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ProductInformation

Anti-MAPs
(Microtubule Associated Proteins)
Developed in Rabbit
Delipidized, Whole Antiserum

Product No. **M 7273**

Product Description

Antiserum is developed in rabbit using MAPs from bovine brain as the immunogen..

Antiserum shows wide cross-reactivity among mammalian species using various immunolabeling techniques. Rabbit Anti-MAPs stains mainly the MAP2 protein and to a lesser extent the Tau (τ) bands using an immunoblot assay.

Anti-MAPs may be used for immunofluorescent labeling of cultured avian and mammalian cells and various tissue preparations. Using total cellular or tissue extract in an immunoblotting technique, this antiserum specifically stains the high and low molecular weight microtubule-associated proteins.

The cytoskeleton consists of extensive and intermeshed networks of filaments which traverse the cytoplasm of eukaryotic cells and interconnect a variety of cytoplasmic structures. There are three major cytoskeletal networks, each with its own particular composition and organization: Microtubules; composed predominately of tubulin and MAPs, Microfilaments; composed of actin and actin-binding proteins and Intermediate Filaments; composed of several cell-type specific subunits, including vimentin, desmin, cytokeratin, neurofilament proteins and glial fibrillary acidic proteins. Microtubules function as structural and mobility elements in mitosis, intracellular transport, flagellar movement and in the cytoskeleton. These intracellular cylindrical filamentous structures are present in almost all eukaryotic cells. Tubulin is the major building block of microtubules. A variety of proteins have been identified that co-purify with tubulin through repetitive cycles of microtubule assembly and disassembly *in vitro* commonly called microtubule-associated proteins (MAPs). There are two major classes of heat stable MAPs: MAP2 with a molecular weight of 280 kDa and Tau with a molecular weight of 55 to 65 kDa. Both classes of heat stable MAPs have a role in the regulation of microtubule polymerization in cells. Both Tau and MAP2 associate with the sides of microtubules. Nearly all mammalian and avian cells and tissues can be stained for MAPs by immunofluorescent methods. Several studies indicate the association of microtubules and MAPs with other cytoskeletal networks such as intermediate filaments or with cellular organelles. Tissue spectrins are able to bundle microtubules and show antigenic cross-reactivity with MAP2.

Reagents

Antiserum has been treated to remove lipoproteins and is supplied as a liquid with 0.1% sodium azide as a preservative

Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage

For continuous use, store at 2-8 °C for up to one month. For extended storage, solution may be frozen in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation before use.

Product Profile

A working dilution of 1:200 was determined by indirect immunoblot assay using bovine brain extract.

In order to obtain best results, it is recommended that each individual user determine their optimum working dilution by titration assay.

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