

MLK3 (m): 293T Lysate: sc-121686

BACKGROUND

As a result of the binding of growth factors to their membrane receptors, cytoplasmic proteins containing Src homology 2 (SH2) domains associate with specific phosphotyrosine residues within the activated receptors and function as signaling intermediates. The action of such SH2 domain proteins frequently involves the activation of a second group of signaling intermediates characterized by SH3 domains. These latter proteins function through binding proline-rich sequences in target proteins. A novel human non-receptor protein kinase, designated either MLK3 or PTK1, is 847 amino acids in length and contains an SH3 domain in the absence of an SH2 domain. In addition, MLK3 is characterized by a leucine zipper basic region (a motif commonly associated with transcription factors) and has a long carboxy-terminal tail which exhibits proline-rich motifs similar to known SH3 binding sites. MLK3 is expressed widely and is related to the previously described MLK1 and MLK2 kinases.

REFERENCES

- Schlessinger, J., et al. 1992. Growth factor signaling by receptor tyrosine kinases. *Neuron* 9: 383-391.
- Mayer, B., et al. 1993. Trends Cell Biol. 3: 8-13.
- Pawson, T., et al. 1993. Proteins with SH2 and SH3 domains couple receptor tyrosine kinases to intracellular signalling pathways. *Philos. Trans. R. Soc. Lond., B, Biol. Sci.* 340: 279-285.
- Dorow, D.S., et al. 1993. Identification of a new family of human epithelial protein kinases containing two leucine/isoleucine-zipper domains. *Eur. J. Biochem.* 213: 701-710.
- Ezoe, K., et al. 1994. PTK1, a novel protein kinase required for proliferation of human melanocytes. *Oncogene* 9: 935-938.
- Ing, Y.L., et al. 1994. MLK-3: identification of a widely-expressed protein kinase bearing an SH3 domain and a leucine zipper-basic region domain. *Oncogene* 9: 1745-1750.

CHROMOSOMAL LOCATION

Genetic locus: Map3k11 (mouse) mapping to 19 A.

PRODUCT

MLK3 (m): 293T Lysate represents a lysate of mouse MLK3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

MLK3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive MLK3 antibodies. Recommended use: 10-20 µl per lane.

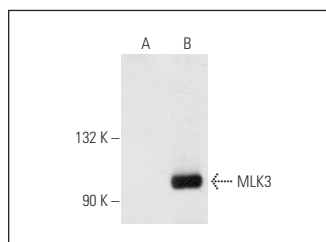
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

MLK3 (B-12): sc-166873 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse MLK3 expression in MLK3 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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



MLK3 (B-12): sc-166873. Western blot analysis of MLK3 expression in non-transfected: sc-117752 (A) and mouse MLK3 transfected: sc-121686 (B) 293T whole cell lysates.

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.

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.