

p-Tau (Ser 396): sc-12414

BACKGROUND

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 4 Tau/MAPT 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, in 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

CHROMOSOMAL LOCATION

Genetic locus: MAPT (human) mapping to 17q21.31; Mapt (mouse) mapping to 11 E1.

SOURCE

p-Tau (Ser 396) is available as either goat (sc-12414) or rabbit (sc-12414-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Ser 396 phosphorylated Tau of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12414 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-Tau (Ser 396) is recommended for detection of Ser 396 phosphorylated Tau of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Tau siRNA (h): sc-36614, Tau siRNA (m): sc-36615, Tau shRNA Plasmid (h): sc-36614-SH, Tau shRNA Plasmid (m): sc-36615-SH, Tau shRNA (h) Lentiviral Particles: sc-36614-V and Tau shRNA (m) Lentiviral Particles: sc-36615-V.

Molecular Weight of p-Tau: 46-68 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410 or mouse brain extract: sc-2253.

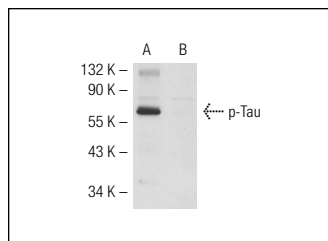
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

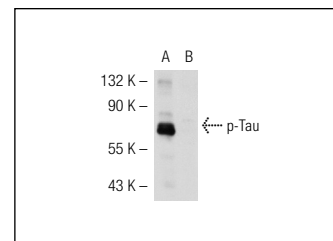
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



p-Tau (Ser 396)-R: sc-12414-R. Western blot analysis of Tau phosphorylation in untreated (A) and lambda protein phosphatase (sc-200312A) treated (B) mouse brain tissue extracts.



p-Tau (Ser 396)-R: sc-12414-R. Western blot analysis of Tau phosphorylation in untreated (A) and lambda protein phosphatase (sc-200312A) treated (B) mouse brain tissue extracts.

SELECT PRODUCT CITATIONS

1. Yang, W., et al. 2005. Tau protein aggregation in the frontal and entorhinal cortices as a function of aging. *Brain Res. Dev. Brain Res.* 156: 127-138.
2. Ding, Y., et al. 2010. Indirubin-3'-monoxime rescues spatial memory deficits and attenuates β -amyloid-associated neuropathology in a mouse model of Alzheimer's disease. *Neurobiol. Dis.* 39: 156-168.
3. Xian, Y.F., et al. 2012. Bioassay-guided isolation of neuroprotective compounds from *Uncaria rhynchophylla* against β -amyloid-induced neurotoxicity. *Evid. Based Complement. Alternat. Med.* 2012: 802625.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **p-Tau (PHF-13): sc-32275**, our highly recommended monoclonal alternative to p-Tau (Ser 396).