

Product Information

Anti- β -tubulin antibody, Mouse monoclonal
clone 2-28-33, purified from hybridoma cell culture

Product Number **SAB4200715**

Product Description

Anti- β -tubulin antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the 2-28-33 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Sarkosyl-resistant ribbons from *Strongylocentrotus purpuratus* (sea urchin) sperm axonemes were used as the immunogen.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 specifically recognizes the two major β -tubulin isotypes and one of the minor β -tubulin isotypes of the free-living soil nematode *Caenorhabditis elegans*.¹ It also binds to Sarkosyl-resistant ribbons from *Strongylocentrotus purpuratus* sperm axonemes,¹ neuronal axons of the larva of *Ciona intestinalis* (ascidian),² microtubules in root tip cells in *Arabidopsis thaliana*³ and to human, mouse, rat, monkey, bovine, dog and chicken β -tubulin. Monoclonal Anti- β -tubulin is recommended to use in various immunochemical assays, including Immunoblotting, Immunofluorescence and Immunohistochemistry.¹⁻⁶

Tubulin (also known as TUBB) is the major building block of microtubules. This intracellular cylindrical filamentous structure is present in almost all eukaryotic cells. Microtubules function as structural and mobile elements in mitosis, intracellular transport, flagellar movement and the cytoskeleton. Microtubules assemble from heterodimers of α -tubulin and β -tubulin; both have a molecular weight of ~ 50 kDa and share considerable homology. Structurally different tubulin subunits have been identified as the products of different genes. For β -tubulin, five evolutionarily conserved isotypes have been identified, which are regularly utilized in the same cell types of different species. The different β -tubulin isotypes are suggested to differ from each other in their ability to polymerize into microtubules.⁷

Monoclonal Anti- β -tubulin antibody, together with monoclonal antibodies to other types of tubulins (such as β -tubulin isotype I+II, β -tubulin isotype III, tyrosine tubulin, α -tubulin and the acetylated form of α -tubulin),

provides a specific and useful tool in studying the intracellular distribution of tubulin and the static and dynamic aspects of the cytoskeleton. It is also useful in deducing the role that different tubulin isotypes play, in the nerve development, function or maintenance.¹

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

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 0.5-1 μ g/mL is recommended using mouse embryo fibroblast NIH-3T3 cells extract.

Immunofluorescence: a working concentration of 1-2 μ g/ml is recommended using human foreskin fibroblast HS68 cells.

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

References

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3. Ni CZ., et al., *Cell Res.*, **15**, 725-33 (2005).
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