

PRODUCT INFORMATION



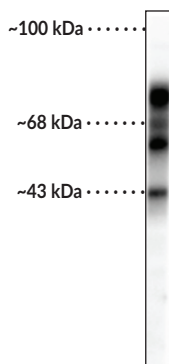
Tau Polyclonal Antibody

Item No. 29296

Overview and Properties

Contents:	This vial contains 100 µl of affinity-purified chicken polyclonal antibody.
Synonyms:	MAPTL, Microtubule-associated Protein Tau, MTBT2, Neurofibrillary Tangle Protein, Paired Helical Filament Tau
Immunogen:	Full-length recombinant human tau
Molecular Weight:	~48, 65, and 75 kDa
Species Reactivity:	(+) Human, bovine, mouse, porcine, rat
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	10 mM sodium azide
Host:	Chicken
Applications:	Immunohistochemistry (IHC), immunocytochemistry (ICC), and Western blot (WB); the recommended starting dilution is 1:1,000, 1:1,000-2,000, and 1:10,000, respectively. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



WB of rat cortical lysate showing specific immunolabeling of the approximately 48, 65, and 75 kDa tau isoforms.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Tau is a member of the microtubule-associated protein (MAP) family that facilitates microtubule formation in axons.^{1,2} It is primarily expressed in neurons and localized to axons, but trace amounts have been observed in glial cells and several peripheral tissues including kidney, lung, and testis. Tau is composed of an N-terminal projection domain that interacts with neurofilaments, cytoplasmic organelles, and neuronal cell membranes and a C-terminal microtubule binding domain that facilitates microtubule polymerization and stabilization. It is encoded by *MAPT* in humans, a 16-exon gene that produces 6 isoforms *via* alternative mRNA splicing. Mutations in *MAPT* lead to changes in expression of tau isoforms and the formation of insoluble protein aggregates that cause familial frontotemporal dementia (FTD) and parkinsonism linked to chromosome 17 (FTDP-17).³ Tau is subject to post-translational modifications, including phosphorylation, and hyperphosphorylation of tau is associated with the formation of neurofibrillary tangles and neuronal cell death in postmortem brains from patients with Alzheimer's disease. Cayman's Tau Polyclonal Antibody can be used for immunohistochemistry (IHC), immunocytochemistry (ICC), and Western blot (WB) applications. The antibody recognizes three isoforms of tau at approximately 48, 65, and 75 kDa from human, bovine, mouse, porcine, and rat samples.

References

1. Buée, L., Bussière, T., Buée-Scherrer, V., *et al.* Tau protein isoforms, phosphorylation and role in neurodegenerative disorders. *Brain Res. Rev* **33(1)**, 95-130 (2000).
2. Arendt, T., Stieler, J.T., and Holzer, M. Tau and tauopathies. *Brain Res. Bull.* **126(Pt 3)**, 238-292 (2016).
3. Pîrșcoveanu, D.F.V., Pirici, I., Tudorică, V., *et al.* Tau protein in neurodegenerative diseases - a review. *Rom. J. Morphol. Embryol.* **58(4)**, 1141-1150 (2017).

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