SANTA CRUZ BIOTECHNOLOGY, INC.

MAP-2 (D-19): sc-5359

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: MAP2 (human) mapping to 2q34; Mtap2 (mouse) mapping to 1 C3.

SOURCE

MAP-2 (D-19) 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-5359 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.

APPLICATIONS

MAP-2 (D-19) is recommended for detection of MAP-2A, MAP-2B, MAP-2C and MAP-2D 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 (D-19) is also recommended for detection of MAP-2A, MAP-2B, MAP-2C and MAP2-D in additional species, including equine, canine, bovine and porcine.

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.

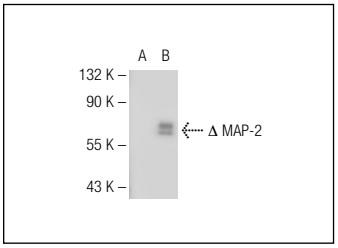
Molecular Weight of MAP-2 low molecular weight isoform: 70 kDa.

Positive Controls: MAP-2 (m): 293T Lysate: sc-121505, IMR-32 cell lysate: sc-2409 or SK-N-SH cell lysate: sc-2410.

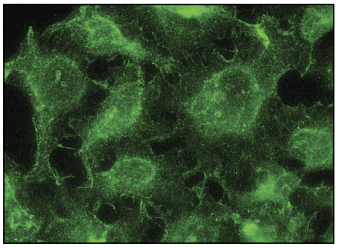
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



MAP-2 (D-19): sc-5359. Western blot analysis of MAP-2 expression in non-transfected: sc-117752 (**A**) and truncated mouse MAP-2 transfected: sc-121505 (**B**) 293T whole cell lysates.



MAP-2 (D-19): sc-5359. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization.

SELECT PRODUCT CITATIONS

1. Sakuma, K., et al. 2002. The reciprocal change of neurotrophin-4 and glial cell line-derived neurotrophic factor protein in the muscles, spinal cord and cerebellum of the dy mouse. Acta Neuropathol. 104: 482-492.
2. Raemaekers, T., et al. 2003. NuSAP, a novel microtubule-associated protein involved in mitotic spindle organization. J. Cell Biol. 162: 1017-1029.
3. Rydziel, S., et al. 2004. AU-rich elements in the Collagenase 3 mRNA mediate stabilization of the transcript by Cortisol in osteoblasts. J. Biol. Chem. 279: 5397-5404.
4. Kim, B.O., et al. 2004. Induction of C chemokine XCL1 (lymphotactin/single C motif-1α/activation-induced, T cell-derived and chemokine-related cytokine) expression by HIV-1 Tat protein. J. Immunol. 172: 1888-1895.
5. Yu, X., et al. 2005. DNA damage induces cdk2 protein levels and histone H2B phosphorylation in SH-SY5Y neuroblastoma cells. J. Alzheimers Dis. 8: 7-21.
6. Desfeux, A., et al. 2010. Dual effect of glutamate on GABAergic interneuron survival during cerebral cortex development in mice neonates. Cereb. Cortex 20: 1092-1108.
7. Wang, Y., et al. 2012. Mifepristone-inducible caspase-1 expression in mouse embryonic stem cells eliminates tumor formation but spares differentiated cells *in vitro* and *in vivo*. Stem Cells 30: 169-179.

RESEARCH USE

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