

Purified anti-Tau Phospho (Thr231) Antibody (Previously Covance catalog# MMS-545P)

Catalog# / Size	828903 / 25 µL 828901 / 100 µL
Clone	PHF-6
Regulatory Status	RUO
Other Names	Microtubule-associated protein tau, PHF-tau, paired helical filament-tau, neurofibrillary tangle protein, microtubule-associated protein tau, isoform 4, G protein beta1/gamma2 subunit-interacting factor 1
Previously	Covance Catalog# MMS-545P
Isotype	Mouse IgG1, κ
Description	Paired helical filaments (PHFs) are the major building blocks of neurofibrillary lesions in Alzheimer's disease brains and are composed of hyperphosphorylated tau protein. Predominantly expressed in axons, alternatively spliced forms of tau comprise a family of microtubule-associated proteins that normally promote and stabilize the assembly of microtubules. PHF-tau differs from normal tau by its abnormal hyperphosphorylation, which results in decreased binding of tau to microtubules. The decreased affinity of PHF-tau for microtubules, coupled with reduced levels of normal tau, destabilizes microtubules leading to an impairment of axonal transport, neuronal death and the aggregation of PHFs. Therefore, hyperphosphorylation of tau is believed to be a key event in the pathogenesis of Alzheimer's disease.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	The PHF-6 antibody was raised using PHF-tau preparations from human brain.
Formulation	Phosphate-buffered solution; no preservatives or carrier proteins.
Preparation	The antibody was purified by affinity chromatography.
Concentration	1.0 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Please note the storage condition for this antibody has been changed from -20°C to between 2°C and 8°C. You can also check your vial or your CoA to find the most accurate storage condition for this antibody.
Application	WB
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting . The optimal working dilution should be determined for each specific assay condition. • WB: 1:1,000
Application Notes	This antibody is effective in immunoblotting (WB). The PHF-6 antibody reacts with human tau phosphorylated at Thr 231.
Application References	
(PubMed link indicates BioLegend citation)	<ol style="list-style-type: none">1. Lasagna-Reeves CA, Castillo-Carranza DL, Sengupta U, Sarmiento J, Troncoso J, Jackson GR, and Kaye R. Identification of oligomers at early stages of tau aggregation in Alzheimer's disease. <i>FASEB J</i>, 26: 1946-1959, May 2012.2. Mitchell TW, Nissanov J, Han LY, Mufson EJ, Schneider JA, Cochran EJ, Bennett DA, Lee VM, Trojanowski JQ, Arnold SE. Novel method to quantify neuropil threads in brains from elders with or without cognitive impairment. <i>J Histochem Cytochem</i> 48(12):1627-1637, 2000.3. Hong M, Chen D, Klein P, Lee V. Lithium reduces tau phosphorylation by inhibition of glycogen

- synthase kinase-3. *J Biol Chem* 272(40):25326-25332, 1997.
4. Bramblett GT, Goedert M, Jakes R, Merrick SE, Trojanowski JQ, Lee VM. Abnormal tau phosphorylation at Ser396 in Alzheimer's disease recapitulates development and contributes to reduced microtubule binding. *Neuron* 10(6):1089-1099, 1993.

Product Citations

1. Loeffler D, *et al.* 2015. *Exp Gerontol.* 67: 15-18. [PubMed](#)

RRID

AB_2715849 (BioLegend Cat. No. 828903)
AB_2564924 (BioLegend Cat. No. 828901)

Antigen Details

Biology Area	Cell Biology, Neurodegeneration, Neuroscience, Protein Misfolding and Aggregation
Molecular Family	Phospho-Proteins, Tau
Gene ID	4137

Related Protocols

[Western Blotting Protocol](#)

Other Formats

Purified anti-Tau Phospho (Thr231)

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