Rabbit antibody to Microtubule-associated protein tau (240-450)/MAPT/TAU: IgG

Catalogue No.: R-177-250

Description: THIS PRODUCT HAS BEEN SUPERCEDED. PLEASE REFER TO THE "REPLACED BY" FIELD BELOW TO LOCATE THE CURRENT BIOSENSIS PRODUCT TO MEET YOUR RESEARCH NEEDS. FUNCTION: 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. SUBCELLULAR LOCATION: Cytoplasm; cytosol. Cell membrane. Mostly found in the axons of neurons, in the cytosol and in association with plasma membrane components. ALTERNATIVE PRODUCTS: 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. TISSUE SPECIFICITY: Expressed in neurons. Isoform PNS-tau is expressed in the peripheral nervous system while the others are expressed in the central nervous system. DEVELOPMENTAL STAGE: 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. DOMAIN: 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.

Batch No.: See product label

Unit size: 250 µg

Antigen: Recombinant human Microtubule-associated protein tau (aa 240-450) has been used as the immunogen.

Other Names: Neurofibrillary tangle protein; Paired helical filament-tau; PHF-tau; MAPT; MTBT1; TAU

Accession: TAU_HUMAN

Produced in: Rabbit

Purity: Protein G purified IgG

Applications: IH/IH(P): This antibody works superbly in both in paraffin-embedded and frozen sections. A working dilution of 1:100 to 1:1000 is recommended. This antiserum recognises both phosphorylated and unphosphorylated forms of Tau protein.
Western blot: 1:500-1:2000. Will detect multiple isoforms of Tau; Biosensis recommends optimal dilutions/concentrations should be determined by the end user.

Specificity: The specificity for Tau protein was confirmed by IHC and WB and ELISA.

FOR RESEARCH USE ONLY

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Cross-reactivity:	This antiserum cross reacts with Tau protein of human, rat and mouse origins.
Form:	Lyophilised
Reconstitution:	Reconstitute in 250 µl of sterile water. Centrifuge to remove any insoluble material.
Storage:	After reconstitution keep aliquots at -20ºC for a higher stability, and at 4ºC with an appropriate antibacterial agent. Glycerol (1:1) may be added for an additional stability. Avoid repetitive freeze/thaw cycles.
Expiry Date:	12 months after purchase
References:	1. Goedert M, et al. (1988) Proc. Natl. Acad. Sci. U.S.A. 85:4051-4055. 2. Goedert M, et al. (1989) Neuron 3:519-526. 3. Lee G, et al. (1989) Neuron 2:1615-1624. 4. Andreadis A, et al. (1992) Biochemistry 31:10626-10633. 5. Jakes R, et al. (1991) EMBO J. 10:2725-2729. 6. Cripps D, et al. (2006) J. Biol. Chem. 281:10825-10838. 7. Maas T, et al. (2000) J. Biol. Chem. 275:15733-15740. 8. Nacharaju P, et al. (1997) J. Neurochem. 69:1709-1719. 9. Wintjens R, et al. (2001) J. Biol. Chem. 276:25150-25156. 10. Oliva R, et al. (2004) Ann. Neurol. 55:448-449.

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