

Alexa Fluor[®] 488 anti-Tau Phospho (Thr181) Antibody

Catalog# / Size	846609 / 25 µg 846610 / 100 µg
Clone	M7004D06
Regulatory Status	RUO
Other Names	Microtubule associated protein tau
Isotype	Mouse IgG1, κ
Description	<p>Tau protein promotes microtubule assembly and stability. Tau is abundant in neurons of the central nervous system, and is expressed at low levels in astrocytes and oligodendrocytes. Abnormal hyper-phosphorylation, aggregation, and toxic gain of function of tau is associated with several neurological disorders, including Alzheimer's disease (AD). The major building block of neurofibrillary lesions in AD brains consists of paired helical filaments (PHFs) of abnormally hyperphosphorylated tau. Recent studies indicate that cerebrospinal fluid tau phosphorylated at position threonine 181 has diagnostic utility for several neurological disorders. Six isoforms of tau are generated by alternative splicing of the MAPT gene. These isoforms are distinguished by the number of tubulin binding domains, 3 (3R) or 4 (4R), in the C-terminal of the protein and by one (1N), two (2N), or no (0N) inserts in the N-terminal domain. Tau isoforms are differentially expressed during development.</p>

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	15-mer pT181 Tau peptide conjugated to KLH.
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor [®] 488 under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	IHC-P - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by formalin-fixed paraffin-embedded immunohistochemical staining. For immunohistochemistry, a concentration range of 2.0 - 10 µg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Alexa Fluor[®] 488 has a maximum emission of 519 nm when it is excited at 488 nm.</p> <p>Alexa Fluor[®] and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p>View full statement regarding label licenses</p>
Excitation Laser	Blue Laser (488 nm)
RRID	AB_2814560 (BioLegend Cat. No. 846609) AB_2814561 (BioLegend Cat. No. 846610)

Antigen Details

Structure	Unmodified Tau isoforms have an apparent molecular weight ranging from 33-79 kD. Additional high and low molecular weight Tau species have been observed in brain tissues.
Distribution	Tissue distribution: central nervous system, peripheral ganglia and nerves, kidney, skeletal, and heart muscle. Cellular distribution: cytoskeleton, nucleus, plasma membrane, and cytosol.
Function	Tau promotes microtubule assembly and stability. The short tau isoforms allow plasticity of the cytoskeleton whereas the longer isoforms may preferentially play a role in its stabilization.
Interaction	Tau interacts with Sequestosome-1, Peptidyl-prolyl cis-trans isomerase FKBP4, Casein kinase I isoform delta, Serine/threonine-protein kinase Sgk1, Laforin, Alpha-synuclein
Molecular Family	Phospho-Proteins, Tau
Antigen References	1. Meredith JE Jr, <i>et al.</i> 2013. <i>PLoS One</i> 8(10):e76523. PubMed 2. Goodall CA, <i>et al.</i> 2006. <i>J. Neurol. Neurosurg. Psychiatry</i> 77(1):89. PubMed
Gene ID	4137

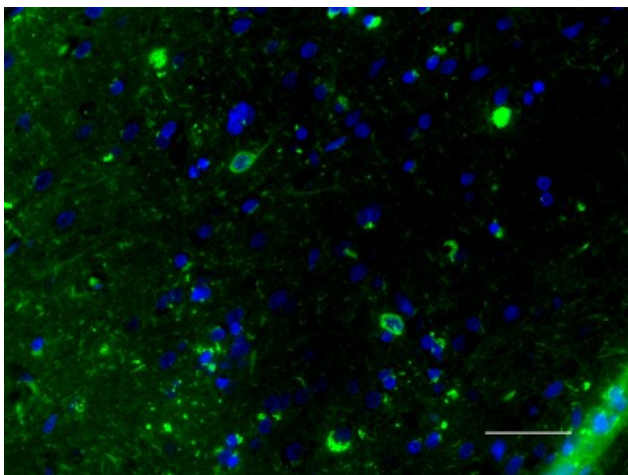
Related Protocols

[Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

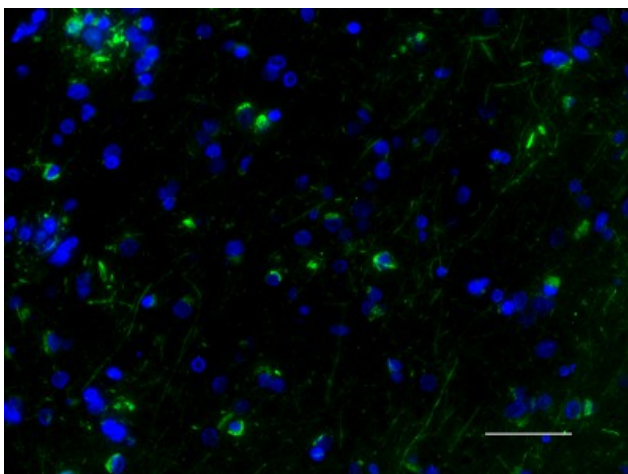
Other Formats

Purified anti-Tau Phospho (Thr181), HRP anti-Tau Phospho (Thr181), Alexa Fluor® 594 anti-Tau Phospho (Thr181), Alexa Fluor® 647 anti-Tau Phospho (Thr181), Alexa Fluor® 488 anti-Tau Phospho (Thr181)

Product Data



IHC staining of Alexa Fluor® 488 anti-Tau Phospho (Thr181) antibody (clone M7004D06) on formalin-fixed paraffin-embedded Alzheimer's disease brain tissue. Following antigen retrieval using Sodium Citrate H.I.E.R. (10 mM, pH 6.0), the tissue was incubated with 2 µg/ml of the primary antibody overnight at 4°C. Nuclei were counterstained with DAPI. The image was captured with a 40X objective. Scale Bar: 50 µm



IHC staining of Alexa Fluor® 488 anti-Tau Phospho (Thr181) antibody (clone M7004D06) on formalin-fixed paraffin-embedded Alzheimer's disease brain tissue. Following antigen retrieval using Sodium Citrate H.I.E.R., the tissue was incubated with 10 µg/ml of the primary antibody overnight at 4°C. Nuclei were counterstained with DAPI. The image was captured with a 40X objective. Scale Bar: 50 µm

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587