

**Cat. No:** MAB-94237  
**Conjugate:** Unconjugated  
**Size:** 100 ug  
**Clone:** D9F4G  
**Concentration:** 1mg/ml  
**Host:** Rb  
**Isotype:** IgG  
**Reactivity:** Hu

**Applications:** Western blotting 1:1000 Immunohistochemistry (Paraffin) 1:100† Unmasking buffer: Citrate †Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.

**Molecular Weight:** 50-80 kDa

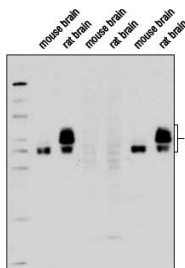
**Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr181 of human Tau protein.

**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; these tangles are bundles of paired helical filaments composed of hyperphosphorylated tau. In particular, phosphorylation at Ser396 by GSK-3 or CDK5 destabilizes microtubules. Furthermore, research studies have shown that inclusions of tau are found in a number of other neurodegenerative diseases, collectively known as tauopathies (1,3). The cerebrospinal fluid concentration of Tau phosphorylated at Thr181 has been proposed to be a biomarker for the study of neurodegenerative disorders (4). Phospho-Tau (Thr181) (D9F4G) Rabbit mAb recognizes endogenous levels of Tau protein only when phosphorylated at Thr181

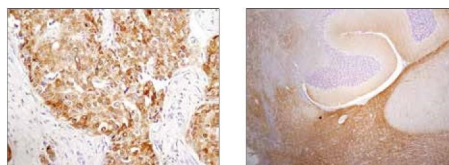
**Form:** liquid

**Buffer:** 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.

**Storage:** Store at -20°C. Avoid freeze / thaw cycles.



Western blot analysis of extracts from



Immunohistochemical analysis of paraffin-embedded human breast carcinoma using Phospho-Tau (Thr181) (D9F4G) Rabbit mAb.  
 Immunohistochemical analysis of paraffin-embedded mouse brain using

mouse and rat brain using Phospho-Tau (Thr181) (D9F4G) Rabbit mAb. The phospho-specificity of Phospho-Tau (Thr181) (D9F4G) Rabbit mAb was verified by peptide blocking using a phosphopeptide or non-phosphopeptide targeting residue Thr181.

Phospho-Tau (Thr181) (D9F4G) Rabbit mAb.

## **References**

(1) Johnson , G.V. and Stoothoff , W.H. (2004) J. Cell Sci. 117, 5721-5729. (2) Hanger, D. P. et al. (1998) J. Neurochem. 71, 2465-2476. (3) Bramblett, G. i et al. (1993) Neuron 10, 1089-1099. (4) Mitchell, A.J. (2009) J Neurol Neurosurg Psychiatry 80, 966-75.

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