

MKP-1 (m): 293T Lysate: sc-121680

BACKGROUND

A key element in the pathway involved in the transduction of signals from activated protein-tyrosine kinase transmembrane receptors has been identified as the family of mitogen-activated protein kinases (MAP kinases). The most well known of these Ser/Thr kinases are ERK 1 and ERK 2. Mitogenic stimulation of cells triggers the activation of MAP kinases through phosphorylation of both tyrosyl (Y185) and threonyl (T183) residues. Phosphorylation of the T183 and Y185 ERK regulatory site is mediated by MAP kinase (MEK), which in turn is regulated by the proto-oncogene product Raf. Two highly related phosphatases, designated MKP-1 and MKP-2, exhibit 59% sequence identity at the amino acid level and oppose the action of MEK by downregulating the kinase activity of ERK 1 and ERK 2. MAP kinase phosphatase-1 and -2 proteins function by dephosphorylating ERK 1 and ERK 2 at their T-E-Y regulatory motif. An additional phosphatase encoded by the DUSP2 gene, designated PAC-1, also functions to downregulate ERK 1 and ERK 2 kinase activity. PAC-1 is a nuclear protein whose expression is strongly induced in response to mitogen.

REFERENCES

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3. Ahn, N.G., Seger, R. and Krebs, E.G. 1992. The mitogen-activated protein kinase activator. *Curr. Opin. Cell Biol.* 4: 992-999.
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8. Yi, H., Morton, C.C., Weremowicz, S., McBride, O.W. and Kelly, K. 1995. Genomic organization and chromosomal localization of the DUSP2 gene, encoding a MAP kinase phosphatase, to human 2p11.2-q11. *Genomics* 28: 92-96.

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.

CHROMOSOMAL LOCATION

Genetic locus: Dusp1 (mouse) mapping to 17 A3.3.

PRODUCT

MKP-1 (m): 293T Lysate represents a lysate of mouse MKP-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

MKP-1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive MKP-1 antibodies. Recommended use: 10-20 µl per lane.

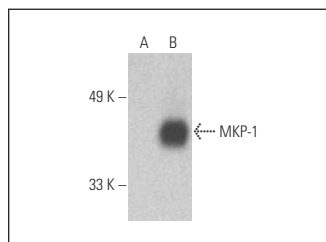
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

MKP-1 (E-6): sc-373841 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse MKP-1 expression in MKP-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

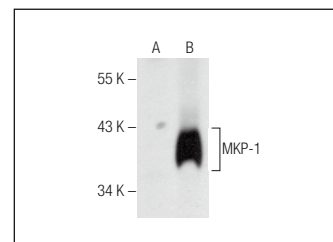
RECOMMENDED SUPPORT REAGENTS

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



MKP-1 (E-6): sc-373841. Western blot analysis of MKP-1 expression in non-transfected: sc-117752 (A) and mouse MKP-1 transfected: sc-121680 (B) 293T whole cell lysates.



MKP-1 (E-6): sc-373841. Western blot analysis of MKP-1 expression in non-transfected: sc-117752 (A) and mouse MKP-1 transfected: sc-121680 (B) 293T whole cell lysates.

RESEARCH USE

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