

Tau

Cat.No. 314 006; Polyclonal chicken antibody, 200 µl antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl antibody, lyophilized. For reconstitution add 200 µl H ₂ O, then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) IP: not tested yet ICC: 1 : 500 IHC: 1 : 500 IHC-P/FFPE: 1 : 500
Immunogen	Recombinant protein corresponding to AA 3 to 214 from mouse Tau (UniProt Id: P10637)
Reactivity	Reacts with: rat, mouse. Other species not tested yet.
Specificity	Specific for tau.
matching control	314-0P
Remarks	The antibody binds phosphorylated and non-phosphorylated tau proteins.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

There are two major classes of heat stable microtubule associated proteins (MAPS): MAP 2 (280 kD), and **tau** (55-65 kD). Both protein classes are involved in the regulation of microtubule polymerization in cells. Tau is a neuronal protein that mainly localizes to axons. Hyperphosphorylated tau has been shown to be a major element of paired helical filaments in Alzheimer's disease.

Selected General References

Missorting of tau in neurons causes degeneration of synapses that can be rescued by the kinase MARK2/Par-1. Thies E, Mandelkow EM

The Journal of neuroscience : the official journal of the Society for Neuroscience (2007) 27(11): 2896-907.

Tau phosphorylation, aggregation, and cell toxicity.

Avila J, Santa-Maria I, Pérez M, Hernández F, Moreno F

Journal of biomedicine & biotechnology (2006) 2006(3): 74539.

Alpha-synuclein induces hyperphosphorylation of Tau in the MPTP model of parkinsonism.

Duka T, Rusnak M, Drolet RE, Duka V, Wersinger C, Goudreau JL, Sidhu A

FASEB journal : official publication of the Federation of American Societies for Experimental Biology (2006) 20(13): 2302-12.

Tau is enriched on dynamic microtubules in the distal region of growing axons.

Black MM, Slaughter T, Moshiah S, Obrocka M, Fischer I

The Journal of neuroscience : the official journal of the Society for Neuroscience (1996) 16(11): 3601-19.

A spatial gradient of tau protein phosphorylation in nascent axons.

Mandell JW, Banker GA

The Journal of neuroscience : the official journal of the Society for Neuroscience (1996) 16(18): 5727-40.

Tau proteins: the molecular structure and mode of binding on microtubules.

Hirokawa N, Shiomura Y, Okabe S

The Journal of cell biology (1988) 107(4): 1449-59.

Immunofluorescent staining of cytoplasmic and spindle microtubules in mouse fibroblasts with antibody to tau protein.

Connolly JA, Kalnins VI, Cleveland DW, Kirschner MW

Proceedings of the National Academy of Sciences of the United States of America (1977) 74(6): 2437-40.

Tubulin requires tau for growth onto microtubule initiating sites.

Witman GB, Cleveland DW, Weingarten MD, Kirschner MW

Proceedings of the National Academy of Sciences of the United States of America (1976) 73(11): 4070-4.