SANTA CRUZ BIOTECHNOLOGY, INC.

MAP-1B (AA6): sc-58784

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Immunochemical evidence that fragments of phosphorylated MAP5 (MAP-1B) are bound to neurofibrillary tangles in Alzheimer's disease. Neuron 4: 909-918.

CHROMOSOMAL LOCATION

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

SOURCE

MAP-1B (AA6) is a mouse monoclonal antibody raised against brain microtubule associated proteins of rat origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MAP-1B (AA6) is recommended for detection of MAP-1B of mouse, rat, human, bovine and feline origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with tubulin of other microtubule associated proteins.

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.

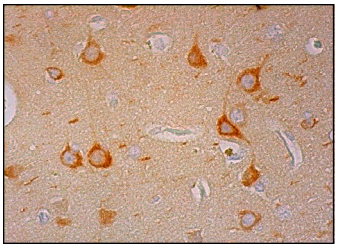
Molecular Weight of MAP-1B light chain: 34 kDa.

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

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. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 3) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



MAP-1B (AA6): sc-58784. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells.

SELECT PRODUCT CITATIONS

1. Westmark, C.J., et al. 2011. Reversal of fragile X phenotypes by manipulation of AβPP/Aβ levels in Fmr1KO mice. PLoS ONE 6: e26549.
2. Treiber, C.D., et al. 2012. Clusters of iron-rich cells in the upper beak of pigeons are macrophages not magnetosensitive neurons. Nature 484: 367-370.
3. Graber, T.E., et al. 2017. UPF1 governs synaptic plasticity through association with a STAU2 RNA granule. J. Neurosci. 37: 9116-9131.
4. Kempf, A., et al. 2017. Control of cell shape, neurite outgrowth, and migration by a Nogo-A/HSPG interaction. Dev. Cell 43: 24-34.e5.

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.

PROTOCOLS

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