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## Product Information

### Monoclonal Anti- $\delta$ Tubulin

Clone DTU-64

Purified Mouse Immunoglobulin

Product Number **T 3950**

### Product Description

Monoclonal Anti- $\delta$  Tubulin (mouse IgM isotype) is derived from the hybridoma DTU-64 produced by the fusion of mouse myeloma cells, NS1 cells, and splenocytes from BALB/c mice immunized with human recombinant  $\delta$  Tubulin. The isotype is determined using Sigma ImmunoType™ Kit (Sigma ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2).

Monoclonal Anti- $\delta$  Tubulin recognizes human  $\delta$  tubulin (approx. 55 kDa). The antibody may be used in various immunochemical techniques including ELISA, immunoblotting, and immunocytochemistry.

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  $\alpha$ - and  $\beta$ -tubulin. In addition to  $\alpha$ - and  $\beta$ -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.<sup>1</sup> Of the seven different tubulins, four new members of the tubulin family ( $\delta$ ,  $\zeta$ ,  $\eta$ , and  $\epsilon$ -tubulin) have been identified.  $\zeta$ - and  $\epsilon$ -tubulins were discovered by database searches.<sup>2</sup>

$\delta$ -tubulin has been identified in many species such as human, mice, rat, and trypanosomes. In human cells,  $\delta$ -tubulin is found in the centrosomal region between centrioles, and also in the intercentriolar location between duplicated centrosomes.<sup>3</sup> In mouse somatic cells, the protein is found in nuclear and cytoplasmic locations particularly enriched at spindle poles during mitosis. In mouse sperm,  $\delta$ -tubulin is found within the perinuclear ring of the manchette, centriolar vaults, and the flagellum.<sup>4</sup>

### Reagent

Monoclonal Anti- $\delta$  Tubulin is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 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 hazardous 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. 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 dilution samples should be discarded if not used within 12 hours.

### Product Profile

By immunoblotting, a working antibody concentration of 0.04-0.08  $\mu$ g/ml is recommended using A431 total cell extract.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining 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).
4. Smrzka, O.W., et al., *Curr. Biol.*, **10**, 413-416 (2000).

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