

## Phospho-Mapt-S416

**Reactivity:**Mouse Rat

**Tested applications:**WB

**Recommended Dilution:**WB 1:500 - 1:1000

**Calculated MW:**48/62/78kDa

**Observed MW:**Refer to Figures

**Immunogen:**

A phospho specific peptide corresponding to residues surrounding S416 of Rat Mapt

**Storage Buffer:**

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

**Synonym:**

pTau; Mtapt; RNPTAU

**Catalog #:**AP0294

**Antibody Type:**

Polyclonal Antibody

**Species:**Rabbit

**Gene ID:**4137

**Isotype:**IgG

**Swiss Prot:**P19332

**Purity:**Affinity purification

For research use only.

**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).

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