# Tau(Phospho-Ser396) Antibody

Catalog No: #11102

Package Size: #11102-1 50ul #11102-2 100ul



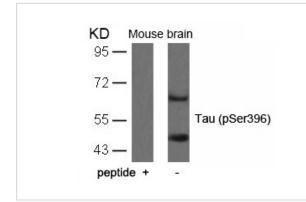
Orders: order@signalwayantibody.com Support: tech@signalwayantibody.com

Host SpeciesRabbitClonalityPolyclonalPurificationAntibodies 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. Non-phospho specific antibodies were removed by chromatography using non-phosphopeptide.ApplicationsWB IHCSpecies ReactivityHu Ms RtSpecificityThe antibody detects endogenous level of Tau only when phosphorylated at serine396.Immunogen TypePeptide-KLHImmunogen DescriptionPeptide sequence around phosphorylation site of serine 396 (Y-K-S(p)-P-V) derived from Human Tau.Target NameTauModificationPhosphoOther NamesMAPT; MTAPT; MTBT1; Neurofibrillary tangle protein; PHF-tauAccession No.Swiss-Prot: P10636NCBI Protein: NP_001116538.1Concentration1.0mg/ml	Description	
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	Concentration	1.0mg/ml
sodium azide and 50% glycerol.	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.	Storage	Store at -20°C for long term preservation (recommended). Store at 4°C for short term use.

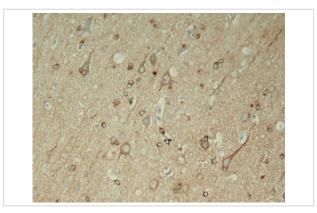
## **Application Details**

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

## Images



Western blot analysis of extracts from mouse brain tissue using Tau(Phospho-Ser396) Antibody #11102 and the same antibody preincubated with blocking peptide.



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

## 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.

Puig B, et al. (2005) Acta Neuropathol (Berl). 110(3):261-268.

DeGiorgis JA, et al. (2005) J Proteome Res. 4(2): 306-315.

Alonso Adel C, et al. (2004) J Biol Chem. 279(33): 34873-34881.

## **Published Papers**

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., 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., Stimulation of hair growth by Tianma Gouteng decoction: Identifying mechanisms based on chemical analysis, systems biology approach, and experimental evaluation. In Front Pharmacol on 2022 Dec 16 by Yanyan Zhang, Shiqian Zhang, et al.. PMID: 36588691, , (2022)

### PMID:36588691

el at., Yuan?zhi?san inhibits tau protein aggregation in an Aβ1?40?induced Alzheimer's disease rat model via the ubiquitin?proteasome system. In

Mol Med Rep on 2021 Apr by Bin Li, Pei-Jun Xie, et al.. PMID: 33604685, , (2021)

## PMID:33604685

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., Genetic deletion of α7 nicotinic acetylcholine receptors induces an age-dependent Alzheimer's disease-like pathology. In Prog Neurobiol on 2021 Nov by Maria Rosaria Tropea,

Domenica D Li Puma, et al. PMID:34453977, , (2021)

#### PMID:34453977

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., 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 alPMID:33070372, , (2020) PMID:33070372
el at., Artemisinin Improved Neuronal Functions in Alzheimer's Disease Animal Model 3xtg Mice and Neuronal Cells via Stimulating the ERK/CREB Signaling Pathway. In Aging Dis on 2020 Jul 23 by Xia Zhao, Shuai Li,et alPMID:32765947, , (2020) PMID:32765947
el at., Capsaicin consumption reduces brain amyloid-beta generation and attenuates Alzheimer's disease-type pathology and cognitive deficits in APP/PS1 mice. In Transl Psychiatry on 2020 Jul 13 by Jun Wang, Bin-Lu Sun,et alPMID:32661266, , (2020) PMID:32661266
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 alPMID:31223056, , (2020) PMID:31223056
el at., Interneuron Accumulation of Phosphorylated tau Impairs Adult Hippocampal Neurogenesis by Suppressing GABAergic Transmission. In Cell Stem Cell on 2020 Mar 5 by Jie Zheng, Hong-Lian Li, et al PMID:31978364, , (2020) PMID:31978364
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 alPMID: 30632006, , (2019) PMID:30632006
el at., Complement C3a receptor antagonist attenuates tau hyperphosphorylation via glycogen synthase kInase 3β signalIng pathways. In Eur J Pharmacol on 2019 May 5 by Hu J, Yang Y, et alPMID: 30771350, , (2019) PMID:30771350
el at., Downregulation of spinal astrocytic connexin43 leads to upregulation of interleukin-6 and cyclooxygenase-2 and mechanical hypersensitivity in mice.In Glia. On 2018 Feb by Morioka N, Fujii S et alPMID: 29105869, , (2018) PMID:29105869
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 alPMID: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 alPMID: 29863023, , (2018) PMID:29863023
el at., Phosphorylation of different tau sites during progression of Alzheimer s disease. In Acta Neuropathol Commun.On 2018 Jun 29 by Neddens J, Temmel M et alPMID: 29958544, , (2018) PMID:29958544
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 alPMID:30021167, , (2018) PMID:30021167
el at., Physiological clearance of tau in the periphery and its therapeutic potential for tauopathies. In Acta Neuropathol. On 2018 Oct by Wang J, Jin WS

et al..PMID: 30074071, , (2018)

