Tau (Tau46) Mouse mAb

**Applications**

- W, IHC-P
- Endogenous

**Species Cross-Reactivity**

- H, M, R, (B)

**Molecular Wt.**

- 50-80 kDa

**Isotype**

- Mouse IgG1**

**Background:** Tau is a heterogeneous microtubule-associated protein that promotes and stabilizes microtubule assembly, especially in axons. Six isoforms with different amino-terminal inserts and different numbers of tandem repeats near the carboxy-terminus have been identified, and tau is hyperphosphorylated at approximately 25 sites by ERK, GSK-3 and CDK5 (1-2). Phosphorylation decreases the ability of tau to bind to microtubules. Neurofibrillary tangles are a major hallmark of Alzheimer's disease and these tangles are bundles of paired helical filaments composed of hyperphosphorylated tau. In particular, phosphorylation of Ser396 by GSK-3 or CDK5 destabilizes microtubules in Alzheimer's disease. Furthermore, inclusions of tau are found in a number of other neurodegenerative diseases, collectively known as tauopathies (1,3).

**Specificity/Sensitivity:** Tau (Tau46) Mouse mAb detects endogenous levels of total tau protein and also cross-reacts with MAP2 at 280kD. Tau (Tau46) Mouse mAb is predicted to detect all six isoforms of tau based on the amino acid sequence.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with native bovine tau and the epitope maps to the carboxy-terminus of the protein.

**Recommended Antibody Dilutions:**

- Western blotting 1:1000
- Immunohistochemistry (Paraffin) 1:400

Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.

- Unmasking buffer: Citrate Antibody diluent: SignalStain® Antibody Diluent #8112
- Detection reagent: SignalStain® Boost (HRP, Rabbit) #8125

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

**Species cross-reactivity is determined by western blot.**

**Anti-mouse secondary antibodies must be used to detect this antibody.**

**Recommended Antibody Dilutions:**

- Western blotting 1:1000
- Immunohistochemistry (Paraffin) 1:400

Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.

- Unmasking buffer: Citrate Antibody diluent: SignalStain® Antibody Diluent #8112
- Detection reagent: SignalStain® Boost (HRP, Rabbit) #8125

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

**Background References:**