

Biotin anti-Tau, 359-373 Antibody

Catalog# / Size	851405 / 25 µg 851406 / 100 µg
Clone	A16097B
Regulatory Status	RUO
Other Names	Microtubule associated protein tau
Isotype	Rat IgG2b, 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 hyperphosphorylation, 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

Verified Reactivity	Human, Mouse, Rat
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Recombinant fragment of human 4R Tau protein (K18) encompassing the microtubule binding domains.
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with biotin under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	WB - Quality tested IHC-P - Verified
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting . For Western blotting, the suggested use of this reagent is 0.5 - 2.0 µg per ml. For immunohistochemistry on formalin-fixed paraffin-embedded tissue, a concentration of 5.0 µg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	This antibody cross-reacts with 3R and 4R human Tau isoforms, and recognizes endogenous human, mouse, and rat Tau in brain lysates by WB.
RRID	AB_2801197 (BioLegend Cat. No. 851405) AB_2801198 (BioLegend Cat. No. 851406)

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

Biology Area

Cell Biology, Neurodegeneration, Neuroscience, Protein Misfolding and Aggregation

Molecular Family

Tau

Antigen References

1. Augustinack JC, *et al.* 2002. *Acta Neuropathol.* 103(1):26-35. [PubMed](#).
2. Seubert P, *et al.* 1995. *J Biol Chem.* 270(32):18917-22. [PubMed](#).
3. Dong Y, *et al.* 2012. *PLoS One* 7(6):e39386. [PubMed](#).

Gene ID

[4137](#)

Related Protocols

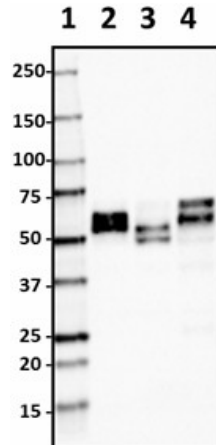
[Western Blotting Protocol](#)

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

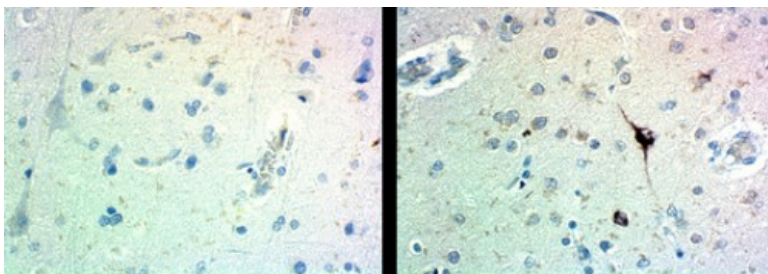
Other Formats

Purified anti-Tau, 359-373, HRP anti-Tau, 359-373, Biotin anti-Tau, 359-373

Product Data



Western blot of Biotin anti-Tau, 359-373 antibody (clone A16097B). Lane 1: Molecular weight marker; Lane 2: 20 μ g of normal human brain lysate; Lane 3: 20 μ g of mouse brain lysate; Lane 4: 20 μ g of rat brain lysate. The blot was incubated with 0.5 μ g/mL of the primary antibody overnight at 4°C, followed by incubation with HRP Streptavidin (Cat. No. 405210). Enhanced chemiluminescence (Cat. No. 426302) was used as the detection system.



IHC staining of Biotin anti-Tau, 359-373 antibody (clone A16097B) on formalin-fixed paraffin-embedded normal human (left panel) and Alzheimer's disease (right panel) brain tissues. Following antigen retrieval using Sodium Citrate H.I.E.R (Cat. No. 928502), the tissues were incubated with 5 μ g/ml of the primary antibody overnight at 4°C. For detection, the HRP labeling reagent and DAB from BioLegend Ultra Streptavidin (USA) HRP Detection Kit was used (Multi-Species, component #5, DAB; Cat. No. 929901). The slides were counterstained with hematoxylin, according to the protocol provided. Scale Bar: 40 μ m

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