10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TAU (MAPT) Antibody (S720)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP1425c

Specification

TAU (MAPT) Antibody (S720) - Product Information

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

TAU (MAPT) Antibody (S720) - 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~~1:10~50
IHC~~1:25
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. 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.

TAU (MAPT) Antibody (S720) - 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

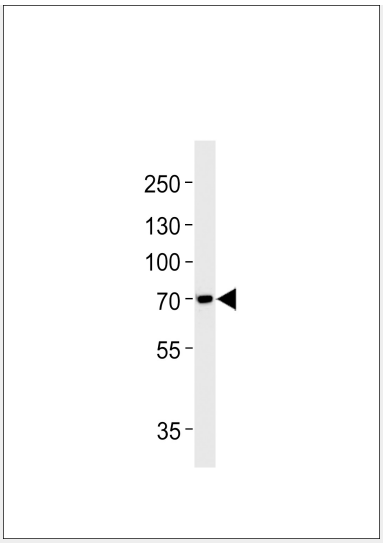
TAU (MAPT) Antibody (S720) - Protocols

Provided below are standard protocols that you may find useful for product applications.

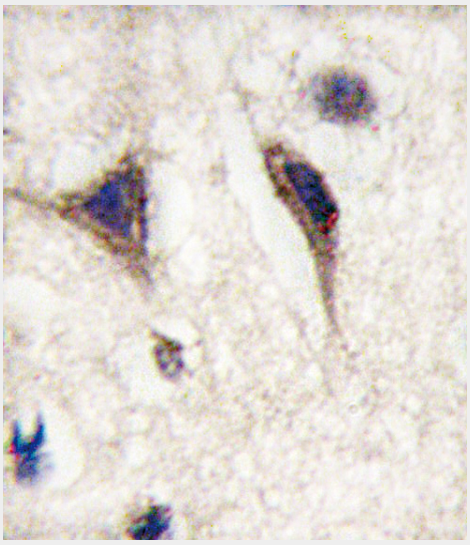
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TAU (MAPT) Antibody (S720) - Images

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

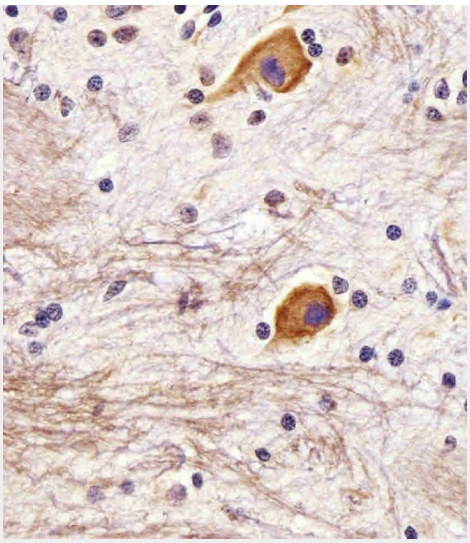


MAPT Antibody (pS720) (Cat.# AP1425c) western blot analysis in SH-SY5Y cell line lysates (35ug/lane).This demonstrates the MAPT antibody detected the MAPT protein (arrow).



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.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



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.

TAU (MAPT) Antibody (S720) - 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.

TAU (MAPT) Antibody (S720) - 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)