

MAP-4 (18): sc-135980

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-4 is a non-neuronal microtubule-associated protein that contains 3, 18 amino acid repeats that are homologous to the repeats found in several other MAP proteins. Studies have shown that MAP-4 is involved with interphase microtubule, mitotic spindle fibers and mitotic movements. The protein, which promotes microtubule assembly, is primarily expressed in kidney, lung, liver, testis and spleen.

REFERENCES

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4. Kumarapeli A.R. and Wang, X. 2004. Genetic modification of the heart: chaperones and the cytoskeleton. *J. Mol. Cell. Cardiol.* 37: 1097-1109.
5. Kokkinakis, D.M., et al. 2004. Modulation of gene expression in human central nervous system tumors under methionine deprivation-induced stress. *Cancer Res.* 64: 7513-7525.
6. Li, C., et al. 2004. *In vitro* study of cell-promoting multiple-armed peptides. *J. Biomed. Mater. Res. A* 71: 134-142.
7. Liang, Y.C., et al. 2005. Characterization of long-term potentiation of primary afferent transmission at trigeminal synapses of juvenile rats: essential role of subtype 5 metabotropic glutamate receptors. *Pain* 114: 417-428.
8. Cheng, G., et al. 2005. Inhibition of β -adrenergic receptor trafficking in adult cardiocytes by MAP4 decoration of microtubules. *Am. J. Physiol. Heart Circ. Physiol.* 288: H1193-H1202.
9. Bewick, G.S., et al. 2005. Autogenic modulation of mechanoreceptor excitability by glutamate release from synaptic-like vesicles: evidence from the rat muscle spindle primary sensory ending. *J. Physiol.* 562: 381-394.

CHROMOSOMAL LOCATION

Genetic locus: MAP4 (human) mapping to 3p21.31.

SOURCE

MAP-4 (18) is a mouse monoclonal antibody raised against amino acids 583-702 of MAP-4 of human origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 500 μ l of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

APPLICATIONS

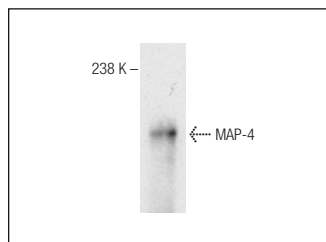
MAP-4 (18) is recommended for detection of MAP-4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for MAP-4 siRNA (h): sc-106198, MAP-4 shRNA Plasmid (h): sc-106198-SH and MAP-4 shRNA (h) Lentiviral Particles: sc-106198-V.

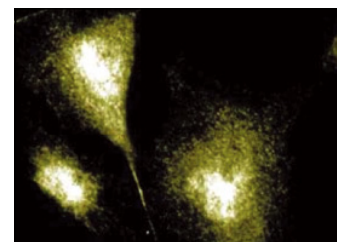
Molecular Weight of MAP-4: 210 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa nuclear extract: sc-2120 or human stomach extract: sc-363780.

DATA



MAP-4 (18): sc-135980. Western blot analysis of MAP-4 expression in human stomach tissue extract.



MAP-4 (18): sc-135980. Immunofluorescence staining of human endothelial cells showing nuclear and cytoplasmic localization.

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.