SANTA CRUZ BIOTECHNOLOGY, INC.

MAP-2 (I-18): sc-5357

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Microtubules, the primary component of the 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, -1B and -2 function to 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. Immunochemical 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., et al. 1995. Role of microtubule-associated proteins in the control of microtubule assembly. Physiol. Rev. 75: 835-864.

CHROMOSOMAL LOCATION

Genetic locus: MAP2 (human) mapping to 2q34; Map2 (mouse) mapping to 1 C3.

SOURCE

MAP-2 (I-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MAP-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-5357 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

MAP-2 (I-18) is recommended for detection of MAP-2A, MAP-2B and MAP-2C of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MAP-2 (I-18) is also recommended for detection of MAP-2A, MAP-2B and MAP2C in additional species, including equine, canine, bovine, porcine and avian.

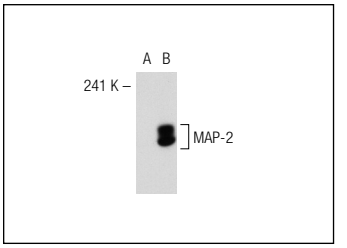
Suitable for use as control antibody for MAP-2 siRNA (h): sc-35853, MAP-2 siRNA (m): sc-35854, MAP-2 shRNA Plasmid (h): sc-35853-SH, MAP-2 shRNA Plasmid (m): sc-35854-SH, MAP-2 shRNA (h) Lentiviral Particles: sc-35853-V and MAP-2 shRNA (m) Lentiviral Particles: sc-35854-V.

Molecular Weight of MAP-2: 280 kDa.

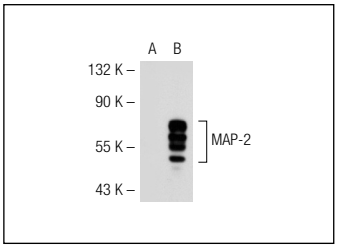
Molecular Weight of MAP-2 low molecular weight isoform: 70 kDa.

Positive Controls: MAP-2 (h): 293T Lysate: sc-115536, MAP-2 (m): 293T Lysate: sc-121505 or IMR-32 cell lysate: sc-2409.

DATA



MAP-2 (I-18): sc-5357. Western blot analysis of MAP-2 expression in non-transfected: sc-117752 (**A**) and human MAP-2 transfected: sc-115536 (**B**) 293T whole cell lysates.



MAP-2 (I-18): sc-5357. 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.

SELECT PRODUCT CITATIONS

1. Bao, J., et al. 2003. Back signaling by the Nrg1 intracellular domain. J. Cell Biol. 161: 1133-1141.
2. Johnson, E.M., et al. 2006. Role of Purα in targeting mRNA to sites of translation in hippocampal neuronal dendrites. J. Neurosci. Res. 83: 929-943.

RESEARCH USE

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