

## Tau(Phospho-Ser404) Antibody

Catalog No: #11112

Package Size: #11112-1 50ul #11112-2 100ul

Orders: [order@signalwayantibody.com](mailto:order@signalwayantibody.com)Support: [tech@signalwayantibody.com](mailto:tech@signalwayantibody.com)

## Description

Product Name	Tau(Phospho-Ser404) Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatography using non-phosphopeptide.
Applications	WB IHC IF
Species Reactivity	Hu Ms Rt
Specificity	The antibody detects endogenous level of Tau only when phosphorylated at serine 404.
Immunogen Type	Peptide-KLH
Immunogen Description	Peptide sequence around phosphorylation site of serine 404 (D-T-S(p)-P-R) derived from Human Tau.
Target Name	Tau
Modification	Phospho
Other Names	MAPT; MTAPT; MTBT1; Neurofibrillary tangle protein; PHF-tau
Accession No.	Swiss-Prot: P10636NCBI Protein: NP_001116538.1
Concentration	1.0mg/ml
Formulation	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C for long term preservation (recommended). Store at 4°C for short term use.

## Application Details

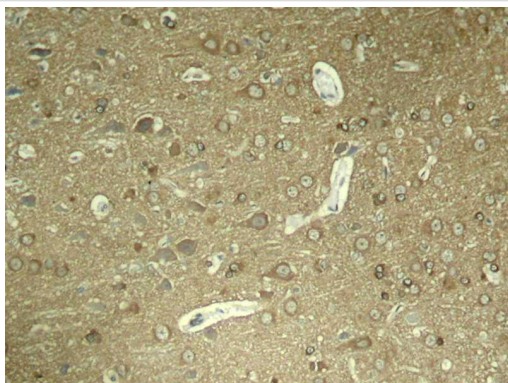
Predicted MW: 48 62 78 kd

Western blotting: 1:500~1:1000

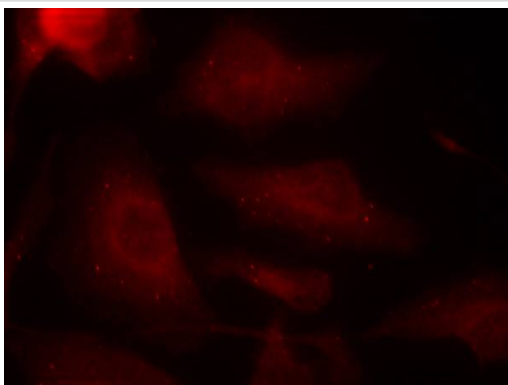
Immunohistochemistry: 1:50~1:100

Immunofluorescence: 1:100~1:200

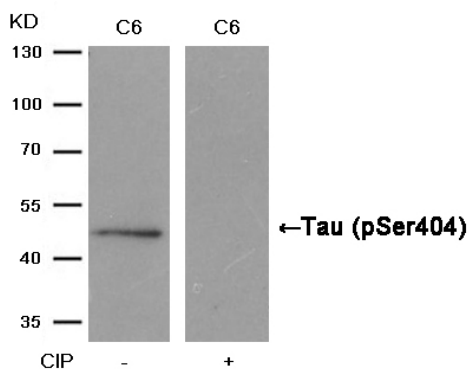
## Images



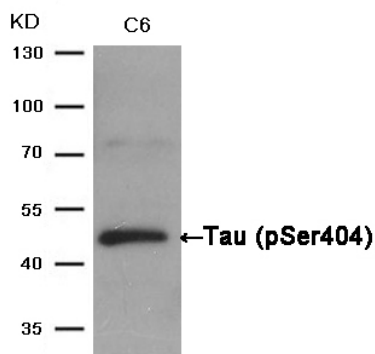
Immunohistochemical analysis of paraffin-embedded rat hippocampal region tissue from a model with Alzheimer



Immunofluorescence staining of methanol-fixed HeLa cells using Tau(Phospho-Ser404) Antibody #11112.



Western blot analysis of extracts from C6 cells, treated with calf intestinal phosphatase (CIP), using Tau (Phospho-Ser404) Antibody #11112.



