

ARG52441 anti-Tau antibody

Package: 50 µl
Store at: -20°C

Summary

Product Description	Chicken Polyclonal antibody recognizes Tau
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, WB
Host	Chicken
Clonality	Polyclonal
Isotype	IgY
Target Name	Tau
Species	Human
Immunogen	Recombinant full length 441 amino acid human tau isoform 2 (NP_005901.2) expressed in and purified from E.Coli.
Conjugation	Un-conjugated
Alternate Names	TAU; Neurofibrillary tangle protein; Paired helical filament-tau; PPND; DDPAC; FTDP-17; MTBT2; Microtubule-associated protein tau; PHF-tau; MSTD; PPP1R103; MTBT1; MAPTL

Application Instructions

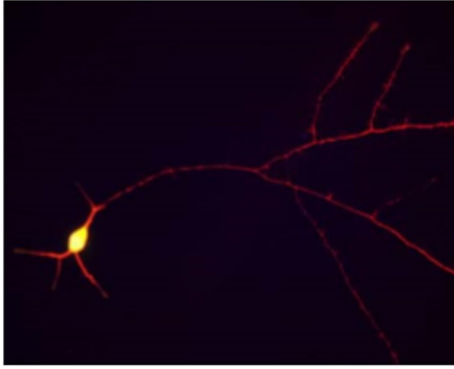
Application table	Application	Dilution
	ICC/IF	1:1000 - 1:2000
	WB	1:5000 - 1:10000
Application Note	Specific for the ~48, 65 & 75k tau isoforms. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties

Form	Liquid
Purification	Total IgY fraction
Buffer	Total IgY fraction in PBS and 10 mM Sodium azide
Preservative	10 mM Sodium azide
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

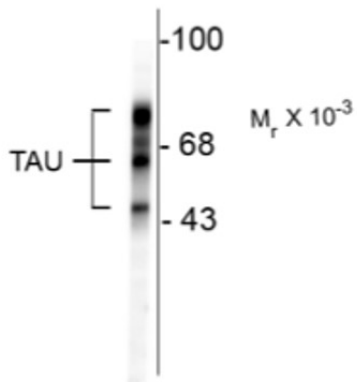
Bioinformation

Gene Symbol	MAPT
Gene Full Name	microtubule-associated protein tau
Background	<p>Tau is a key microtubule-associated protein that plays an important role in the formation of microtubules in axons (Binder et al. 1985). Six tau isoforms have been identified as products of a single gene produced by alternative mRNA splicing (Goedert 1990). Tau mutations have been implicated in many neurodegenerative disorders such as Alzheimer's disease (AD), Pick's disease and progressive supranuclear palsy</p>
Highlight	<p>Related Antibody Duos and Panels: ARG30083 Neuron Development Marker Antibody Duo (Nestin, Tau)</p> <p>Related products: Tau antibodies; Tau ELISA Kits; Tau Duos / Panels; Anti-Chicken IgY secondary antibodies;</p> <p>Related news: 14-3-3η as a promising target for the treatment of Major Depression Disorder Neuronal Development Marker</p>
Research Area	Neuroscience antibody; Signaling Transduction antibody; Neuron Development Study antibody
Calculated Mw	79 kDa
PTM	<p>Phosphorylation at serine and threonine residues in S-P or T-P motifs by proline-directed protein kinases (PDPK1: CDK1, CDK5, GSK3, MAPK) (only 2-3 sites per protein in interphase, seven-fold increase in mitosis, and in the form associated with paired helical filaments (PHF-tau)), and at serine residues in K-X-G-S motifs by MAP/microtubule affinity-regulating kinase (MARK1 or MARK2), causing detachment from microtubules, and their disassembly. Phosphorylation decreases with age. Phosphorylation within tau/MAP's repeat domain or in flanking regions seems to reduce tau/MAP's interaction with, respectively, microtubules or plasma membrane components. Phosphorylation on Ser-610, Ser-622, Ser-641 and Ser-673 in several isoforms during mitosis. Phosphorylation at Ser-548 by GSK3B reduces ability to bind and stabilize microtubules. Phosphorylation at Ser-579 by BRSK1 and BRSK2 in neurons affects ability to bind microtubules and plays a role in neuron polarization. Phosphorylated at Ser-554, Ser-579, Ser-602, Ser-606 and Ser-669 by PHK. Phosphorylation at Ser-214 by SGK1 mediates microtubule depolymerization and neurite formation in hippocampal neurons. There is a reciprocal down-regulation of phosphorylation and O-GlcNAcylation. Phosphorylation on Ser-717 completely abolishes the O-GlcNAcylation on this site, while phosphorylation on Ser-713 and Ser-721 reduces glycosylation by a factor of 2 and 4 respectively. Phosphorylation on Ser-721 is reduced by about 41.5% by GlcNAcylation on Ser-717. Dephosphorylated at several serine and threonine residues by the serine/threonine phosphatase PPP5C.</p> <p>Polyubiquitinated. Requires functional TRAF6 and may provoke SQSTM1-dependent degradation by the proteasome (By similarity). PHF-tau can be modified by three different forms of polyubiquitination. 'Lys-48'-linked polyubiquitination is the major form, 'Lys-6'-linked and 'Lys-11'-linked polyubiquitination also occur.</p> <p>O-glycosylated. O-GlcNAcylation content is around 8.2%. There is reciprocal down-regulation of phosphorylation and O-GlcNAcylation. Phosphorylation on Ser-717 completely abolishes the O-GlcNAcylation on this site, while phosphorylation on Ser-713 and Ser-721 reduces O-GlcNAcylation by a factor of 2 and 4 respectively. O-GlcNAcylation on Ser-717 decreases the phosphorylation on Ser-721 by about 41.5%.</p> <p>Glycation of PHF-tau, but not normal brain TAU/MAPT. Glycation is a non-enzymatic post-translational modification that involves a covalent linkage between a sugar and an amino group of a protein molecule forming ketoamine. Subsequent oxidation, fragmentation and/or cross-linking of ketoamine leads to the production of advanced glycation endproducts (AGES). Glycation may play a role in stabilizing PHF aggregation leading to tangle formation in AD.</p>



ARG52441 anti-Tau antibody ICC/IF image

Immunofluorescence: cultured rat hippocampal neurons stained with Tau antibody (ARG52441) showing staining of tau in red along the neuronal processes.



ARG52441 anti-Tau antibody WB image

Western Blot: rat cortex lysate stained with Tau antibody (ARG52441) showing specific immunolabeling of the ~48, 65 & 75k tau isoforms.
