

MAP-2 (m): 293T Lysate: sc-121505

BACKGROUND

Microtubules, the primary component of the cytoskeletal network, interact with proteins called microtubule-associated proteins (MAPs). The microtubule-associated proteins can be divided into two groups, structural and dynamic. The structural microtubule-associated proteins, MAP-1A, MAP-1B, MAP-2A, MAP-2B and MAP-2C, stimulate tubulin assembly, enhance microtubule stability and influence the spatial distribution of microtubules within cells. Both MAP-1 and, to a greater extent, MAP-2 have been implicated as agents of microtubule depolymerization by suppressing the dynamic instability of the microtubules. The suppression of microtubule dynamic instability by the MAP proteins is thought to be associated with phosphorylation of the MAPs.

REFERENCES

1. Sloboda, R.D., et al. 1976. Microtubule-associated proteins and the stimulation of tubulin assembly *in vitro*. *Biochemistry* 15: 4497-4505.
2. Murphy, D.B., et al. 1977. Role of tubulin-associated proteins in microtubule nucleation and elongation. *J. Mol. Biol.* 117: 33-52.
3. Hasegawa, M., et al. 1990. Immunohistochemical evidence that fragments of phosphorylated MAP5 (MAP1B) are bound to neurofibrillary tangles in Alzheimer's disease. *Neuron* 4: 909-918.
4. MacRae, T.H. 1992. Towards an understanding of microtubule function and cell organization: an overview. *Biochem. Cell Biol.* 70: 835-841.
5. Davis, R.J. 1993. The mitogen-activated protein kinase signal transduction pathway. *J. Biol. Chem.* 268: 14553-14556.
6. Maccioni, R.B. and Cambiazo, V. 1995. Role of microtubule-associated proteins in the control of microtubule assembly. *Physiol. Rev.* 75: 835-864.
7. Dhamodharan, R. and Wadsworth, P. 1995. Modulation of microtubule dynamic instability *in vivo* by brain microtubule associated proteins. *J. Cell Sci.* 108: 1679-1689.
8. Vandecastelaere, A., et al. 1996. Differences in the regulation of microtubule dynamics by microtubule-associated proteins MAP-1B and MAP-2. *Cell. Motil. Cytoskeleton* 35: 134-146.

CHROMOSOMAL LOCATION

Genetic locus: Mtap2 (mouse) mapping to 1 C3.

PRODUCT

MAP-2 (m): 293T Lysate represents a lysate of mouse MAP-2 transfected 293T cells and is provided as 100 µg protein in 200 µl 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

MAP-2 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive MAP-2 antibodies. Recommended use: 10-20 µl per lane.

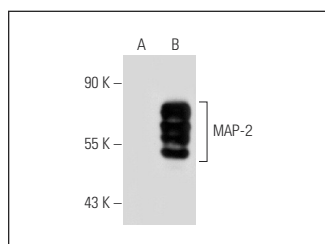
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

MAP-2 (A-4): sc-74421 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse MAP-2 expression in MAP-2 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



MAP-2 (A-4): sc-74421. Western blot analysis of MAP-2 expression in non-transfected: sc-117752 (A) and mouse MAP-2 transfected: sc-121505 (B) 293T whole cell lysates.

RESEARCH USE

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