SANTA CRUZ BIOTECHNOLOGY, INC.

MEK-6 (N-19): sc-1992

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 Mkk4) 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 Mkk7) 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: MAP2K6 (human) mapping to 17q24.3; Map2k6 (mouse) mapping to 11 E2.

SOURCE

MEK-6 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of MEK-6 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-1992 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MEK-6 (N-19) is recommended for detection of MEK-6 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-6 (N-19) is also recommended for detection of MEK-6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MEK-6 siRNA (h): sc-35913, MEK-6 siRNA (m): sc-35914, MEK-6 shRNA Plasmid (h): sc-35913-SH, MEK-6 shRNA Plasmid (m): sc-35914-SH, MEK-6 shRNA (h) Lentiviral Particles: sc-35913-V and MEK-6 shRNA (m) Lentiviral Particles: sc-35914-V.

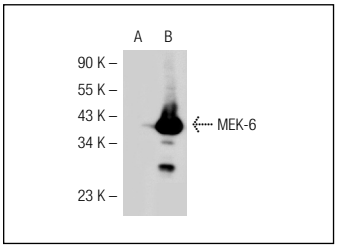
Molecular Weight of MEK-6: 37 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, HeLa whole cell lysate: sc-2200 or MEK-6 (h): 293T Lysate: sc-113820.

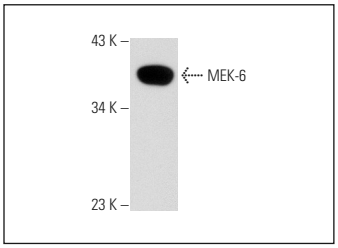
STORAGE

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

DATA



MEK-6 (N-19): sc-1992. Western blot analysis of MEK-6 expression in non-transfected: sc-117752 (**A**) and human MEK-6 transfected: sc-113820 (**B**) 293T whole cell lysate.



MEK-6 (N-19): sc-1992. Western blot analysis of MEK-6 expression in COLO 320DM whole cell lysate.

SELECT PRODUCT CITATIONS

1. Wang, D. and Richmond, A. 2001. Nuclear factor-κB activation by the CXC chemokine melnaoma growth-stimulatory activity/growth-regulated protein involves the MEKK1/p38 mitogen-activated protein kinase pathway. J. Biol. Chem. 276: 3650-3659.
2. Chen, Z., et al. 2001. Regulation of stress-responsive mitogen-activated protein (MAP) kinase pathways by TAO2. J. Biol. Chem. 276: 16070-16075.
3. Chabaud-Riou, M., et al. 2004. Expression and activation of mitogen-activated protein kinase kinases-3 and -6 in rheumatoid arthritis. Am. J. Pathol. 164: 177-184.
4. Robidoux, J., et al. 2005. Selective activation of mitogen-activated protein (MAP) kinase kinase 3 and p38a MAP kinase is essential for cyclic AMP-dependent UCP1 expression in adipocytes. Mol. Cell. Biol. 25: 5466-5479.
5. Wu, Y., et al. 2006. Human glutathione S-transferase P1-1 interacts with TRAF2 and regulates TRAF2-ASK 1 signals. Oncogene 25: 5787-5800.
6. Demidov, O.N., et al. 2007. The role of the MKK6/p38 MAPK pathway in Wip1-dependent regulation of ErbB2-driven mammary gland tumorigenesis. Oncogene 26: 2502-2506.
7. Xu, L., et al. 2008. Anthrax lethal toxin increases superoxide production in murine neutrophils via differential effects on MAPK signaling pathways. J. Immunol. 180: 4139-4147.

RESEARCH USE

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