

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

<b>Catalog# / Size</b>	828903 / 25 µL 828901 / 100 µL
<b>Clone</b>	PHF-6
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	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
<b>Previously</b>	Covance Catalog# MMS-545P
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	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

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<b>Verified Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	The PHF-6 antibody was raised using PHF-tau preparations from human brain.
<b>Formulation</b>	Phosphate-buffered solution; no preservatives or carrier proteins.
<b>Preparation</b>	The antibody was purified by affinity chromatography.
<b>Concentration</b>	1.0 mg/ml
<b>Storage &amp; Handling</b>	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.
<b>Application</b>	<a href="#">WB</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">Western blotting</a> .  The optimal working dilution should be determined for each specific assay condition. • <b>WB:</b> 1:1,000
<b>Application Notes</b>	This antibody is effective in immunoblotting (WB).  The PHF-6 antibody reacts with human tau phosphorylated at Thr 231.
<b>Application References</b>	<ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>3. Hong M, Chen D, Klein P, Lee V. Lithium reduces tau phosphorylation by inhibition of glycogen</li> </ol>
<b>(PubMed link indicates BioLegend citation)</b>	

- 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

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<b>Biology Area</b>	Cell Biology, Neurodegeneration, Neuroscience, Protein Misfolding and Aggregation
<b>Molecular Family</b>	Phospho-Proteins, Tau
<b>Gene ID</b>	<a href="#">4137</a>

## Related Protocols

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[Western Blotting Protocol](#)

## Other Formats

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Purified anti-Tau Phospho (Thr231)

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