

MEK-4 (H-98): sc-13070

BACKGROUND

A family of protein kinases located upstream of the MAP kinases and responsible for their activation has been identified. The prototype member of this family, designated MAP kinase kinase, or MEK-1, specifically phosphorylates the MAP kinase regulatory threonine and tyrosine residues present in the Thr-Glu-Tyr motif of ERK. A second MEK family member, MEK-2, resembles MEK-1 in its substrate specificity. MEK-3 (or MKK-3) functions to activate p38 MAP kinase, and MEK-4 (also called SEK1 or MKK-4) activates both p38 and JNK MAP kinases. MEK-5 appears to specifically phosphorylate ERK5, whereas MEK-6 phosphorylates p38 and p38b. MEK-7 (or MKK-7) phosphorylates and activates the JNK signal transduction pathway.

REFERENCES

1. Crews, C.M., et al. 1992. The primary structure of MEK, a protein kinase that phosphorylates the ERK gene product. *Science* 258: 478-480.
2. Wu, J., et al. 1993. Identification and characterization of a new mammalian mitogen-activated protein kinase kinase, MKK2. *Mol. Cell. Biol.* 13: 4539-4548.
3. Dérijard, B., et al. 1995. Independent human MAP-kinase signal transduction pathways defined by MEK and MKK isoforms. *Science* 267: 682-685.

CHROMOSOMAL LOCATION

Genetic locus: MAP2K4 (human) mapping to 17p12; Map2k4 (mouse) mapping to 11 B3.

SOURCE

MEK-4 (H-98) is a rabbit polyclonal antibody raised against amino acids 302-399 mapping at the C-terminus of MEK-4 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.

APPLICATIONS

MEK-4 (H-98) is recommended for detection of MEK-4 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MEK-4 (H-98) is also recommended for detection of MEK-4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MEK-4 siRNA (h): sc-35909, MEK-4 siRNA (m): sc-35910, MEK-4 shRNA Plasmid (h): sc-35909-SH, MEK-4 shRNA Plasmid (m): sc-35910-SH, MEK-4 shRNA (h) Lentiviral Particles: sc-35909-V and MEK-4 shRNA (m) Lentiviral Particles: sc-35910-V.

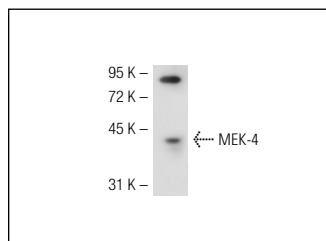
Molecular Weight of MEK-4: 45 kDa.

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

STORAGE

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

DATA



MEK-4 (H-98): sc-13070. Western blot analysis of MEK-4 expression in NIH/3T3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Girardin, S.E. and Yaniv, M. 2001. A direct interaction between JNK1 and Crk II is critical for Rac1-induced JNK activation. *EMBO J.* 20: 3437-3446.
2. Yamada, S.D., et al. 2002. Mitogen-activated protein kinase kinase 4 (MKK4) acts as a metastasis suppressor gene in human ovarian carcinoma. *Cancer Res.* 62: 6717-6723.
3. Reiley, W., et al. 2004. Negative regulation of JNK signaling by the tumor suppressor CYLD. *J. Biol. Chem.* 53: 55161-55167.
4. Spillman, M.A., et al. 2007. Regulation of the metastasis suppressor gene MKK4 in ovarian cancer. *Gynecol. Oncol.* 105: 312-320.

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.

MONOS
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Try **MEK-4 (G-7): sc-376838** or **MEK-4 (G-6): sc-166168**, our highly recommended monoclonal alternatives to MEK-4 (H-98).