**BACKGROUND**

Tau can be phosphorylated by several protein kinases. Phosphorylation by Tau protein kinase II at Serine 404 is primarily responsible for the functional loss of Tau-mediated tubulin polymerization. In addition, phosphorylation of microtubule-associated Tau results in the dissociation of Tau from the microtubules and tubulin depolymerization. Serine 412 of Tau is modified by Tau protein kinase I/glycogen synthase kinase-3 beta (TPKI/GSK-3β) to disrupt neuronal metabolism in anatomical areas vulnerable to Alzheimer’s disease. TPKI/GSK-3β is expressed primarily in neurons and especially in neurites early in development, whereafter the distribution is concentrated mostly in the cell soma and the proximal neurite region.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: MAPT (human) mapping to 17q21.1; Mapt (mouse) mapping to 11 E1.

**SOURCE**

p-Tau (Ser 46) is available as either goat (sc-16896) or rabbit (sc-16896-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing phosphorylated Ser 46 of Tau of human origin.

**STORAGE**

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

**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-16896 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

p-Tau (Ser 46) is recommended for detection of Ser 46 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).

Suitable for use as control antibody for Tau siRNA (h): sc-36614.

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

Positive Controls: human brain extract.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: 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), 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: 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.

**RESEARCH USE**

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

**PROTOCOLS**

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