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TAU (MAPT) Antibody (S720)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1425c

Product Information

Application	WB, IHC-P, IHC, E
Primary Accession	P10636
Other Accession	P19332, P10637, P29172
Reactivity	Human, Cynomolgus
Predicted	Bovine, Mouse, Rat, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	78928
Antigen Region	699-728

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(MAPT) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 699-728 amino acids from human TAU(MAPT).
Dilution	WB~~1:1000 IHC-P~~1:100~500 IHC~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
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 (MAPT) Antibody (S720) 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

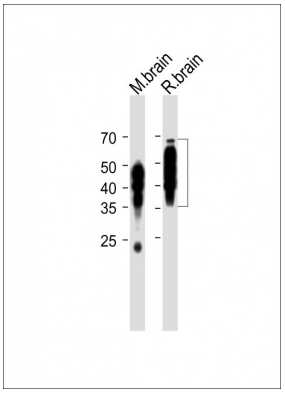
Background

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.

References

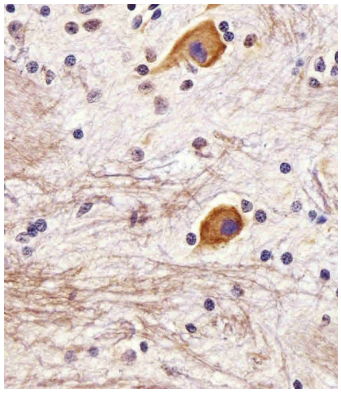
McCulloch,C.C., Hum. Genet. 123 (3), 257-265 (2008)
Mateo,I., Dement Geriatr Cogn Disord 25 (4), 317-320 (2008)
Beck,J., Brain 131 (PT 3), 706-720 (2008)

Images

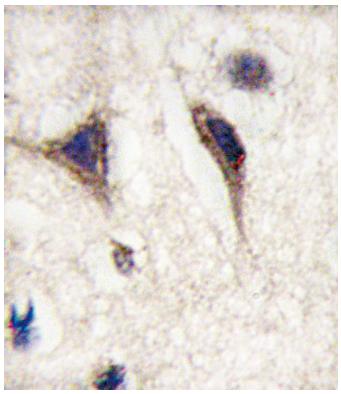


All lanes: Anti-TAU (MAPT) Antibody (S720) at 1:2000 dilution Lane 1: mouse brain lysate Lane 2: rat brain lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) E42at 1/15000 dilution. Observed band size: 34-70 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

AP1425c staining TAU in Monkey brain tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat



mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Formalin-fixed and paraffin-embedded human brain tissue reacted with MAPT Antibody (S720) (Cat.#AP1425c), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

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