

## Purified anti-Tau, 425-441 Antibody

<b>Catalog# / Size</b>	851101 / 25 µg 851102 / 100 µg
<b>Clone</b>	A16097E
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Microtubule associated protein tau
<b>Isotype</b>	Rat IgG2a, 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. 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, Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Rat
<b>Immunogen</b>	Recombinant C-terminal fragment of human 4R Tau protein encompassing amino acid residues 425-441.
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography.
<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.
<b>Application</b>	<a href="#">WB - Quality tested</a> <a href="#">IHC-P - Verified</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">Western blotting</a> . For Western blotting, the suggested use of this reagent is 1.0 - 5.0 µg/ml. For immunohistochemical staining on formalin-fixed paraffin-embedded tissue sections, a concentration range of 2.0 - 5.0 µg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	This antibody cross-reacts with 3R and 4R human Tau isoforms, and recognizes endogenous human and mouse Tau in brain lysates by WB
<b>RRID</b>	AB_2721766 (BioLegend Cat. No. 851101) AB_2721767 (BioLegend Cat. No. 851102)

### 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.
<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>Biology Area</b>	Cell Biology, Neurodegeneration, Neuroscience, Protein Misfolding and Aggregation
<b>Molecular Family</b>	Tau
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Augustinack JC, <i>et al.</i> 2002. <i>Acta Neuropathol.</i> 103(1):26-35. <a href="#">PubMed</a>.</li> <li>2. Seubert P, <i>et al.</i> 1995. <i>J Biol Chem.</i> 270(32):18917-22. <a href="#">PubMed</a>.</li> <li>3. Dong Y, <i>et al.</i> 2012. <i>PLoS One</i> 7(6):e39386. <a href="#">PubMed</a>.</li> </ol>
<b>Gene ID</b>	<a href="#">4137</a>

## Related Protocols

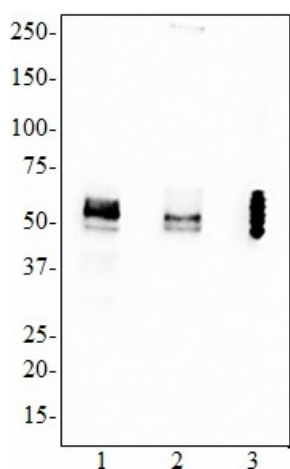
[Western Blotting Protocol](#)

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

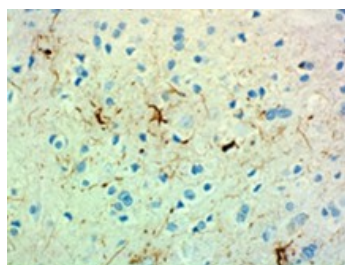
## Other Formats

Purified anti-Tau, 425-441, HRP anti-Tau, 425-441

## Product Data



Western blot of purified anti-Tau, 425-441 antibody (clone A16097E). Lane 1: 20 µg of normal human brain lysate; Lane 2: 20 µg of mouse brain lysate; Lane 3: 50 ng recombinant human Tau ladder. The blot was incubated with 1 µg/mL of the primary antibody overnight at 4°C, followed by incubation with HRP-labeled goat anti-rat IgG secondary antibody. Enhanced chemiluminescence was used as the detection system.



IHC staining of purified anti-Tau, 425-441 antibody (clone A16097E) 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 the primary antibody at 2.0 µg/mL for 1 hour at room temperature. Biotinylated anti-rat IgG, HRP Streptavidin, and DAB (3,3'-diaminobenzidine) substrate were used as the detection system. The slide was counterstained with hematoxylin.

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