MAPT
Mouse Anti-Multispecies Microtubule-Associated Protein Tau Clone TAU-5 mAb

Catalog No.	CSI14244	**Quantity:**	100 µg

Alternate Names: Neurofibrillary Tangles Marker, Mtapt, Tau

Description: Microtubule-Associated Protein Tau (MAPT) is a protein whose transcript undergoes complex, regulated alternative splicing, giving rise to several mRNA species. MAPT transcripts are differentially expressed in the nervous system, depending on stage of neuronal maturation and neuron type. MAPT gene mutations have been associated with several neurodegenerative disorders such as Alzheimer's disease, Pick's disease, frontotemporal dementia, cortico-basal degeneration and progressive supranuclear palsy.

Tau proteins promote the assembly of tubulin monomers into microtubules and stabilize microtubules. Alternate splicing of tau mRNA, glycosylation, and differential phosphorylation contribute to the heterogeneity of tau. The TAU-5 monoclonal antibody reacts with the non-phosphorylated as well as the phosphorylated forms of tau. Its epitope is located in the middle region of tau. This antibody is highly specific for tau and does not cross-react with other microtubule associated proteins (MAPs) or tubulin. In immunohistology, this antibody intensely stains the human neurofibrillary tangles, neuropil threads, and neuritic plaques associated with Alzheimer's disease. This antibody is also observed to stain astrocytes.

Specificity: Human, Sheep, Bovine, Mouse, and Rat Tau. This antibody recognizes proteins of 45 -68 kDa, identified as Tau proteins.

Immunogen: Purified Bovine microtubule-associated proteins.

Isotype: IgG_1

Formulation: Purified immunoglobulin in phosphate buffered saline, pH 7.4. 15 mM sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.)

Purification: Purified from Ascites fluid by Protein A/G chromatography.

Cross-Reactivity: Human, Sheep, Bovine, Mouse, and Rat Tau. Other species were not tested.

Applications: Western Blot, Immunoprecipitation, ELISA, and Immunohistology with cryostat sections and formalin-fixed paraffin embedded tissue sections.

With formalin-fixed paraffin embedded tissues, staining is enhanced by boiling tissue sections in 10 mM Citrate buffer, pH 6.0, for 10-20 minutes followed by cooling at room temperature for 20 minutes prior to antibody incubation

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temperature for 20 minutes prior to antibody incubation.

For Immunoprecipitation, use 10 µg per 200-500 µg of cell lysate.

For Western blot, use 1 µg/mL.

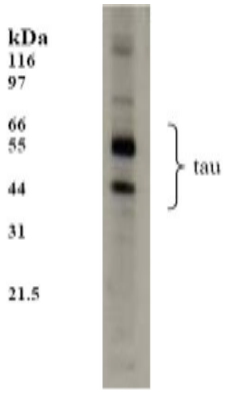
For Immunohistology, use 1-2 µg/mL for 30-60 minutes at room temperature.

The optimal concentration should be determined by the user for each specific application.

Storage & Stability: Store at 2-4°C. Store in working aliquots at -20°C for longer storage. **Avoid repeated freeze/thaw cycles.**

Recommended Positive Control: Human T98G glioblastoma, SH-SY5Y cells or brain tissue.

Extracts from SH-SY5Y neuronal cells were resolved on a 4-20% Tris-glycine gel and proteins were transferred to PVDF. Membranes were incubated with 1:1000 dilution of the anti-tau antibody. The signal was detected using a Goat F(ab')2 anti-Mouse IgG Alkaline Phosphatase antibody at a 1:5000 dilution and the membrane was incubated with CDP-substrate using the WesternStarTM method (Tropix). The membrane was then exposed to Kodak BioMax film.



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