

MEK-5 (C-20): sc-1287

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. Derijard, 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: MAP2K5 (human) mapping to 15q23.

SOURCE

MEK-5 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MEK-5 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-1287 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MEK-5 (C-20) is recommended for detection of MEK-5 of 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).

Suitable for use as control antibody for MEK-5 siRNA (h): sc-35911, MEK-5 shRNA Plasmid (h): sc-35911-SH and MEK-5 shRNA (h) Lentiviral Particles: sc-35911-V.

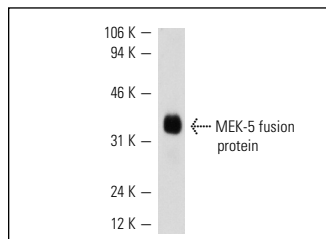
Molecular Weight of MEK-5: 54 kDa.

Positive Controls: HeLa + serum-starved cell lysate: sc-24693, Jurkat whole cell lysate: sc-2204 or A-673 cell lysate: sc-2414.

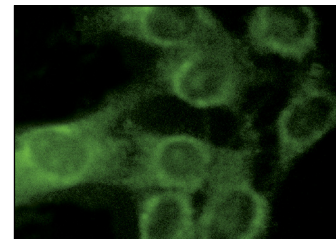
STORAGE

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

DATA



MEK-5 (C-20): sc-1287. Western blot analysis of human recombinant MEK-5 fusion protein.



MEK-5 (C-20): sc-1287. Immunofluorescence staining of methanol-fixed Sol8 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Vitale, G., et al. 2000. Susceptibility of mitogen-activated protein kinase kinase family members to proteolysis by anthrax lethal factor. *Biochem. J.* 352: 739-745.
2. Raviv, Z., et al. 2004. MEK-5 and ERK 5 are localized in the nuclei of resting as well as stimulated cells, while MEKK2 translocates from the cytosol to the nucleus upon stimulation. *J. Cell Sci.* 117: 1773-1784.
3. Pearson, G.W., et al. 2006. Cyclic AMP selectively uncouples mitogen-activated protein kinase cascades from activating signals. *Mol. Cell. Biol.* 26: 3039-3047.
4. Nakamura, K., et al. 2010. Activity assays for extracellular signal-regulated kinase 5. *Methods Mol. Biol.* 661: 91-106.

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-5 (E-3): sc-365198** or **MEK-5 (21): sc-135986**, our highly recommended monoclonal alternatives to MEK-5 (C-20).