

Product Information

Monoclonal Anti- ϵ -Tubulin

Clone TUB-11

Purified Mouse Immunoglobulin

Product Number **T 1323**

Product Description

Monoclonal Anti- ϵ -Tubulin (mouse IgG2a isotype) is derived from the TUB-11 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from mice immunized with a synthetic peptide corresponding to amino acids 352-366 of human ϵ -tubulin, conjugated to KLH. 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).

Monoclonal Anti- ϵ -Tubulin recognizes human, mouse, frog, and chicken ϵ -tubulin (55 kDa). The epitope recognized by the antibody is localized in the C-terminal region of ϵ -tubulin (amino acids 352-366 of human ϵ -tubulin). The product may be used in ELISA and immunoblotting.

Microtubules constitute one of the major components of eukaryotic cells' cytoskeleton and are involved in many essential processes, including cell division, ciliary and flagellar motility and intracellular transport. Microtubules of the eukaryotic cytoskeleton are composed of a heterodimer of α - and β -tubulin. In addition to α - and β -tubulin, several other tubulins have been identified, bringing the number of distinct tubulin classes to seven. Most of these tubulins have distinct subcellular localization and an emerging, diverse set of functions.¹

Out of the seven different tubulins, four new members of the tubulin family have been identified: δ , ζ , η , and ϵ -tubulin. ζ and ϵ -tubulins were discovered by database searches.² ϵ -Tubulin was found to be located in the centriolar area, a localization that is dependent on cell cycle modulation. During the early phase of the cell cycle, the protein associates predominantly with the old centrosome, and only later becomes associated with both the old and the new centrosomes.^{2,3} It has been shown that centrosomes could nucleate microtubule assembly irrespective of ϵ -tubulin content, indicating

that this protein is not involved in microtubule nucleation.³ Monoclonal antibodies specific for ϵ -tubulin are an important tool in studying the role of ϵ -tubulin in the replication and maturation of centrioles at the centrosome core.

Reagent

Monoclonal Anti- ϵ -Tubulin is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide.

Antibody concentration: Approx. 2 mg/ml

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 prolonged storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing is not recommended. Storage in frost-free freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

A working concentration of 2-4 μ g/ml is determined by immunoblotting, using a whole extract of cultured chicken fibroblasts.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

1. Dutcher, S.K., et al., Curr. Opin. Cell Biol., **13**, 49-54 (2001).
2. McKean, P.G., et al., J. Cell Sci., **114**, 2723-2733 (2001).
3. Chang, P., et al., Nature Cell Biol., **2**, 30-35 (2000).

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