

Product Information

MONOCLONAL ANTI-MAP2 (2a + 2b)

Clone AP-20

Mouse Ascites Fluid

Product Number **M 1406**

Product Description

Monoclonal Anti-MAP2 (2a + 2b) (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Bovine microtubule associated protein 2 (MAP2) was used as the immunogen. The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

MAP2 is the major microtubule associated protein of brain tissue. There are three forms of MAP2; two are similarly sized with apparent molecular weights of 280 kDa (MAP2a and MAP2b) and the third with a lower molecular weight of 70 kDa (MAP2c). In the newborn rat brain, MAP2b and MAP2c are present, while MAP2a is absent. Between postnatal days 10 and 20, MAP2a appears. At the same time, the level of MAP2c drops by 10-fold. This change happens during the period when dendrite growth is completed and when neurons have reached their mature morphology. MAP2 is degraded by a Cathepsin D-like protease in the brain of aged rats. There is some indication that MAP2 is expressed at higher levels in some types of neurons than in other types. MAP2 is known to promote microtubule assembly and to form side-arms on microtubules. It also interacts with neurofilaments, actin, and other elements of the cytoskeleton.

Reagents

The product is provided as ascites fluid with 15 mM 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/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, the 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 the solution by centrifugation before use.

Product Profile

Monoclonal Anti-MAP2 specificity was established by an immunoblot. The antibody localizes the high molecular weight forms of MAP2 namely MAP2a and MAP2b, but shows no reactivity with MAP2c. No cross-reactivity is observed with MAP1, MAP5, tubulin, or tau (τ). Monoclonal Anti-MAP2 (2a + 2b) reacts with bovine, rat, mouse, *Xenopus*, salamander, and quail tissue or cells by immunocytochemical techniques utilizing either a fluorescent or peroxidase label.

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

Reference

1. Binder, L. I., et al., Differential localization of MAP-2 and tau in mammalian neurons in situ. Ann. N. Y. Acad. Sci. **466**, 145 (1986).

JWM/KMR 02/02

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