and Arkinstall, S. 2000. Dual specificity phosphatases: a gene family for control of MAP kinase function. *FASEB J.* 14: 6-16.
4. Zama, T., Aoki, R., Kamimoto, T., Inoue, K., Ikeda, Y. and Hagiwara, M. 2002. A novel dual specificity phosphatase SKRP1 interacts with the MAPK kinase MKK7 and inactivates the JNK MAPK pathway. Implication for the precise regulation of the particular MAPK pathway. *J. Biol. Chem.* 277: 23909-23918.
5. Zama, T., Aoki, R., Kamimoto, T., Inoue, K., Ikeda, Y. and Hagiwara, M. 2002. Scaffold role of a mitogen-activated protein kinase phosphatase, SKRP1, for the JNK signaling pathway. *J. Biol. Chem.* 277: 23919-23926.

CHROMOSOMAL LOCATION

Genetic locus: DUSP19 (human) mapping to 2q32.1; Dusp19 (mouse) mapping to 2 C3.

SOURCE

SKRP1 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SKRP1 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.

Blocking peptide available for competition studies, sc-47673 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SKRP1 (G-13) is recommended for detection of SKRP1 of human and, to a lesser extent, 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).

SKRP1 (G-13) is also recommended for detection of SKRP1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SKRP1 siRNA (h): sc-61557, SKRP1 siRNA (m): sc-61558, SKRP1 shRNA Plasmid (h): sc-61557-SH, SKRP1 shRNA Plasmid (m): sc-61558-SH, SKRP1 shRNA (h) Lentiviral Particles: sc-61557-V and SKRP1 shRNA (m) Lentiviral Particles: sc-61558-V.

Molecular Weight of SKRP1: 27 kDa.

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.

RESEARCH USE

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

PROTOCOLS

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