**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-3β (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 17q21.31.

**SOURCE**

p-Tau (PHF-6) is a mouse monoclonal antibody raised against highly purified PHF-Tau preparation of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**STORAGE**

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

**APPLICATIONS**

p-Tau (PHF-6) is recommended for detection of Tau phosphorylated at Thr 231 of 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

**DATA**

![Western blot analysis of phosphorylated Tau expression in paired helical filaments from human brain.](image1)

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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