

tau (pan). Mouse Monoclonal Antibody TAU-5 , Human, Mouse, Rat, Sheep, Cow

BACKGROUND

This antibody recognizes proteins of 45-68 kDa, identified as tau proteins. 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.

ORDERING INFORMATION

CATALOG NUMBER
X1999M

SIZE
100 µg

FORM
Unconjugated

HOST/CLONE
Mouse Clone TAU-5

FORMULATION
Purified IgG in phosphate buffered saline, pH 7.3 with 15 mM sodium azide

CONCENTRATION
0.5 mg/ml

ISOTYPE
IgG1

APPLICATIONS
WB, IP, IHC
Western Blot, Immunoprecipitation, Immunohistochemistry

IMMUNOGEN

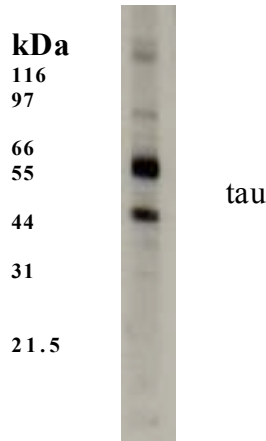
Purified bovine microtubule-associated proteins

SPECIES REACTIVITY

Human, Mouse, Rat, Sheep, Cow

Legend:

Extracts from SH-SY5Y neuronal cells 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 Membrane was incubated with CDP-substrate using the WesternStar™ method (Tropix).



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POSITIVE CONTROL/TISSUE EXPRESSION

Human T98G glioblastoma, SH-SY5Y cells or brain tissue.

COMMENTS

The optimal antibody concentration should be determined for each specific application. For immunoprecipitation, use 10 µg per 200-500 µg of cell lysate; and for Western blotting, use 1 µg/mL. For immunohistology, use 1-2 µg/mL for 30-60 minutes at room temperature. Use antigen retrieval for staining with paraffin embedded sections.

SHIP CONDITIONS

Ship on gel ice, store at -20°C immediately upon arrival

STORAGE CUSTOMER

Product should be stored at -20°C. Aliquot to avoid freeze/thaw cycles

STABILITY

Products are stable for one year from purchase when stored properly

REFERENCES

Papasozomenos, S.C. and A. Shanavas (2002) Testosterone prevents the heat shock-induced overactivation of glycogen synthase kinase-3 beta but not of cyclin-dependent kinase 5 and c-Jun NH2-terminal kinase and concomitantly abolishes hyperphosphorylation of tau: Implications of Alzheimer's disease. Proc. Nat'l. Acad. Sci. USA 99 (3):1140-1145 (cites the use of this antibody in Western blotting).

Rapoport, M., H.N. Dawson, L.I. Binder, M.P. Bitek, and A. Ferreira (2002) Tau is essential to β-amyloid-induced neurotoxicity. Proc. Nat'l. Acad. Sci. USA 99(9):6364-6369 (cites the use of TAU-5 in immunocytochemistry).

Takahashi, S., T. Saito, S. Hisanaga, H. C. Pant and A. B. Kulkarni (2003) Tau phosphorylation by cyclin-dependent kinase 5/p39 during brain development reduces its affinity for microtubules. J. Biol. Chem. 278(12):10506-10515.

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