Rabbit (polyclonal) Anti-Tau (TAUY6 [amino acid residues 186-201])

PRODUCT ANALYSIS SHEET

Catalog Number:	AHB0361
Lot Number:	See product label
Quantity:	0.1 mL (approximate immunoglobulin concentration: 1 mg/mL)
Form of Antibody:	Purified immunoglobulin in phosphate buffered saline.
Preservation:	0.1% sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.)
Purification:	Purified by caprylic acid and ammonium sulfate precipitation.
Immunogen:	A synthetic peptide, corresponding to amino acid residues 186-201 of human tau protein isoform 6 (GEPPKSGDRSG-pY-SSPG), conjugated to keyhole limpet hemocyanin via an N-terminal cysteine residue. This immunogen sequence is homologous with the corresponding region of rat tau. The rat sequence contains a single conservative amino acid substitution (D193E).
Specificity:	Tau, a microtubule associated protein, is found predominantly in neuronal axons of vertebrate brain. Human tau exists as six different isoforms that result from alternative splicing of the single transcript derived from a gene located on chromosome 7. The molecular weights of the tau isoforms range from 48 kDa to 68 kDa. Tau protein is highly soluble and normally attached to axonal microtubules. Tau also interacts with actin in the cytoskeleton, anchors enzymes, and plays a role in regulating intracellular vesicle transport. Tau is phosphorylated by numerous serine/threonine kinases, including GSK-3β, PKA, CDK5, MARK, JNK, p38 MAPK, and casein kinase II. Tau is also tyrosine phosphorylated by Src family members. Tau phosphorylation regulates both normal and pathological functions of this protein. Tau, in its hyperphosphorylated form, is the major component of paired helical filaments (PHFs), the building block of neurofibrillary lesions in Alzheimer's disease. Hyperphosphorylation impairs the microtubule binding functions of tau, resulting in the destabilization of microtubules in AD brain, leading to neuronal degeneration. Deposition of filamentous tau is implicated in other neurodegenerative diseases, including progressive supranuclear palsy, Pick's disease, and certain forms of Parkinson's disease. Tau can be detected in cerebrospinal fluid (CSF). Elevated tau concentrations in CSF samples have been observed in patients with Alzheimer's disease, Multiple Sclerosis, and Creutzfeldt-Jacob (prion) disease. This antibody detects both non-phophorylated and $p56^{lck}$-phosphorylated tau.
Species Reactivity:	Human. Based on sequence conservation, this antibody is expected to cross-react with rat tau. Other species have not been tested.

This product is for research use only. Not for use in diagnostic procedures.

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Applications: This antibody is suitable for use in Western blotting and immunohistochemistry with formalin-fixed, paraffin-embedded tissue sections.

Suggested Working Dilutions: In Western blotting, a 1:1,000 to 1:10,000 dilution is recommended. For immunohistochemistry, a 1:300 to 1:3,000 dilution is recommended. The optimal concentration should be determined for each specific application.

Recommended Positive Control: Human tau isoform 6 (2N4R).

Storage: Store at −20°C. Upon initial thawing, apportion into working aliquots and store at −20°C. Avoid repeated freeze-thaw cycles to prevent denaturing the antibody.

References:

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