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# MKP-6 (m): 293T Lysate: sc-125622

## BACKGROUND

The deduced 198 amino acid MAP kinase phosphatase 6 (MKP-6), also designated MAP6 and dual-specificity phosphatase 14 (DUSP14), is homologous to other MKP family proteins in that it has a conserved, centrally located, catalytic core, but differs from traditional MKP proteins because it contains unique N- and C-terminal regions. Binding and deletion analyses have established that the interaction between the cytoplasmic tail of CD28 (a T cell antigen) and MKP-6 occurs at Tyr 200 of CD28 and is specific for both MKP-6 and CD28; however, Tyr 200 can be mutated to Phe 200 without a loss of binding ability. Functional analysis indicates that MKP-6 dephosphorylates ERK, JNK and p38 while acting as a negative regulator of CD28 signaling. MKP-6 is expressed ubiquitously, although expression is stronger in certain cell types and tissues than in others.

## REFERENCES

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2. Marti, F., Krause, A., Post, N.H., Lyddane, C., Dupont, B., Sadelain, M. and King, P.D. 2001. Negative-feedback regulation of CD28 costimulation by a novel mitogen-activated protein kinase phosphatase, MKP-6. *J. Immunol.* 166: 197-206.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606618. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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5. Nakano, Y. 2007. Novel function of DUSP14/MKP-6 (dual specific phosphatase 14) as a nonspecific regulatory molecule for delayed-type hypersensitivity. *Br. J. Dermatol.* 156: 848-860.
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7. Elass, E., Coddeville, B., Kremer, L., Mortuaire, M., Mazurier, J. and Guérardel, Y. 2008. Mycobacterial lipomannan induces MAP kinase phosphatase-1 expression in macrophages. *FEBS Lett.* 582: 445-450.

## 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](http://www.scbt.com) for detailed protocols and support products.

## CHROMOSOMAL LOCATION

Genetic locus: Dusp14 (mouse) mapping to 11 C.

## PRODUCT

MKP-6 (m): 293T Lysate represents a lysate of mouse MKP-6 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

MKP-6 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive MKP-6 antibodies. Recommended use: 10-20  $\mu$ l per lane.

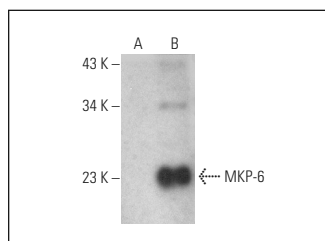
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

MKP-6 (4B5-E6): sc-517023 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse MKP-6 expression in MKP-6 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-6 (4B5-E6): sc-517023. Western blot analysis of MKP-6 expression in non-transfected: sc-117752 (A) and mouse MKP-6 transfected: sc-125622 (B) whole cell lysates.

## RESEARCH USE

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