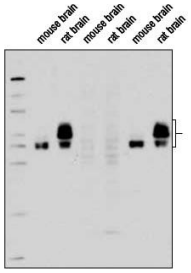
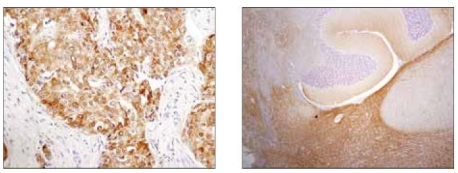
Product Data Sheet: Phospho-Tau (T181)

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℃. 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.