

# p-Tau (Ser 721): sc-16944

## 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 (PSP).

## REFERENCES

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## CHROMOSOMAL LOCATION

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

## SOURCE

p-Tau (Ser 721) is available as either goat (sc-16944) or rabbit (sc-16944-R) polyclonal antibody raised against a short amino acid sequence containing Ser 721 phosphorylated Tau of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16944 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p-Tau (Ser 721) is recommended for detection of Ser 721 phosphorylated Tau of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

p-Tau (Ser 721) is also recommended for detection of correspondingly phosphorylated Tau in additional species, including equine, canine, bovine and porcine.

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: 46-80 kDa.

Positive Controls: Mouse brain extract: sc-2253, SK-N-SH cell lysate: sc-2410 or rat brain extract: sc-2392.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.