



**Mouse (monoclonal)
Anti-tau (421/422)
Cleavage Site Specific Antibody,
Unconjugated
PRODUCT ANALYSIS SHEET**

Catalog Number:	AHB0061
Lot Number:	See product label
Expiration Date:	See product label
Quantity/Volume:	50 µg/0.1 mL
Clone Number:	TauC3
Isotype:	IgG1κ
Form of Antibody:	Purified immunoglobulin in phosphate buffered saline, pH 7.2, with 1% bovine serum albumin.
Preservation:	0.1% sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.)
Purification:	Purified from ascites by affinity chromatography.
Immunogen:	KLH-CSSTGSIDMVD, corresponding to the C terminus of tau truncated at Asp421.
Specificity:	This antibody recognizes tau when truncated at Asp421. Several caspases, including caspase-3, caspase-7, and caspase-8, cleave tau at this site, yielding the truncated form of the protein. This antibody does not react with full-length tau, or with tau truncated at Glu391 or Ala429. Tau is a microtubule-associated protein found predominantly in neuronal axons of vertebrate brain that promotes the assembly of tubulin monomers into microtubules and stabilizes microtubules. Hyperphosphorylation impairs the microtubule binding function of tau. Hyperphosphorylated tau is the major component of paired helical filaments (PHF), the building block of neurofibrillary lesions in Alzheimer's disease (AD) brain. The truncation state of tau can influence many of its pathologic characteristics, including its ability to assume AD-related conformations and to assemble into filaments. Recent data suggest that Aβ can trigger caspase activation and cell apoptosis. Caspase cleavage of tau at Asp 421 at the C-terminus is an important inducer of tau polymerization in Alzheimer's disease. This antibody provides a tool for studying neuronal cell apoptosis.
Species Reactivity:	Human, mouse and rat. Other species were not tested.
Applications:	This antibody is suitable for use in Western blotting, immunoprecipitation and immunohistochemistry.
Suggested Working Dilutions:	For Western blotting, the recommended concentration is 1 µg/mL. The optimal antibody concentration should be determined for each specific application.
Recommended Positive Control:	Tau and caspase-3 cleaved tau.
Storage:	Store at 2-8°C. For long term storage, aliquot into small volumes and store at -20°C. Avoid repeated freeze-thaw cycles to prevent denaturing the antibody.

For Research Use Only. CAUTION: Not for human or animal therapeutic or diagnostic use.

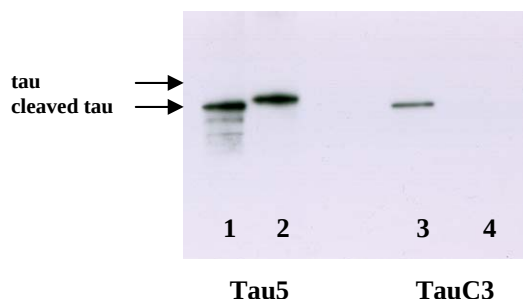
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Specificity of TauC3 antibody

Tau proteins were treated with recombinant caspase-3 (Cat. # PHZ0014) (lane 1, 3), or left untreated as a control (lane 2, 4). The proteins were resolved by SDS-PAGE and transferred to PVDF. The membranes were then incubated with monoclonal antibody TauC3 (lane 3, 4) or the Tau5 monoclonal antibody (Cat. # AHB0042) (lane 1, 2), each at a concentration of 1 µg/mL. After washing, the membranes were incubated with a goat F(ab')₂ anti-mouse IgG alkaline phosphatase conjugated secondary antibody (Cat. # AMI4405) at a 1:2000 dilution. Bands were detected with CDP-substrate using the WesternStar™ method (Tropix) and Kodak BioMax film. The data show that the TauC3 antibody detects caspase-cleaved tau but not untreated tau, demonstrating that the TauC3 monoclonal antibody specifically recognizes caspase-truncated tau.

References:

- Horowitz, P.M., et al. (2004) Early N-terminal changes and caspase-6 cleavage of tau in Alzheimer's disease. *J. Neurosci.* 24(36):7895-902.
- Gamblin, T.C., et al. (2003) Caspase cleavage of tau: linking amyloid and neurofibrillary tangles in Alzheimer's disease. *Proc. Nat'l. Acad. Sci. USA* 100(17):10032-10037.
- Berry, R.W., et al. (2003) Inhibition of tau polymerization by its carboxy-terminal caspase cleavage fragment. *Biochemistry* 42(27):8325-8331.
- Liu, F., et al. (2002) Involvement of aberrant glycosylation in phosphorylation of tau by cdk5 and GSK-3beta. *FEBS Lett.* 530(1-3):209-214.
- Alonso, A.D., et al. (2001) Interaction of tau isoforms with Alzheimer's disease abnormally hyperphosphorylated tau and in vitro phosphorylation into the disease-like protein. *J. Biol. Chem.* 276(41):37967-37973.
- Jenkins, S.M., et al. (2000) Modulation of tau phosphorylation and intracellular localization by cellular stress. *Biochem. J.* 345(Pt 2):263-270.

Mandelkow, E. (1999) Alzheimer's disease. The tangled tale of tau. *Nature* 402(6762):588-589.

Related Products:

Human Tau (total) ELISA	Cat. #	KHB0041/2
Human Tau [pS214] phosphoELISA™	Cat. #	KHB7021
Human Tau [pS396] phosphoELISA™	Cat. #	KHB7031
Human Tau [pS199] phosphoELISA™	Cat. #	KHB7041
Tau Antibody Sample Pack	Cat. #	44-781
Active Recombinant Human Caspase-3	Cat. #	PHZ0014
Caspase-3, Colorimetric Enzyme Assay	Cat. #	KHZ0021/2
Human Aβ40 ELISA kit	Cat. #	KHB3481/2
Human Aβ42 ELISA kit	Cat. #	KHB3441/2
Human APP ELISA	Cat. #	KHB0051
Human α-Synuclein ELISA	Cat. #	KHB0061

Explanation of symbols			
Symbol	Description	Symbol	Description
	Catalogue Number		Batch code
	Research Use Only		In vitro diagnostic medical device
	Use by		Temperature limitation
	Manufacturer		European Community authorised representative
	Without, does not contain		With, contains
	Protect from light		Consult accompanying documents
	Directs the user to consult instructions for use (IFU), accompanying the product.		

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