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TAU Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2040B

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P10636
Other Accession	P19332, P10637, P29172
Reactivity	Human, Mouse, Rat, Cynomolgus
Predicted	Human, Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB2883
Calculated MW	78928
Antigen Region	677-707

Additional Information

Gene ID	4137
Other Names	Microtubule-associated protein tau, Neurofibrillary tangle protein, Paired helical filament-tau, PHF-tau, MAPT, MAPTL, MTBT1, TAU
Target/Specificity	This TAU antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 677-707 amino acids from the C-terminal region of human TAU.
Dilution	WB~~1:2000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TAU Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MAPT (HGNC:6893)
Synonyms	MAPTL, MTBT1, TAU

Function	Promotes microtubule assembly and stability, and might be involved in the establishment and maintenance of neuronal polarity (PubMed:21985311). 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 (PubMed:21985311, PubMed:32961270). Axonal polarity is predetermined by TAU/MAPT 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.
Cellular Location	Cytoplasm, cytosol. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cytoplasm, cytoskeleton. Cell projection, axon. Cell projection, dendrite. Secreted Note=Mostly found in the axons of neurons, in the cytosol and in association with plasma membrane components (PubMed:10747907). Can be secreted; the secretion is dependent on protein unfolding and facilitated by the cargo receptor TMED10; it results in protein translocation from the cytoplasm into the ERGIC (endoplasmic reticulum-Golgi intermediate compartment) followed by vesicle entry and secretion (PubMed:32272059).
Tissue Location	Expressed in neurons. Isoform PNS-tau is expressed in the peripheral nervous system while the others are expressed in the central nervous system

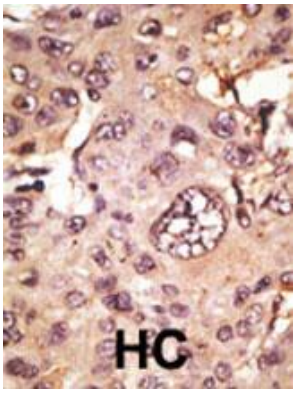
Background

The microtubule-associated protein tau (MAPT) gene 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 result in several neurodegenerative disorders such as Alzheimer's disease, Pick's disease, frontotemporal dementia, cortico-basal degeneration and progressive supranuclear palsy.

References

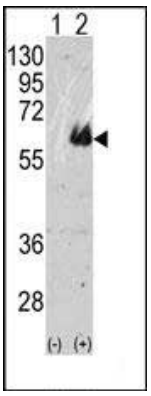
Yoshiyama, Y., et al., J. Neurosci. 23(33):10662-10671 (2003).
Horiguchi, T., et al., Am. J. Pathol. 163(3):1021-1031 (2003).
Gamblin, T.C., et al., Proc. Natl. Acad. Sci. U.S.A. 100(17):10032-10037 (2003).
Kraemer, B.C., et al., Proc. Natl. Acad. Sci. U.S.A. 100(17):9980-9985 (2003).
Yancopoulou, D., et al., J. Neuropathol. Exp. Neurol. 62(8):878-882 (2003).

Images

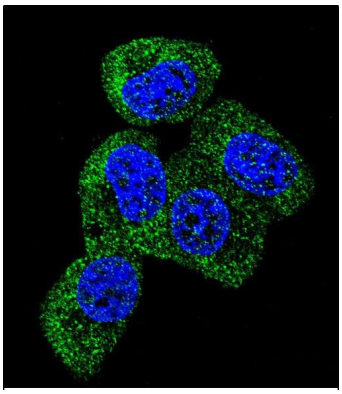


Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Western blot analysis of TAU(arrow) using rabbit polyclonal TAU Antibody (Cat.#AP2040b). 293 cell lysates



(2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the TAU gene (Lane 2) (Origene Technologies).



Confocal immunofluorescent analysis of TAU Antibody (C-term)(Cat#AP2040b) with MCF-7 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).DAPI was used to stain the cell nuclear (blue).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.