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Phospho-Tau (T231) Antibody
Rabbit mAb
Catalog # AP90628

Specification

Phospho-Tau (T231) Antibody - Product Information

Application	**WB, IHC, IP**
Primary Accession	P10636
Reactivity	**Rat**
Clonality	**Monoclonal**

Other Names
MAPT; Microtubule-associated protein tau; MTBT1; Neurofibrillary tangle protein; Paired helical filament-tau; PHF-tau;

Isotype	**Rabbit IgG**
Host	**Rabbit**
Calculated MW	**78928 Da**

Phospho-Tau (T231) Antibody - Additional Information

Dilution	**WB~~1:1000** **IHC~~1:100~500** **IP~~N/A**
Purification	**Affinity-chromatography**
Immunogen	**A synthesized peptide derived from human Phospho-Tau (T231)**
Description	**Tau is a heterogeneous microtubule-associated protein that promotes and stabilizes microtubule assembly, especially in axons. Six isoforms with different amino-terminal inserts and different numbers of tandem repeats near the carboxy-terminus have been identified, and tau is hyperphosphorylated at approximately 25 sites by ERK, GSK-3 and CDK5. Phosphorylation decreases the ability of tau to bind to microtubules. Neurofibrillary tangles are a major hallmark of Alzheimer's disease and these tangles are bundles of paired helical filaments composed of hyperphosphorylated tau.**
Storage Condition and Buffer	**Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.**

Phospho-Tau (T231) Antibody - 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

Phospho-Tau (T231) Antibody - 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

Phospho-Tau (T231) Antibody - Images

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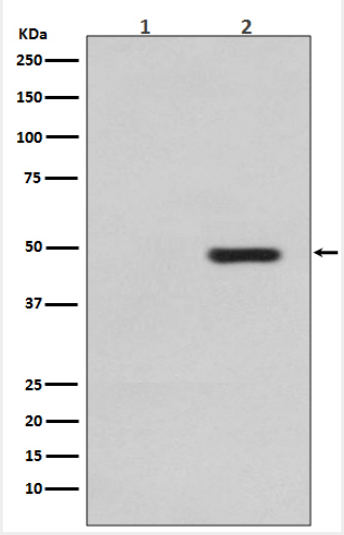

Western blot analysis of Phospho-Tau (T231) expression in (1) SH-SY5Y cell lysate; (2) SH-SY5Y cell lysate, treated with sorbitol.