

# MEK-7 (H-160): sc-13071

## 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: MAP2K7 (human) mapping to 19p13.2; Map2k7 (mouse) mapping to 8 A1.1.

## SOURCE

MEK-7 (H-160) is a rabbit polyclonal antibody raised against amino acids 1-176 mapping at the N-terminus of MEK-7 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-7 (H-160) is recommended for detection of MEK-7 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-7 (H-160) is also recommended for detection of MEK-7 in additional species, including canine and porcine.

Suitable for use as control antibody for MEK-7 siRNA (h): sc-35915, MEK-7 siRNA (m): sc-35916, MEK-7 shRNA Plasmid (h): sc-35915-SH, MEK-7 shRNA Plasmid (m): sc-35916-SH, MEK-7 shRNA (h) Lentiviral Particles: sc-35915-V and MEK-7 shRNA (m) Lentiviral Particles: sc-35916-V.

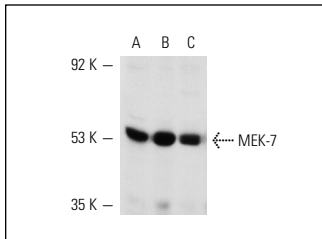
Molecular Weight of MEK-7: 47 kDa.

Positive Controls: MEK-7 (h2): 293T Lysate: sc-176089, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

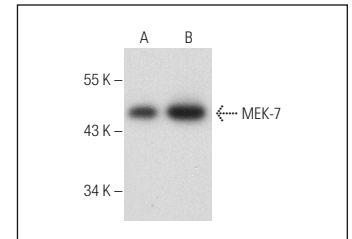
## STORAGE

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

## DATA



MEK-7 (H-160): sc-13071. Western blot analysis of MEK-7 expression in A-431 (A), HeLa (B) and NIH/3T3 (C) whole cell lysates.



MEK-7 (H-160): sc-13071. Western blot analysis of MEK-7 expression in non-transfected: sc-117752 (A) and human MEK-7 transfected: sc-176089 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Hamza, M.S. 2004. ORF36 protein kinase of Kaposi's sarcoma herpesvirus activates the c-Jun N-terminal kinase signaling pathway. *J. Biol. Chem.* 279: 38325-38330.
2. Zhang, Q.X., et al. 2007. Crosstalk between PSD-95 and JIP-1-mediated signaling modules: the mechanism of MLK3 activation in cerebral ischemia. *Biochemistry* 46: 4006-4016.
3. Hong, H.Y. and Kim, B.C. 2007. Mixed lineage kinase 3 connects reactive oxygen species to c-Jun NH<sub>2</sub>-terminal kinase-induced mitochondrial apoptosis in genipin-treated PC3 human prostate cancer cells. *Biochem. Biophys. Res. Commun.* 362: 307-312.
4. Papa, S., et al. 2008. GADD 45β promotes hepatocyte survival during liver regeneration in mice by modulating JNK signaling. *J. Clin. Invest.* 118: 1911-1923.
5. 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.
6. Koçer, S.S., et al. 2008. Effects of anthrax lethal toxin on human primary keratinocytes. *J. Appl. Microbiol.* 105: 1756-1767.

## RESEARCH USE

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

**MONOS**  
Satisfaction  
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Try **MEK-7 (E-7): sc-25288** or **MEK-7 (40): sc-136337**, our highly recommended monoclonal alternatives to MEK-7 (H-160).