

MEK-2 (C-16): sc-525

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 ERK 5, 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.

CHROMOSOMAL LOCATION

Genetic locus: MAP2K2 (human) mapping to 19p13.3; Map2k2 (mouse) mapping to 10 C1.

SOURCE

MEK-2 (C-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of MEK-2 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-525 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MEK-2 (C-16) is recommended for detection of MEK-2 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-2 (C-16) is also recommended for detection of MEK-2 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for MEK-2 siRNA (h): sc-35905, MEK-2 siRNA (m): sc-35906, MEK-2 shRNA Plasmid (h): sc-35905-SH, MEK-2 shRNA Plasmid (m): sc-35906-SH, MEK-2 shRNA (h) Lentiviral Particles: sc-35905-V and MEK-2 shRNA (m) Lentiviral Particles: sc-35906-V.

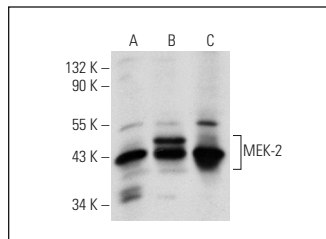
Molecular Weight of MEK-2: 47 kDa.

Positive Controls: MEK-2 (h3): 293T Lysate: sc-158719, Jurkat whole cell lysate: sc-2204 or A-431 whole cell lysate: sc-2201.

STORAGE

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

DATA



MEK-2 (C-16): sc-525. Western blot analysis of MEK-2 expression in non-transfected 293T: sc-117752 (A), human MEK-2 transfected 293T: sc-158719 (B) and Jurkat (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Altiock, S., et al. 1997. PPAR γ induces cell cycle withdrawal: inhibition of E2F/DP DNA-binding activity via down-regulation of PP2A. *Genes Dev.* 11: 1987-1998.
2. Liang, X., et al. 2004. Involvement of domain II in toxicity of anthrax lethal factor. *J. Biol. Chem.* 279: 52473-52478.
3. Cha, H., et al. 2004. Phosphorylation regulates nucleophosmin targeting to the centrosome during mitosis as detected by cross-reactive phosphorylation-specific MKK1/MKK2 antibodies. *Biochem. J.* 378: 857-865.
4. Cha, H., et al. 2006. Inhibition of mixed-lineage kinase (MLK) activity during G₂-phase disrupts microtubule formation and mitotic progression in HeLa cells. *Cell. Signal.* 18: 93-104.
5. Kocer, S.S., et al. 2008. Effects of anthrax lethal toxin on human primary keratinocytes. *J. Appl. Microbiol.* 105: 1756-1767.
6. Lehmann, M., et al. 2009. Lung epithelial injury by *B. anthracis* lethal toxin is caused by MKK-dependent loss of cytoskeletal integrity. *PLoS ONE* 4: e4755.
7. Ramis, G., et al. 2012. EGFR inhibition in glioma cells modulates Rho signaling to inhibit cell motility and invasion and cooperates with temozolomide to reduce cell growth. *PLoS ONE* 7: e38770.

RESEARCH USE

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



Try **MEK-2 (A-1): sc-13159** or **MEK-2 (96): sc-136261**, our highly recommended monoclonal alternatives to MEK-2 (C-16). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **MEK-2 (A-1): sc-13159**.