Tau (human) polyclonal antibody (TAUY9)

Tau is the principal microtubule-associated protein located in axons in the nervous system where it participates in events including the elongation, stabilisation and bundling of microtubules. The tau family consists of six isoforms identified by the insertion of three or four partial repeats of 30-31 amino acids in the C-terminal region. Subcellular fractionation studies have revealed tau to be associated with the membrane fraction, as well as with the cytoskeletal fraction and there is some evidence that the N-terminal domain of tau may be responsible for membrane binding as well as interaction with other cellular components. Tau extracted from human fetal and neonatal brains is moderately phosphorylated with 5-9 phosphorylated serine/threonine residues per molecule. Normal adult human brain tau shows a marked reduction in phosphorylation, but in certain neurodegenerative diseases (tauopathies) tau becomes hyperphosphorylated (6-15 phosphates per tau molecule have been identified) and associates to form filamentous aggregates. In Alzheimer's disease (AD) hyperphosphorylated tau polymerises to form a mixture of paired helical filaments (PHF) and straight filaments which accumulate and contribute to the formation of neurofibrillary tangles - one of the characteristic features of AD. It was reported in 1998 that tau could be tyrosine phosphorylated when co-transfected with the src-family protein tyrosine kinase fyn. In 2004 the same group, using phospho-specific antibodies, reported that fyn phosphorylated Tyr18 of brain tau at an early developmental stage in mice, but that tyrosine phosphorylated tau was undetectable in adult mice. However, they also showed that PHF preparations were reactive to the tau-pTyr18-specific antibodies, implicating a role for fyn – and possibly other tyrosine kinases - in the neurodegenerative process.

This antibody is covered by our Worry-Free Guarantee.

Citations: 8 View Online »

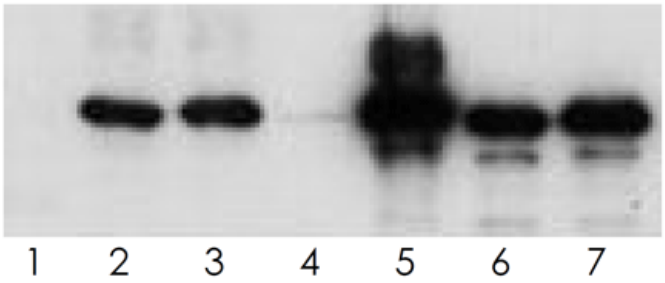
Ordering Information

Order Online »

BML-TA3119-0100	100µl

Manuals, SDS & CofA

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Western blot analysis of human tau (2N4R) using various antisera. Lane 1: MW markers; Lanes 2 and 3: Tau1 (control); Lanes 2, 4 and 6: unphosphorylated tau; lanes 3, 5 and 7: p56lck phosphorylated tau; ~400ng tau per lane. Lanes 4 and 5: antiphosphotyrosine (4G10) (1:1000); Lanes 6 and 7: antiserum TA 3119 (1:3000). Enhanced chemiluminescence (1 min exposure). Image courtesy of Professor Brian Anderton (Institute of Psychiatry, London, U.K.)

Handling & Storage

Handling	Store unopened vial at -20°C until required for use. Avoid repeated freeze-thaw cycles.
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	Microtubule-associated protein Tau
Application	IHC (FS), WB
Formulation	Liquid. In PBS, pH 7.2, containing 0.1% sodium azide.
Host	Rabbit
Immunogen	Synthetic peptide corresponding to aa 12-27 (E12DHAGTpYGLGDRKDQG27) of human tau isoform 6 (2N4R) phosphorylated at Tyr18.
Recommendation Dilutions/Conditions	Immunohistochemistry (formalin-fixed tissue section, use of high temperature antigen retrieval technique may be required)Western Blot (1:3000)Suggested dilutions/conditions may not be available for all applications.Optimal conditions must be determined individually for each application.
Source	Purified from rabbit serum.
Species Reactivity	Human
UniProt ID	P10636
Worry-free Guarantee	**This antibody is covered by our Worry-Free Guarantee .**

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