Western blot analysis of extracts from C6 cells using Tau(Phospho-Ser404) Antibody #11112.

## Background

Promotes microtubule assembly and stability, and might be involved in the establishment and maintenance of neuronal polarity. The C-terminus binds axonal microtubules while the N-terminus binds neural plasma membrane components, suggesting that tau functions as a linker protein between both. Axonal polarity is predetermined by tau localization (in the neuronal cell) in the domain of the cell body defined by the centrosome. The short isoforms allow plasticity of the cytoskeleton whereas the longer isoforms may preferentially play a role in its stabilization.

Li G, Yin H, et.al. (2004) J Biol Chem ; 279(16): 15938-45.

Noble W, et al. (2003) Neuron ; 38(4): 555-65.

Giasson BI, et al.(2002). Biochemistry; 41(51): 15376-87.

Lee G., et.al. (1989). Neuron 2:1615-1624.

Andreadis A.et.al. (1992) Biochemistry 31:10626-10633.

## Published Papers

el at., Gypenoside IX restores Akt/GSK-3 $\beta$  pathway and alleviates Alzheimer's disease-like neuropathology and cognitive deficitsInAging (Albany NY)On2023 Dec 12byLing Lei?1?2,?Yong Luo et al..PMID:?38095632, , (2023)

[PMID:38095632](https://pubmed.ncbi.nlm.nih.gov/38095632/)

el at., HIF-1 $\alpha$  Causes LCMT1/PP2A Deficiency and Mediates Tau Hyperphosphorylation and Cognitive Dysfunction during Chronic Hypoxia. In Int J

Mol Sci on 2022 Dec 17 by Ling Lei, Jun Feng,et al..PMID:36555780 , (2022)

[PMID:36555780](#)

el at., A novel small-molecule PROTAC selectively promotes tau clearance to improve cognitive functions in Alzheimer-like models. In Theranostics on 2021 Mar 11 by Weijin Wang, Qiuzhi Zhou, et al..PMID:33859747 , (2021)

[PMID:33859747](#)

el at., 14-3-3 $\zeta$  Captures SET in the Cytoplasm, Mediating Tau Pathology and Cognitive Impairments., , (2021)

[PMID:](#)

el at., A novel dephosphorylation targeting chimera selectively promoting tau removal in tauopathies. In Signal Transduct Target Ther on 2021 Jul 14 by Jie Zheng, Na Tian

et al..PMID:34262014 , (2021)

[PMID:34262014](#)

el at., Protection of melatonin against acidosis induced neuronal injuries.In J Cell Mol Med on 2020 May 4 by Shi Y, Cai EL, et al..PMID: 32364678 , (2020)

[PMID:32364678](#)

el at., Polyphyllin I attenuates cognitive impairments and reduces AD-like pathology through CIP2A-PP2A signaling pathway in 3XTg-AD mice. In FASEB J

on 2020 Dec by Ying Zhou, Dichen Yang, et al..PMID:33070372 , (2020)

[PMID:33070372](#)

el at., FoxO1 overexpression reduces A $\beta$  production and tau phosphorylation in vitro. In Neurosci Lett on 2020 Nov 1 by Wei Zhang, Shanshan Bai,et al..PMID:32860886 , (2020)

[PMID:32860886](#)

el at., Correcting abnormalities in miR-124/PTPN1 signaling rescues tau pathology in Alzheimer's disease. In J Neurochem on 2020 Aug by Tong-Yao Hou, Yang Zhou,et al..PMID:31951013 , (2020)

[PMID:31951013](#)

el at., MAPT/Tau accumulation represses autophagy flux by disrupting IST1-regulated ESCRT-III complex formation: a vicious cycle in Alzheimer neurodegeneration. In Autophagy on 2020 Apr by Qiong Feng, Yu Luo, et al..PMID:31223056 , (2020)

[PMID:31223056](#)

el at., Liraglutide Ameliorates Hyperhomocysteinemia-Induced Alzheimer-Like Pathology and Memory Deficits in Rats via Multi-molecular TargetIng. In Neurosci Bull on 2019 Jan 10 by Zhang Y, Xie JZ, et al..PMID: 30632006 , (2019)

