

## Alexa Fluor<sup>®</sup> 594 anti-Tau Phospho (Thr181) Antibody

<b>Catalog# / Size</b>	846605 / 25 µg 846606 / 100 µg
<b>Clone</b>	M7004D06
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Microtubule associated protein tau
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	<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

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<b>Verified Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	15-mer pT181 Tau peptide conjugated to KLH.
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor <sup>®</sup> 594 under optimal conditions.
<b>Concentration</b>	0.5 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">IHC-P - Quality tested</a>
<b>Recommended Usage</b>	<p>Each lot of this antibody is quality control tested by formalin-fixed paraffin-embedded immunohistochemical staining. For immunohistochemistry, a concentration of 5.0 µg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Alexa Fluor<sup>®</sup> 594 has an excitation maximum of 590 nm, and a maximum emission of 617 nm.</p> <p>Alexa Fluor<sup>®</sup> and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p><a href="#">View full statement regarding label licenses</a></p>
<b>RRID</b>	AB_2783415 (BioLegend Cat. No. 846605) AB_2783416 (BioLegend Cat. No. 846606)

### Antigen Details

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<b>Structure</b>	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.
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<b>Distribution</b>	Tissue distribution: central nervous system, peripheral ganglia and nerves, kidney, skeletal, and heart muscle. Cellular distribution: cytoskeleton, nucleus, plasma membrane, and cytosol.
<b>Function</b>	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.
<b>Interaction</b>	Tau interacts with Sequestosome-1, Peptidyl-prolyl cis-trans isomerase FKBP4, Casein kinase I isoform delta, Serine/threonine-protein kinase Sgk1, Laforin, Alpha-synuclein
<b>Molecular Family</b>	Phospho-Proteins, Tau
<b>Antigen References</b>	1. Meredith JE Jr, <i>et al.</i> 2013. <i>PLoS One</i> 8(10):e76523. <a href="#">PubMed</a> 2. Goodall CA, <i>et al.</i> 2006. <i>J. Neurol. Neurosurg. Psychiatry</i> 77(1):89. <a href="#">PubMed</a>
<b>Gene ID</b>	<a href="#">4137</a>

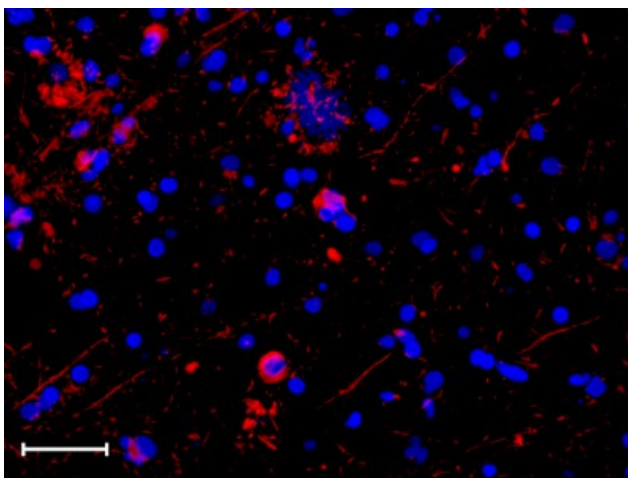
## Related Protocols

[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® 594 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. (Cat. No. 928502), the tissue was incubated with 5 µg/ml of the primary antibody overnight at 4°C. Nuclei were counterstained with DAPI, and the slide was mounted with ProLong™ Gold Antifade Mountant. The image was captured with a 40X objective. Scale Bar: 50 µm.

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