



## Mouse monoclonal antibody to Microtubule-associated protein tau

<b>Catalogue No.:</b>	M-1703-100
<b>Description:</b>	<p><b>FUNCTION:</b> Promotes microtubule assembly and stability, and might be involved in the establishment and maintenance of neuronal polarity. The C-terminus binds axonal microtubules while the N-terminus binds neural plasma membrane components, suggesting that tau functions as a linker protein between both. Axonal polarity is predetermined by tau localization (in the neuronal cell) in the domain of the cell body defined by the centrosome. The short isoforms allow plasticity of the cytoskeleton whereas the longer isoforms may preferentially play a role in its stabilization. <b>SUBCELLULAR LOCATION:</b> Cytoplasm; cytosol. Cell membrane. Mostly found in the axons of neurons, in the cytosol and in association with plasma membrane components. <b>ALTERNATIVE PRODUCTS:</b> 8 named isoforms produced by alternative splicing. Additional isoforms seem to exist. Isoforms differ from each other by the presence or absence of up to 5 of the 15 exons. One of these optional exons contains the additional tau/MAP repeat. <b>TISSUE SPECIFICITY:</b> Expressed in neurons. Isoform PNS-tau is expressed in the peripheral nervous system while the others are expressed in the central nervous system. <b>DEVELOPMENTAL STAGE:</b> Four-repeat (type II) tau is expressed in an adult-specific manner and is not found in fetal brain, whereas three-repeat (type I) tau is found in both adult and fetal brain. <b>DOMAIN:</b> The tau/MAP repeat binds to tubulin. In Alzheimer disease, the neuronal cytoskeleton in the brain is progressively disrupted and replaced by tangles of paired helical filaments and straight filaments, mainly composed of hyperphosphorylated forms of Microtubule-associated protein Tau. Defects in Microtubule-associated protein Tau are a cause of frontotemporal dementia and parkinsonism linked to chromosome 17, as well as a number of other neurodegenerative diseases.</p>
<b>Batch No.:</b>	See vial label
<b>Unit size:</b>	100 uL
<b>Antigen:</b>	Recombinant full length version of the shortest human tau isoform purified from E. coli.
<b>Antibody Type:</b>	Monoclonal
<b>Isotype:</b>	IgG1
<b>Other Names:</b>	Neurofibrillary tangle protein; Paired helical filament-tau; PHF-tau; MAPT; MTBT1; TAU
<b>Produced in:</b>	Mouse
<b>Applications:</b>	Western Blotting (WB) and Immunocytochemistry (ICC). A dilution of 1:5,000 - 1:10,000 is recommended for WB. A dilution of 1:500-1,000 is recommended for ICC. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
<b>Specificity:</b>	The antibody reacts with multiple closely spaced bands covering the region of the blot from 48kDa to 67kDa. It has also been used successfully for immunocytochemistry.
<b>Species Against:</b>	Human, rat and mouse. It is expected that it will work on other mammal tissues.
<b>Form:</b>	Lyophilised purified culture supernatant with 5% trehalose and 0.5% sodium azide.
<b>Appearance:</b>	White powder

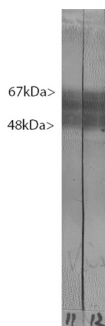
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- Reconstitution:** Reconstitute in sterile distilled water. Centrifuge to remove any insoluble material.
- Storage:** Maintain lyophilized material at 2-8C. After reconstitution of lyophilized antibody, aliquot and store at -20C for a higher stability. Avoid freeze-thaw cycles.
- Expiry Date:** 12 months after purchase
- General References:** 1. Skene JH, Willard M. Changes in axonally transported proteins during axon regeneration in toad retinal ganglion cells. J. Cell Biol. 89:86-95 (1981).



Crude rat brain extract. Tau protein is expressed as up to 9 different isoforms of different molecular weight and so appears as multiple closely spaced bands covering the region of the blot from 48kDa to 67kDa.

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