

## Anti-Non-Phospho-Tau (T217) Antibody [PSH16-43] - BSA and Azide free (Capture)

# HA723843



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	ELISA(Cap)
<b>Clone number:</b>	PSH16-43

**Description:** 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).

**Immunogen:** Synthetic peptide within Human Tau protein aa 212-223 (P10636-8).

**Positive control:** Human Tau/Tau441, C-His (isoform 2N4R) Protein (HA210937).

**Subcellular location:** Cell membrane. Cytoplasm. Secreted.

**Database links:** SwissProt: P10636-8 Human | P10637 Mouse

### Recommended Dilutions:

**ELISA(Cap)** Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH10-42] to Tau antibody (Detector) (HA723209) and Recombinant Human Non-Phospho-Tau (T217) protein (HA210937) as the standard. The reference range value is 0.117-30 ng/mL.

**Storage Buffer:** PBS (pH7.4).

**Storage Instruction:** Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

**Purity:** Protein A affinity purified.

## Hangzhou Huaan Biotechnology Co., Ltd.

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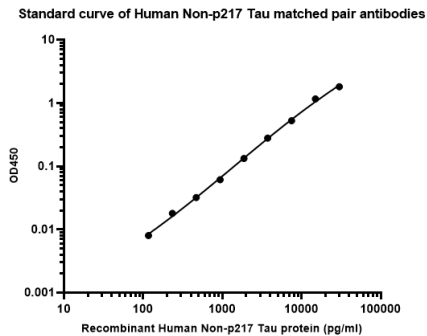
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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

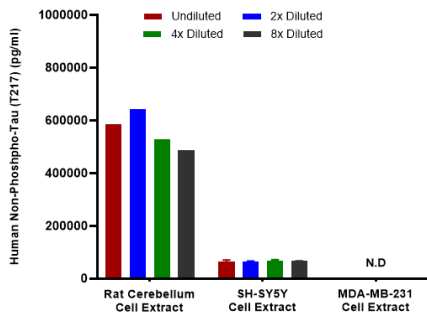
**Fig1:** Sandwich ELISA analysis of Human Non-p217 Tau matched pair antibodies

Capture: HA723843, Non-Phospho-Tau (T217) Rabbit mAb [PSH16-43]  
Detector: HA723209, Non-Phospho-Tau (T217) Rabbit mAb [PSH10-42]



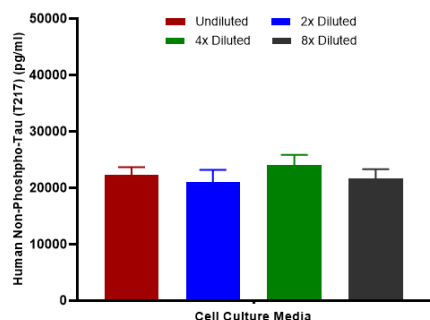
Elisa assay was performed by coating wells of a 96-well plate with 100  $\mu$ l per well of capture antibody (HA723843) diluted in carbonate/bicarbonate buffer, at a concentration of 5ug/ml overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150  $\mu$ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human Phospho-Tau (T217) protein (HA210937) starting from 30000 pg/ml to 0 pg/ml and detect antibody (HA723209, Biotin, 0.2  $\mu$ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 100  $\mu$ l per well of SA-HRP for 0.5 hour at 30 $^{\circ}$ C with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

**Fig2:** Interpolated concentrations of native Non-p217 Tau in rat cerebellum, SH-SY5Y and MDA-MB-231 extract samples based on a 1000  $\mu$ g/ml extract load.



Capture: HA723843, Non-Phospho-Tau (T217) Rabbit mAb [PSH16-43]  
Detector: HA723209, Non-Phospho-Tau (T217) Rabbit mAb [PSH10-42]

Interpolated concentration of native Non-p217 Tau was measured in duplicate at different sample concentrations and interpolated from the Non-p217 Tau standard curves. The interpolated dilution factor corrected values were plotted (mean  $\pm$  SD, n=2). The mean Non-p217 Tau concentration was determined to be 561,264 pg/mL in rat cerebellum and 66,440 pg/mL in SH-SY5Y cell extract, There was no detectable signal in MDA-MB-231 cell extract.



**Fig3:** Interpolated concentrations of spiked Non-p217 Tau in cell culture media samples.

Capture: HA723843, Non-Phospho-Tau (T217) Rabbit mAb [PSH16-43]

Detector: HA723209, Non-Phospho-Tau (T217) Rabbit mAb [PSH10-42]

The concentrations of Non-p217 Tau were measured in duplicates, interpolated from the Non-p217 Tau standard curves and corrected for sample dilution. Diluted samples are as follows: 50% cell culture media with FBS. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2).

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

### Background References

1. Bayoumy S, Verberk IMW, den Dulk B, et al. Clinical and analytical comparison of six Simoa assays for plasma P-tau isoforms P-tau181, P-tau217, and P-tau231. *Alzheimers Res Ther.* 2021;13(1):198. Published 2021 Dec 4. doi:10.1186/s13195-021-00939-9
2. Janelidze S, Berron D, Smith R, et al. Associations of Plasma Phospho-Tau217 Levels With Tau Positron Emission Tomography in Early Alzheimer Disease. *JAMA Neurol.* 2021;78(2):149-156. doi:10.1001/jamaneurol.2020.4201

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