SANTA CRUZ BIOTECHNOLOGY, INC.

MAP-9 (D-18): sc-164961

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 MAP proteins function to stimulate tubulin assembly, enhance microtubule stability, influence the spatial distribution of microtubules within cells and utilize microtubule polarity to translocate cellular components. MAP-9 (microtubule-associated protein 9), also known as ASAP, is a 647 amino acid cytoplasmic protein that is constitutively expressed during the cell cycle. MAP-9 localizes to microtubules in interphase, associates with the mitotic spindle during mitosis and localizes to the central body during cytokinesis. Involved in organization of the bipolar mitotic spindle, MAP-9 is required for bipolar spindle assembly, mitosis progression and cytokinesis. MAP-9 may be involved in stabilizing interphase microtubules. Two isoforms of MAP-9 are produced due to alternative splicing events.

REFERENCES

1. Sloboda, R.D., et al. 1975. Cyclic AMP-dependent endogenous phosphorylation of a microtubule-associated protein. Proc. Natl. Acad. Sci. USA 72: 177-181.
2. Bloom, G.S. and Vallee, R.B. 1983. Association of microtubule-associated protein 2 (MAP-2) with microtubules and intermediate filaments in cultured brain cells. J. Cell Biol. 96: 1523-1531.
3. Krstenansky, J.L., et al. 1989. Short model peptides having a high α-helical tendency: design and solution properties. FEBS Lett. 242: 409-413.
4. West, R.R., et al. 1991. A model for microtubule-associated protein 4 structure. Domains defined by comparisons of human, mouse, and bovine sequences. J. Biol. Chem. 266: 21886-21896.
5. Saffin, J.M., et al. 2005. ASAP, a human microtubule-associated protein required for bipolar spindle assembly and cytokinesis. Proc. Natl. Acad. Sci. USA 102: 11302-11307.

CHROMOSOMAL LOCATION

Genetic locus: MAP9 (human) mapping to 4q32.1; Mtap9 (mouse) mapping to 3 E3.

SOURCE

MAP-9 (D-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MAP-9 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-164961 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-9 (D-18) is recommended for detection of MAP-9 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); non cross-reactive with other MAP family members.

MAP-9 (D-18) is also recommended for detection of MAP-9 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MAP-9 siRNA (h): sc-89229, MAP-9 siRNA (m): sc-149255, MAP-9 shRNA Plasmid (h): sc-89229-SH, MAP-9 shRNA Plasmid (m): sc-149255-SH, MAP-9 shRNA (h) Lentiviral Particles: sc-89229-V and MAP-9 shRNA (m) Lentiviral Particles: sc-149255-V.

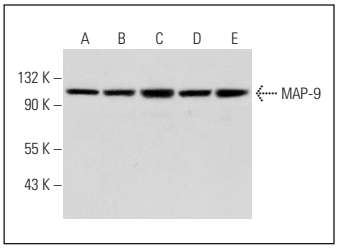
Molecular Weight of MAP-9: 110 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

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-9 (D-18): sc-164961. Western blot analysis of MAP-9 expression in HUV-EC-C (**A**), HeLa (**B**), Jurkat (**C**), K-562 (**D**) and HEK293 (**E**) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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