SANTA CRUZ BIOTECHNOLOGY, INC.

MAP-1B (N-19): sc-8970

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.

CHROMOSOMAL LOCATION

Genetic locus: MAP1B (human) mapping to 5q13.2; Mtap1b (mouse) mapping to 13 D1.

SOURCE

MAP-1B (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of MAP-1B 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-8970 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MAP-1B (N-19) is recommended for detection of MAP-1B 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-1B (N-19) is also recommended for detection of MAP-1B in additional species, including bovine and porcine.

Suitable for use as control antibody for MAP-1B siRNA (h): sc-35851, MAP-1B siRNA (m): sc-35852, MAP-1B shRNA Plasmid (h): sc-35851-SH, MAP-1B shRNA Plasmid (m): sc-35852-SH, MAP-1B shRNA (h) Lentiviral Particles: sc-35851-V and MAP-1B shRNA (m) Lentiviral Particles: sc-35852-V.

Molecular Weight (predicted) of MAP-1B heavy chain: 271 kDa.

Molecular Weight (observed) of MAP-1B heavy chain: 325 kDa.

Molecular Weight of MAP-1B light chain: 34 kDa.

Positive Controls: PC-12 cell lysate: sc-2250.

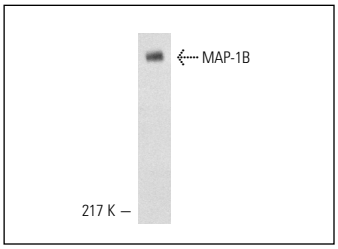
STORAGE

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

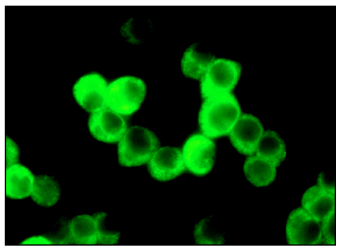
RESEARCH USE

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

DATA



MAP-1B (N-19): sc-8970. Western blot analysis of MAP-1B expression in PC-12 whole cell lysate.



MAP-1B (N-19): sc-8970. Immunofluorescence staining of methanol-fixed PC-12 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Shin, D.H., et al. 2003. The correspondence between the labeling patterns of antibody RT97, neurofilaments, microtubule associated protein 1B and tau varies with cell types and development stages of chicken retina. Neurosci. Lett. 342: 167-170.
2. Utreras, E., et al. 2008. Microtubule-associated protein 1B interaction with tubulin tyrosine ligase contributes to the control of microtubule tyrosination. Dev. Neurosci. 30: 200-210.
3. Silva, E.J., et al. 2010. Glucocorticoid receptor in the rat epididymis: expression, cellular distribution and regulation by steroid hormones. Mol. Cell. Endocrinol. 325: 64-77.
4. Montenegro-Venegas, C., et al. 2010. MAP1B regulates axonal development by modulating Rho-GTPase Rac1 activity. Mol. Biol. Cell 21: 3518-3528.
5. Tortosa, E., et al. 2011. Microtubule-associated protein 1B (MAP1B) is required for dendritic spine development and synaptic maturation. J. Biol. Chem. 286: 40638-40648.
6. Dajas-Bailador, F., et al. 2012. microRNA-9 regulates axon extension and branching by targeting Map1b in mouse cortical neurons. Nat. Neurosci. E-published.

PROTOCOLS

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