

MAP1B Antibody / Microtubule-associated protein 1B (FY13099)

Catalog No.	Formulation	Size
FY13099	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P46821
Applications	Western Blot: 0.25-0.5ug/ml Immunohistochemistry: 2-5ug/ml Immunofluorescence: 5ug/ml Flow Cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This MAP1B antibody is available for research use only.

Description

MAP1B antibody detects Microtubule-associated protein 1B, a neuronal cytoskeletal protein that regulates microtubule stability, axon guidance, and neuronal differentiation. The UniProt recommended name is Microtubule-associated protein 1B (MAP1B). This large microtubule-binding protein plays an essential role during nervous system development by stabilizing and organizing microtubule networks within axons and dendrites.

Functionally, MAP1B antibody identifies a precursor protein of approximately 2,460 amino acids that is proteolytically cleaved into heavy and light chains. These subunits assemble with microtubules and actin filaments, promoting cytoskeletal crosslinking. MAP1B is enriched in developing neurons, where it modulates growth cone dynamics and neurite outgrowth, influencing axonal pathfinding and regeneration.

The MAP1B gene is located on chromosome 5q13.2 and is highly expressed in the central and peripheral nervous systems. MAP1B associates with other neuronal cytoskeletal proteins, such as tau and MAP2, to regulate polymerization and microtubule stability. Phosphorylation of MAP1B by kinases including GSK3 and CDK5 modulates its binding affinity

and spatial localization, fine-tuning neuronal polarity and maturation.

Pathologically, aberrant MAP1B expression or phosphorylation is associated with neurodevelopmental and neurodegenerative diseases, including AlzheimerÂ's and ParkinsonÂ's disease. In tumor cells, MAP1B re-expression correlates with altered cytoskeletal organization and invasiveness. Research using MAP1B antibody supports studies in axonal transport, cytoskeletal remodeling, and neuronal repair mechanisms.

MAP1B antibody is validated for western blotting, immunohistochemistry, and immunofluorescence to detect neuronal microtubule-associated proteins. NSJ Bioreagents offers MAP1B antibody reagents optimized for neurobiology, cytoskeletal, and developmental research applications.

Structurally, Microtubule-associated protein 1B contains multiple microtubule-binding domains and an actin-binding region, facilitating cytoskeletal integration. Its dynamic phosphorylation pattern determines its localization and activity during neuron growth and regeneration. This antibody provides a reliable tool to examine MAP1BÂ's regulatory functions in cytoskeletal organization and axonal development.

Application Notes

Optimal dilution of the MAP1B antibody should be determined by the researcher.

Immunogen

E.coli-derived human MAP1B recombinant protein (Position: H102-R1849) was used as the immunogen for the MAP1B antibody.

Storage

After reconstitution, the MAP1B antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.