

Product datasheet

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ARG66960 anti-Tau (C-ter) antibody

Package: 100 μl Store at: -20°C

Summary

Product Description Rabbit Polyclonal antibody recognizes Tau

Tested Reactivity Hu, Ms, Rat

Tested Application ICC/IF, IHC-Fr, IHC-P, WB

Host Rabbit

Clonality Polyclonal

Isotype IgG

Target Name Tau

Species Human

Immunogen Synthetic peptide corresponding to the C-terminal region of Human Tau.

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	1:200 - 1:500
	IHC-Fr	1:200 - 1:400
	IHC-P	1:100 - 1:300
	WB	1:1000 - 1:5000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties

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Form	Liquid	
Purification	Affinity purified.	
Buffer	100 mM Tris Glycine (pH 7.0), 0.025% ProClin 300 and 20% Glycerol.	
Preservative	0.025% ProClin 300	
Stabilizer	20% Glycerol	
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. 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

Promotes microtubule assembly and stability, and might be involved in the establishment and maintenance of neuronal polarity. The C-terminus binds axonal microtubules while the N-terminus binds neural plasma membrane components, suggesting that tau functions as a linker protein between both. Axonal polarity is predetermined by tau localization (in the neuronal cell) in the domain of the cell body defined by the centrosome. The short isoforms allow plasticity of the cytoskeleton whereas the longer isoforms may preferentially play a role in its stabilization.

Function

Promotes microtubule assembly and stability, and might be involved in the establishment and maintenance of neuronal polarity. The C-terminus binds axonal microtubules while the N-terminus binds neural plasma membrane components, suggesting that tau functions as a linker protein between both. Axonal polarity is predetermined by TAU/MAPT localization (in the neuronal cell) in the domain of the cell body defined by the centrosome. The short isoforms allow plasticity of the cytoskeleton whereas the longer isoforms may preferentially play a role in its stabilization. [UniProt]

Highlight

Related Antibody Duos and Panels:

ARG30211 Phospho Tau Antibody Panel (Total, pS396, pS404)

Related products:

Tau antibodies; Tau ELISA Kits; Tau Duos / Panels; Anti-Rabbit IgG secondary antibodies;

Related news:

"Pro-aging factor" tied to immune-related molecule

Research Area

Neuroscience antibody; Signaling Transduction antibody; Neuron Development Study antibody

Calculated Mw

36-79 kDa

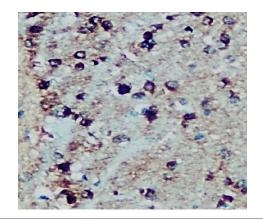
рТМ

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.

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

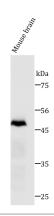
O-glycosylated. O-GlcNAcylation content is around 8.2%. There is reciprocal down-regulation of phosphorylation and O-GlcNAcylation. Phosphorylation on Ser-717 completely abolishes the O-GlcNAcylation on this site, while phosphorylation on Ser-713 and Ser-721 reduces O-GlcNAcylation by a factor of 2 and 4 respectively. O-GlcNAcylation on Ser-717 decreases the phosphorylation on Ser-721 by about 41.5%.

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.



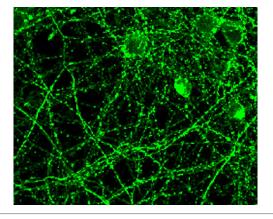
ARG66960 anti-Tau (C-ter) antibody IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded human brain tissue section stained with ARG66960 anti-Tau (C-ter) antibody at 1:200 dilution.



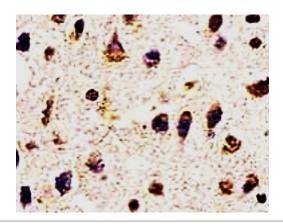
ARG66960 anti-Tau (C-ter) antibody WB image

Western blot: Mouse brain stained with ARG66960 anti-Tau (C-ter) antibody.



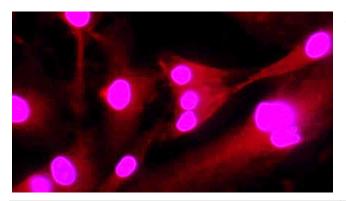
ARG66960 anti-Tau (C-ter) antibody ICC/IF image

Immunofluorescence: Formalin-fixed rabbit primary cortical neurons stained with ARG66960 anti-Tau (C-ter) antibody.



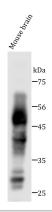
ARG66960 anti-Tau (C-ter) antibody IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded human astroglioma tissue section stained with ARG66960 anti-Tau (C-ter) antibody at $1:300\ \text{dilution}.$



ARG66960 anti-Tau (C-ter) antibody ICC/IF image

Immunofluorescence: Formalin-fixed cells were permeabilized with 0.1% NP-40 in TBS for 10 minutes and blocked with 5% BSA-PBS for 30 minutes at room temperature. Cells were stained with ARG 66960 anti-Tau (C-ter) antibody at 1:200 dilution.



ARG66960 anti-Tau (C-ter) antibody WB image

Western blot: Mouse brain stained with ARG66960 anti-Tau (C-ter) antibody. $\label{eq:continuous} % \begin{subarray}{ll} \end{subarray} % \begin$