

# Anti-Phospho-Tau (T231) Antibody [PSH01-05]

## HA721569



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IHC-P
<b>Molecular Wt:</b>	Predicted band size: 46 kDa
<b>Clone number:</b>	PSH01-05

<b>Description:</b>	Tau, also known as MAPT (microtubule-associated protein tau), MAPTL, MTBT1 or TAU, is a 758 amino acid protein that localizes to the cytoplasm, as well as to the cytoskeleton and the cell membrane, and contains four Tau/MAP repeats. Expressed in neuronal tissue and existing as multiple alternatively spliced isoforms, Tau functions to promote microtubule assembly and stability and is thought to be involved in the maintenance of neuronal polarity. Tau may also link microtubules with neural plasma membrane components and, addition to its role in microtubule stability, is also necessary for cytoskeletal plasticity. Tau is highly subject to a variety of post-translational modifications, including phosphorylation on serine and threonine residues, polyubiquitination (and subsequent proteasomal degradation) and glycation of specific Tau isoforms. Defects in the gene encoding Tau are associated with Alzheimers disease, pallido-ponto-nigral degeneration (PPND), corticobasal degeneration (CBD) and progressive supranuclear palsy (PSP).
<b>Immunogen:</b>	Synthetic phospho-peptide corresponding to residues surrounding Thr231 of human Tau-F (P10636-8).
<b>Positive control:</b>	Human brain tissue lysate, rat brain tissue lysate, human brain tissue, mouse brain tissue, rat brain tissue.
<b>Subcellular location:</b>	Cytoplasm, cytosol, Cell membrane, cytoskeleton, Cell projection, axon, dendrite, Secreted.
<b>Database links:</b>	SwissProt: P10636-8 Human   P10637 Mouse   P19332 Rat
<b>Recommended Dilutions:</b>	
<b>WB</b>	1:1,000
<b>IHC-P</b>	1:10,000
<b>Storage Buffer:</b>	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
<b>Storage Instruction:</b>	Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.
<b>Purity:</b>	Protein A affinity purified.

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Technical: 0086-571-89986345

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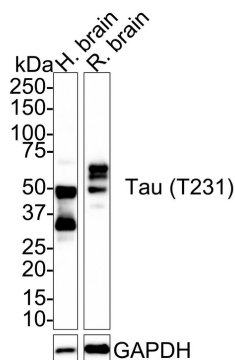
Applications: WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

## Images

**Fig1:** Western blot analysis of Phospho-Tau (T231) on different lysates with Rabbit anti-Phospho-Tau (T231) antibody (HA721569) at 1/1,000 dilution.

Lane 1: Human brain tissue lysate

Lane 2: Rat brain tissue lysate



Lysates/proteins at 50 µg/Lane.

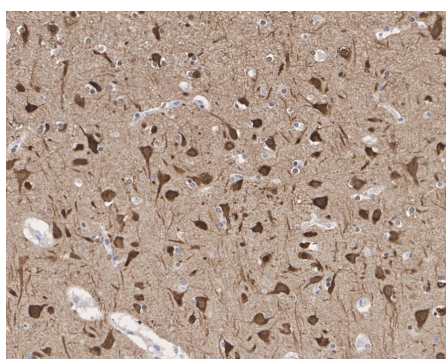
Predicted band size: 46 kDa

Observed band size: 35-70 kDa

Exposure time: 2 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDm/TBST for 1 hour at room temperature. The primary antibody (HA721569) at 1/1,000 dilution was used in 5% NFDm/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:100,000 dilution was used for 1 hour at room temperature.



**Fig2:** Immunohistochemical analysis of paraffin-embedded human brain tissue with Rabbit anti-Phospho-Tau (T231) antibody (HA721569) at 1/10,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA721569) at 1/10,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

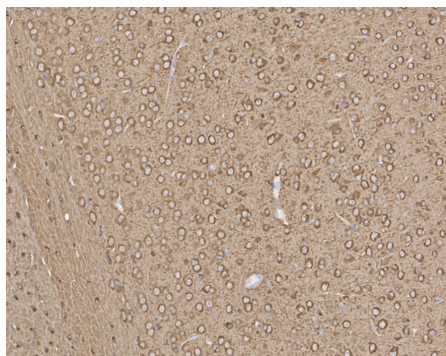
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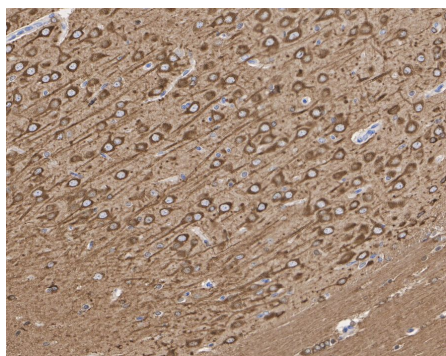
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**Fig3:** Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-Phospho-Tau (T231) antibody (HA721569) at 1/10,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA721569) at 1/10,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



**Fig4:** Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-Phospho-Tau (T231) antibody (HA721569) at 1/10,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA721569) at 1/10,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

### Background References

1. Wang, HY. et al. 2012. Reducing amyloid-related Alzheimer's disease pathogenesis by a small molecule targeting filamin A. J. Neurosci. 32: 9773-9784.
2. Kamnaksh, A. et al. 2012. Neurobehavioral, cellular, and molecular consequences of single and multiple mild blast exposure. Electrophoresis. 33: 3680-3692.

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