

Product Information

Anti-Tau antibody, Mouse monoclonal clone Tau46, purified from hybridoma cell culture

Catalog Number **T9450**

Product Description

Anti-Tau antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the hybridoma Tau46 produced by the fusion of mouse myeloma cells (SP2 cells) and splenocytes from BALB/c mice immunized with bovine Tau.¹ 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).

Anti-Tau antibody, Mouse monoclonal recognizes bovine,¹ rat,² human,^{3,4} and mouse⁵ Tau (approx. 45 to 60 kDa). The antibody recognizes a phosphorylation-independent epitope in amino acids 404-441 (human)¹. The antibody recognizes all six isoforms of Tau and may cross react with MAP2 protein.^{1,6} The product is useful in ELISA,⁴ immunoblotting,^{2,3,5} immunogold labeling,⁵ immunoprecipitation⁷ as well as immunohistochemistry.³

Tau is a family of microtubule-associated proteins thought to regulate the stability and organization of microtubules in neuronal cells. The tau protein family is derived from alternative mRNA splice variants that originate from a single gene, and result in mature proteins that vary in size from 352 to 441 amino acids (45 to 60 kDa).⁸ Tau loses microtubule-binding activity and aggregates into paired helical filaments (PHFs) in neurodegenerative disorders.⁹ PHFs are the basic structural components of neurofibrillary tangles (NFTs). NFT accumulation correlates with the clinical progression of Alzheimer's disease. Phosphorylation can affect the functional properties of tau and hyperphosphorylation of tau may result in the loss of tau's microtubule binding activity and the formation of the insoluble aggregates.⁸ Hyperphosphorylation and nonenzymatic glycosylation are posttranslational modifications detected in PHF-tau, and numerous sites of hyperphosphorylation of both normal and PHF-tau have been identified.⁹

Reagent

The product is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: approx. 2 mg/ml.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the 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, or storage in "frost-free" freezers, 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 µg/ml is determined using mouse brain extract.

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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