

Purified anti-Tau, 269-281 Antibody

Catalog# / Size	850601 / 25 µg 850602 / 100 µg
Clone	A16040D
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 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

Reactivity	Human, Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Tau peptide encompassing amino acid residues 269-281 conjugated to KLH
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	WB - Quality tested IHC-P, ELISA - 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 1.0 - 5.0 µg per ml. For immunohistochemistry of paraffin-embedded tissues, the suggested use of this reagent is 1.0 - 5.0 µg per ml. For ELISA, the suggested use of this reagent is 0.02 - 1.0 µg per ml. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	This antibody cross-reacts with 2N3R and 2N4R Tau isoforms, and recognizes endogenous human and murine Tau in brain lysates by WB.
RRID	AB_2716011 (BioLegend Cat. No. 850601) AB_2716012 (BioLegend Cat. No. 850602)

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	<ol style="list-style-type: none"> 1. Augustinack JC, <i>et al.</i> 2002. <i>Acta Neuropathol.</i> 103(1):26-35. PubMed. 2. Seubert P, <i>et al.</i> 1995. <i>J Biol Chem</i> 270(32):1817-22. PubMed. 3. Dong Y, <i>et al.</i> 2012. <i>PLoS One</i> 7(6):e39386. PubMed.
Gene ID	4137

Related Protocols

[Western Blotting Protocol](#)

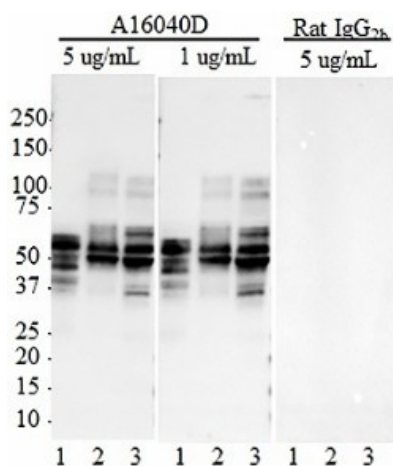
[Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

[ELISPOT Protocol](#)

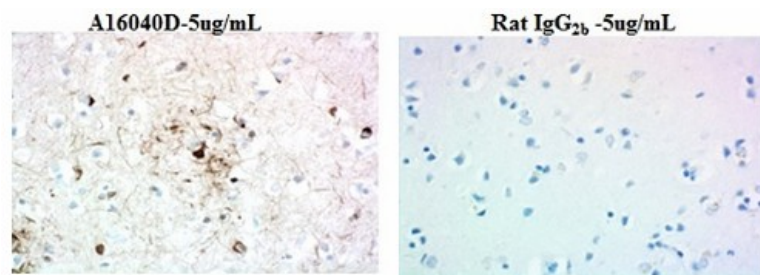
Other Formats

Purified anti-Tau, 269-281 , Alexa Fluor® 647 anti-Tau, 269-281

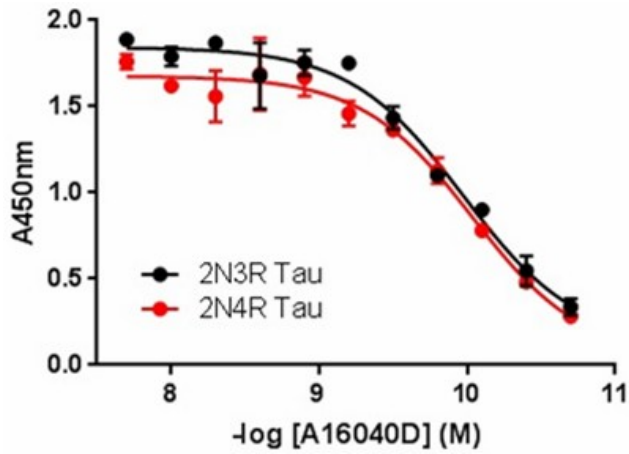
Product Data



Western blots of anti-Tau, 269-281 antibody (clone A16040D) and isotype-matched control rat IgG2b, κ . Lane 1: 20 μ g of normal human brain lysate; Lanes 2 & 3: 20 μ g of mouse brain lysates. Blots were incubated overnight at 4°C with 1 or 5 μ g/ml of primary antibody, followed by incubation with horseradish peroxidase labeled goat anti-rat IgG secondary antibody.



IHC staining of anti-Tau, 269-281 antibody (clone A16040D) and isotype-matched control rat IgG2b on formalin-fixed paraffin-embedded Alzheimer's disease brain tissue. Following antigen retrieval using Sodium Citrate and 0.25% triton X-100, the tissue was incubated with the primary antibody at 5 μ g/ml overnight at 4°C. Biotinylated anti-rat IgG, HRP Streptavidin, and DAB (3,3'-diaminobenzidine) substrate were used as the detection system.



Direct ELISA of purified anti-Tau, 269-281 antibody (clone A16040D) binding to plate-immobilized human 2N3R and 2N4R Tau proteins. ELISA was performed by coating wells with 100 ng of each recombinant Tau protein. The wells were then incubated with the primary antibody at 37°C for 45 minutes, followed by incubation with horseradish peroxidase labeled goat anti-rat secondary antibody. TMB (3, 3', 5, 5' tetramethylbenzidine) was used as the detection system.

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