

p-Tau (Thr 498): sc-16980

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 four 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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- Tashiro, K., et al. 1997. Somatodendritic localization of phosphorylated Tau in neonatal and adult rat cerebral cortex. *Neuroreport* 8: 2797-2801.
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- Hashiguchi, M., et al. 2000. 14-3-3 ζ is an effector of Tau protein phosphorylation. *J. Biol. Chem.* 275: 25247-25254.

CHROMOSOMAL LOCATION

Genetic locus: MAPT (human) mapping to 17q21.31.

SOURCE

p-Tau (Thr 498) is available as either goat (sc-16980) or rabbit (sc-16980-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Thr 498 phosphorylated Tau of human origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-16980 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-Tau (Thr 498) is recommended for detection of Thr 498 phosphorylated Tau of 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 (Thr 498) is also recommended for detection of correspondingly phosphorylated Tau in additional species, including equine and avian.

Suitable for use as control antibody for Tau siRNA (h): sc-36614, Tau siRNA (h2): sc-43402, Tau shRNA Plasmid (h): sc-36614-SH, Tau shRNA Plasmid (h2): sc-43402-SH, Tau shRNA (h) Lentiviral Particles: sc-36614-V and Tau shRNA (h2) Lentiviral Particles: sc-43402-V.

Molecular Weight of p-Tau: 46-80 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: for goat primary antibody (sc-16980): use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), for rabbit primary antibody (sc-16980-R): use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: for goat primary antibody (sc-16980): use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941, for rabbit primary antibody (sc-16980-R): use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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