PMID:30074071

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

PMID: 29098530

el at., Peritoneal Dialysis Reduces Amyloid-Beta Plasma Levels in Humans and Attenuates Alzheimer-associated Phenotypes in an APP/PS1 Mouse Model.In Acta Neuropathol on 2017 Aug by Wang-Sheng Jin, Lin-Lin Shen, et al.. PMID: 28477083, (2017)

#### PMID:28477083

el at., Expression of P301L-hTau in Mouse MEC Induces Hippocampus-Dependent Memory Deficit. In Sci Rep on 2017 Jun 20 by Xinghua Liu, Kuan

#### Zeng,et al..PMID: 28634382, , (2017)

#### PMID:28634382

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., Alzheimer's disease and methanol toxicity (part 2): lessons from four rhesus macaques (Macaca mulatta) chronically fed methanol.In J Alzheimers Dis on 2014 by Meifeng Yang, Junye Miao et al..PMID: 24787917, , (2016)

#### PMID:24787917

el at., Extrasynaptic NMDA Receptor-Induced Tau Overexpression Mediates Neuronal Death Through Suppressing Survival Signaling ERK Phosphorylation.In Cell Death Dis on 2016 Nov 3 by Xu-Ying Sun , Qing-Zhang Tuo et al..PMID: 27809304, , (2016)

#### PMID:27809304

el at., Impairment of rat spatial learning and memory in a new model of cold water-induced chronic hypothermia: implication for Alzheimer's disease.In Neurotox Res on 2015 Aug by Mohammad Mahdi Ahmadian-Attari, Leila Dargahi et al..PMID:25782579, , (2015)

#### PMID:25782579

el at., Zinc binds to and directly inhibits protein phosphatase 2A in vitro.In Neurosci Bull.On 2015 Jun by Xiong Y, Luo DJ et al.. PMID: 25854679 , ,

(2015)

## PMID:25854679

el at., Physiological amyloid-beta clearance in the periphery and its therapeutic potential for Alzheimer's disease. In Acta Neuropatholon 2015 Oct by Yang Xiang, Xian-Le Bui ε t al..PMID:26363791, , (2015)

#### PMID:26363791

el at., Chronic Cold-Water-Induced Hypothermia Impairs Memory Retrieval and Nepeta Menthoides as a Traditional "Hot" Herb Reverses the Impairment.In Iran J Pharm Res on Winter 2014 by Mohammad Mahdi ,Ahmadian-Attar et al..PMID:24711845, , (2014)

### PMID:24711845

el at., Losartan-induced hypotension leads to tau hyperphosphorylation and memory deficit. In J Alzheimers Dis on 2014 by Xinghua Liu , Zhihong Wang et al.. PMID: 24448782, (2014)

#### PMID:24448782

el at., Activation of GSK3ε<sup>°</sup>Y by Sirt2 is required for early lineage commitment of mouse embryonic stem cell. In PLoS One on 2013 Oct 18 by Xiaoxing Si, Wen Chen, et al..PMID: 24204656, , (2013)

#### PMID:24204656

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

Li-Ming Chen, Yan-Si Xiong, Fan-Li Kong el at., Neuroglobin attenuates Alzheimer-like tau hyperphosphorylation by activating Akt signaling.,

JOURNAL OF NEUROCHEMISTRY., 120:157n — C164(2012)

## PMID:21496024

Xu-Ying Sun, Yu-Ping Wei, Yan Xiong el at., Synaptic Released Zinc Promotes Tau Hyperphosphorylation by Inhibition of Protein Phosphatase 2A (PP2A)., THE JOURNAL OF BIOLOGICAL CHEMISTRY, 287(14):11174-11182(2012)

#### PMID:22334661

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., Tau hyperphosphorylation is associated with memory impairment after exposure to 1.5% isoflurane without temperature maintenance in rats.In

Eur J Anaesthesiol on 2010 Sep by Tan W, Cao X, et al.. PMID: 20485178, , (2010)

#### PMID:20485178

el at., Protective effects of lithium treatment for spatial memory deficits induced by tau hyperphosphorylation in splenectomized rats.In

Clin Exp Pharmacol Physiol on 2010 Oct by Tan WF, Cao XZ,et al..PMID:20659131, , (2010)

PMID:20659131

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