

MEK-7 (h2): 293T Lysate: sc-176089

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., Alessandrini, A. and Erikson, R.L. 1992. The primary structure of MEK, a protein kinase that phosphorylates the ERK gene product. *Science* 258: 478-480.
2. Wu, J., Harrison, J.K., Dent, P., Lynch, K.R., Weber, M.J. and Sturgill, T.W. 1993. Identification and characterization of a new mammalian mitogen-activated protein kinase kinase, MKK-2. *Mol. Cell. Biol.* 13: 4539-4548.
3. Derijard, B., Raingeaud, J., Barrett, T., Wu, I.H., Han, J., Ulevitch, R.J. and Davis, R.J. 1995. Independent human MAP-kinase signal transduction pathways defined by MEK and MKK isoforms. *Science* 267: 682-685.
4. Zhou, G., Bao, Z.Q. and Dixon, J.E. 1995. Components of a new human protein kinase signal transduction pathway. *J. Biol. Chem.* 270: 12665-12669.
5. Han, J., Lee, J.D., Jiang, Y., Li, Z., Feng, L. and Ulevitch, R.J. 1996. Characterization of the structure and function of a novel MAP kinase kinase (MKK-6). *J. Biol. Chem.* 271: 2886-2891.
6. Jiang, Y., Chen, C., Li, Z., Guo, W., Gegner, J.A., Lin, S. and Han, J. 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., Whitmarsh, A.J., Cavanagh, J., Barrett, T. and Davis, R.J. 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.

CHROMOSOMAL LOCATION

Genetic locus: MAP2K7 (human) mapping to 19p13.2

PRODUCT

MEK-7 (h2): 293T Lysate represents a lysate of human MEK-7 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.

PROTOCOLS

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

APPLICATIONS

MEK-7 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive MEK-7 antibodies. Recommended use: 10-20 μ l per lane.

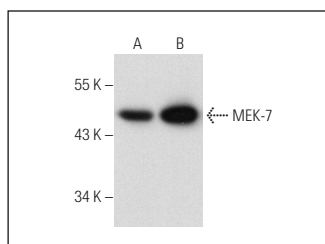
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

MEK-7 (E-7): sc-25288. is recommended as a positive control antibody for Western Blot analysis of enhanced human MEK-7 expression in MEK-7 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-7 (E-7): sc-25288. 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.

RESEARCH USE

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