Store at -20°C

#11834

Phospho-Tau (Ser202) Antibody

www.cellsignal.com

100 µl (10 western blots)

Support: 877-678-TECH (8324)
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Entrez-Gene ID #4137
UniProt ID #P10636-8

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, M, R	50-80 kDa	Rabbit**

Background: Tau is a heterogeneous microtubule-associated protein that promotes and stabilizes microtubule assembly, especially in axons. Six isoforms with different amino-terminal inserts and different numbers of tandem repeats near the carboxy terminus have been identified, and tau is hyperphosphorylated at approximately 25 sites by Erk, GSK-3, and CDK5 (1,2). Phosphorylation decreases the ability of tau to bind to microtubules. Neurofibrillary tangles are a major hallmark of Alzheimer's disease; these tangles are bundles of paired helical filaments composed of hyperphosphorylated tau. In particular, phosphorylation at Ser396 by GSK-3 or CDK5 destabilizes microtubules. Furthermore, research studies have shown that inclusions of tau are found in a number of other neurodegenerative diseases, collectively known as tauopathies (1,3).

Investigators have shown that Tau is phosphorylated during development and hyper-phosphorylated at Ser202 in Alzheimer's disease (4).

Specificity/Sensitivity: Phospho-Tau (Ser202) Antibody recognizes endogenous levels of Tau protein only when phosphorylated at Ser202.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser202 of human Tau protein. Antibodies are purified by protein A and peptide affinity chromatography.

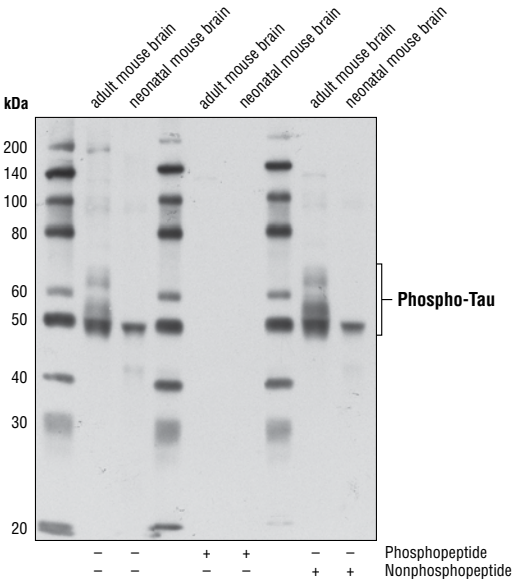
Background References:

(1) Johnson , G.V. and Stoothoff , W.H. (2004) *J. Cell Sci.* 117, 5721-5729.

(2) Hanger, D. P. et al. (1998) *J. Neurochem.* 71, 2465-2476.

(3) Bramblett, G. T. et al. (1993) *Neuron* 10, 1089-1099.

(4) Goedert, M. et al. (1993) *Proc Natl Acad Sci USA* 90, 5066-70.



Western blot analysis of extracts from adult and neonatal mouse brain using Phospho-Tau (Ser202) Antibody. The phospho-specificity of the antibody was verified by blocking with a phospho or nonphosphopeptide.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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Cell Signaling TECHNOLOGY®

Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.