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Product Information

Anti-β-Tubulin I antibody, Mouse monoclonal
clone SAP.4G5, purified from hybridoma cell culture

Product Number **SAB4200732**

Product Description

Monoclonal Anti-β-Tubulin I (mouse IgG1 isotype) is derived from the SAP.4G5 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a BALB/c mouse immunized with a synthetic peptide corresponding to the C-terminal sequence of β-tubulin isotype I (GeneID 203068), conjugated to BSA[1]. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-β-Tubulin I antibody recognizes an epitope located on the C-terminal sequence of β-Tubulin isotype I from human[1], rat[1], mouse, bovine[1], canine, monkey, hamster, gerbil[2], chicken and Xenopus origin. No reactivity with other β-tubulin isotypes is observed.[1] Monoclonal Anti-β-Tubulin I is recommended to use in various immunochemical assays, including Immunoblot[1] (~55 kDa), Immunofluorescence and Immunohistochemistry.

Tubulin is the major building block of microtubules, an intracellular cylindrical filamentous structure that is present in almost all eukaryotic cells. Microtubules are involved in many cellular functions and its proper organization is essential for mitosis, meiosis, some forms of organellar movement, intracellular transport, flagellar movement and other cytoskeletal-related functions. Except in simplest eukaryotes, Tubulin exists in all cells as a 100 kDa protein which assembles from heterodimers of α-tubulin and β-tubulin; both have a molecular weight of ~ 55 kDa and share considerable homology. For each family of α/β Tubulin heterodimer, the sequence of the individual subunits is highly conserved both within and across species, while the most diversity is localized to the C-terminal 15 residues. For β-tubulin, six evolutionarily conserved isotypes were identified (designated βI-βVI). In mammals and birds, βI is constitutive and found in most tissues. Specific monoclonal Anti-β-tubulin I antibody, together with additional antibodies to other tubulin isotypes, provides a specific and useful tool in studying the intracellular distribution of tubulin including static and dynamic aspects of the cytoskeleton. It is also useful in deducing the role that different tubulin isotypes play in nerve development, function or maintenance.[1-3]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at –20 °C. For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.06–0.12 μg/mL is recommended using HeLa cell extract.

Immunofluorescence: a working concentration of 1–2.5 μg/mL is recommended using HeLa cells.

Immunohistochemistry: a working concentration of 1–2 μg/mL is recommended using heat-retrieved formalin-fixed, paraffin-embedded human fallopian tube or testis sections.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

1. Roach MC., et al., *Cell Motil Cytoskel*., **39**, 273-85 (1998).
2. Perry B., et al., *J Assoc Res Otolaryngol.*, **4**, 329-38 (2003).
3. Siddiqui SS., et al., *J Neurosci*., **9**, 2963-72 (1989).

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