# Tau(Phospho-Ser404) Antibody

Catalog No: #11112

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



Orders: order@signalwayantibody.com Support: tech@signalwayantibody.com

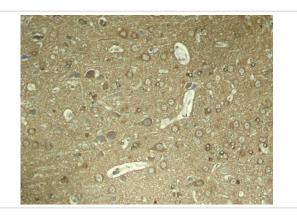
## Description

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 chromatogramphy using non-phosphopeptide.
Applications	WB IHC IF
Species Reactivity	Human;Mouse;Rat
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.
Conjugates	Unconjugated
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 Mg2+ and Ca2+), 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.

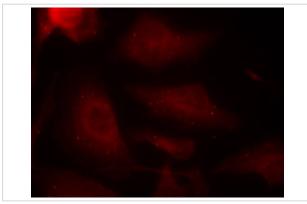
## **Application Details**

Predicted MW: 48 62 78 kd
Western blotting: 1:500~1:1000
Immunohistochemistry: 1:50~1:100
Immunofluorescence: 1:100~1:200

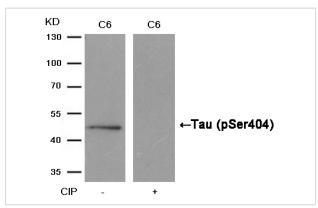
## **Images**



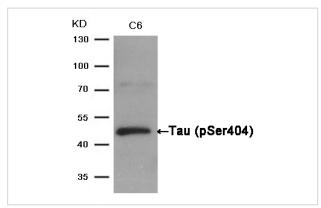
Immunohistochemical analysis of paraffin-embedded rat hippocampal region tissue from a model with Alzheimer



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.

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

## **Published Papers**

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., Liraglutide Ameliorates Hyperhomocystelnemia-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., Neurotrophln receptor p75 mediates amyloid β-Induced tau pathology. In Neurobiol Dis on 2019 Dec by Shen LL, Li WW, et al..PMID:31394202, , (2019)

### PMID:31394202

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., Tau-Induced Ca2+/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 Pl3K/Akt/GSK-3β Pathway. In Neurochem Res.On 2018 Feb by Xu ZP, Gan GS et al..PMID: 29098530, , (2018)

#### PMID:

### 29098530

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

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., 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., 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 Aβ 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., 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., 14-3-3ζ 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., HIF-1α 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., Gypenoside IX restores Akt/GSK-3β 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

el at., Physalin B reduces tau phosphorylation and cell apoptosis in HEK293 cells by activating FoxO1. In Curr Mol Pharmacol on 2024 by Wei Zhang, Yating Shi,et al..PMID:37489791, , (2024)

#### PMID:37489791

el at., Correcting abnormalities in miR-124/PTPN1 signaling rescues tau pathology in Alzheimer's. In J Neurochem on 2020 Aug by Tong-Yao Hou, Yang Zhou,et al..PMID:31951013, , (2024)

#### PMID:31951013

el at., Physalin B reduces tau phosphorylation and cell apoptosis in HEK293 cells by activating FoxO1. In Curr Mol Pharmacol on 2024 by Wei Zhang, Yating Shi,et al..PMID:37489791, , (2024)

#### PMID:37489791

el at., Effectiveness and mechanisms of combined use of antioxidant nutrients in protecting against oxidative stress-induced neuronal loss and related neurological deficits. In CNS Neurosci Ther on 2024 Jul by Lu Wang, Yingjuan Wei,et al..PMID:39072940, , (2024)

## PMID:39072940

el at., Selective degradation of hyperphosphorylated tau by proteolysis-targeting chimeras ameliorates cognitive function in Alzheimerβ s disease model mice. In Front Pharmacol on 2024 Jun 11 by Dongping Yao, Ting Li,et al..PMID:38919259, , (2024)

#### PMID:38919259

el at., Correcting abnormalities in miR-124/PTPN1 signaling rescues tau pathology in Alzheimer's. In J Neurochem on 2020 Aug by Tong-Yao Hou, Yang Zhou,et al..PMID:31951013, , (2024)

#### PMID:31951013

Xing Jun Jiang; Yan Qing Wu; Rong Ma; Yan Min Chang; Lu Lu Li; Jia Hui Zhu; Gong Ping Liu; Gang Li el at., PINK1 Alleviates Cognitive Impairments via Attenuating Pathological Tau Aggregation in a Mouse Model of Tauopathy, (2022)

#### PMID:

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