[PMID:30632006](#)

el at., Neurotrophin receptor p75 mediates amyloid  $\beta$ -Induced tau pathology. In Neurobiol Dis on 2019 Dec by Shen LL, Li WW, et al..PMID:31394202 , (2019)

[PMID:31394202](#)

el at., Moringa Oleifera Alleviates Homocysteine-Induced Alzheimer's Disease-Like Pathology and Cognitive Impairments.In J Alzheimers Dis.On 2018 by Mahaman YAR, Huang F et al..PMID:29710724 , (2018)

[PMID:29710724](#)

el at., Trillium tschonoskii maxim extract attenuates abnormal Tau phosphorylation.Neural Regen Res.In Neural Regen Res.On 2018 May by Luo HB, Shang N. et al..PMID: 29863023 , (2018)

[PMID:29863023](#)

el at., Evidence of altered depression and dementia-related proteins in the brains of young rats after ovariectomy. In J Neurochem. On 2018 Aug 8 by Fang YY1, Zeng P et al..PMID: 29939407 , (2018)

[PMID:29939407](#)

el at., CIP2A Causes Tau/APP Phosphorylation, Synaptopathy, and Memory Deficits in Alzheimer s Disease.In Cell Rep. On 2018 Jul 17 by Shentu

YP, Huo Y et al..PMID:30021167, , (2018)

[PMID:30021167](#)

el at., Methanolic extract of Tamarix Gallica attenuates hyperhomocysteinemia induced AD-like pathology and cognitive impairments in rats.In Aging (Albany NY). On 2018 Nov 12 by Salissou MTM, Mahaman YAR et al..PMID:30425189, , (2018)

[PMID:30425189](#)

el at., Tau-Induced Ca<sup>2+</sup>/Calmodulin-Dependent Protein Kinase-IV Activation Aggravates Nuclear Tau Hyperphosphorylation .In Neurosci Bull. On 2018 Apr by Wei YP, Ye JW et al..PMID: 28646348, , (2018)

[PMID:](#)  
[28646348](#)

el at., Adiponectin Attenuates Streptozotocin-Induced Tau Hyperphosphorylation and Cognitive Deficits by Rescuing PI3K/Akt/GSK-3 $\beta$  Pathway. In Neurochem Res.On 2018 Feb by Xu ZP, Gan GS et al..PMID: 29098530, , (2018)

[PMID:](#)  
[29098530](#)

el at., Sex dimorphism profile of Alzheimer's disease-type pathologies in an APP/PS1 mouse model.In Neurotox Res on 2016 Feb by Shu-Sheng Jiao, Xian-Le Bu et al..PMID:26707129, , (2016)

[PMID:26707129](#)

el at., Brain-derived neurotrophic factor protects against tau-related neurodegeneration of Alzheimer's disease.In Transl Psychiatry on 2016 Oct 4 by S-S Jiao , L-L Shen et al..PMID:27701410 , , (2016)

[PMID:27701410](#)

el at., FLZ alleviates the memory deficits in transgenic mouse model of Alzheimer's disease via decreasing beta-amyloid production and tau hyperphosphorylation. In PLoS One

on 2013 Nov 4 by Xiu-Qi Bao, Ning Li, et al..PMID: 24223757, , (2013)

[PMID:24223757](#)

el at., Neuroglobin attenuates Alzheimer-like tau hyperphosphorylation by activating Akt signaling.In J Neurochem on 2012 Jan by Chen LM, Xiong YS,et al..PMID:21496024, , (2012)

[PMID:21496024](#)

el at., Synaptic released zinc promotes tau hyperphosphorylation by inhibition of protein phosphatase 2A (PP2A). In J Biol Chem on 2012 Mar 30 by Xu-Ying Sun, Yu-Ping Wei, et al..PMID: 22334661

, , (2012)

[PMID:22334661](#)

---

Note: This product is for in vitro research use only and is not intended for use in humans or animals.