

MEK-3 (h2): 293T Lysate: sc-176353

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 p38 β . 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. Dérjard, B., et al. 1995. Independent human MAP-kinase signal transduction pathways defined by MEK and MKK isoforms. *Science* 267: 682-685.
4. Zhou, G., et al. 1995. Components of a new human protein kinase signal transduction pathway. *J. Biol. Chem.* 270: 12665-12669.
5. Han, J., et al. 1996. Characterization of the structure and function of a novel MAP kinase kinase (MKK6). *J. Biol. Chem.* 271: 2886-2891.
6. Jiang, Y., et al. 1996. Characterization of the structure and function of a new mitogen-activated protein kinase (p38 β). *J. Biol. Chem.* 271: 17920-17926.
7. Tournier, C., et al. 1997. Mitogen-activated protein kinase kinase 7 is an activator of the c-Jun NH₂-terminal kinase. *Proc. Natl. Acad. Sci. USA* 94: 7337-7442.
8. Holland, P.M., et al. 1997. MKK7 is a stress-activated mitogen-activated protein kinase kinase functionally related to hemipterous. *J. Biol. Chem.* 272: 24994-24998.
9. Wu, Z., et al. 1997. Molecular cloning and characterization of human JNKK2, a novel Jun NH₂-terminal kinase-specific kinase. *Mol. Cell. Biol.* 17: 7407-7416.

CHROMOSOMAL LOCATION

Genetic locus: MAP2K3 (human) mapping to 17q11.2.

PRODUCT

MEK-3 (h2): 293T Lysate represents a lysate of human MEK-3 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

MEK-3 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive MEK-3 antibodies.

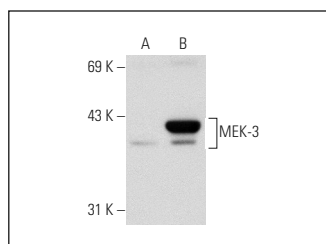
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

MEK-3/6 (B-1): sc-136982 is recommended as a positive control antibody for Western Blot analysis of enhanced human MEK-3 expression in MEK-3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

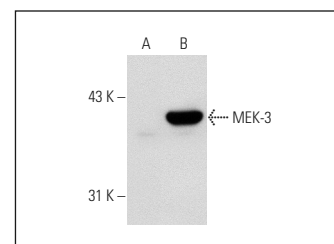
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



MEK-3/6 (B-1): sc-136982. Western blot analysis of MEK-3 expression in non-transfected: sc-117752 (A) and human MEK-3 transfected: sc-176353 (B) 293T whole cell lysates.



MEK-3 (5F7): sc-81474. Western blot analysis of MEK-3 expression in non-transfected: sc-117752 (A) and human MEK-3 transfected: sc-176353 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.