

Product Information

Anti-tau antibody, Mouse monoclonal

clone tu53, purified from hybridoma cell culture

Product Number **SAB4200765**

Product Description

Anti-tau antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the tu53 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from Blab/C mice immunized with a recombinant human tau protein expressed in HEK-293 cells (Cat.No. MSST0032), (GeneID 4137). 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.

Anti-tau antibody, Mouse monoclonal specifically recognizes human and mouse tau protein. The antibody recognizes all six isoforms of human tau. The antibody may be used in various immunochemical techniques including Immunoblotting (multiple isoforms, ~46-60 kDa) and Immunoprecipitation.

Tau, also known as microtubule-associated protein tau (MAPT), neurofibrillary tangle protein or paired helical filament-tau (PHF-tau). Tau proteins constitute a family of 6 isoforms that derived from alternative mRNA splice variants, originate from a single gene and result in mature proteins that vary in size from 352 to 441 amino acids (45 to 60 kDa).¹ Tau proteins regulate the stability, assembly and organization of microtubules in neuronal cells under normal physiological conditions.² In neurodegenerative disorders tau loses its microtubule-binding activity and aggregates into paired helical filaments (PHFs).² PHFs are the basic structural components of neurofibrillary tangles (NFTs), which their accumulation correlates with the clinical progression of Alzheimer's disease. In addition, under pathological conditions tau can undergo modifications such as hyperphosphorylation, nonenzymatic glycosylation and acetylation, that can result in the generation of aberrant aggregates such as found in NFTs at Alzheimer's disease brain.¹⁻⁶

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 5-10 µg/mL is recommended using mouse brain tissue extract.

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

References

1. Goedert M., *Trends Neurosci.*, **16**, 460-5 (1993).
2. Min SW., et al., *Nat Med.*, **21**, 1154-62 (2015).
3. Lee VM., et al., *Annu Rev Neurosci.*, **24**, 1121-59 (2001).
4. Wang Y. and Mandelkow E., *Nat Rev Neurosci.*, **17**, 5-21 (2016).
5. Avila J., et al., *Physiol Rev.*, **84**, 361-84 (2004).
6. Chiang MF., et al., *J Neurosci.*, **13**, 4854-60 (1993).

PCG, DR_OKF/LV,PHC 11/17-1