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RABBIT ANTI-Tau phosphoSerine 422 POLYCLONAL ANTIBODY

CATALOG NUMBER: AB9664

LOT NUMBER:

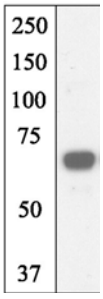
QUANTITY: 100 µL (10 blots)

SPECIFICITY: Tau phosphoSerine 422. The antibody recognizes Tau pSerine 422 in samples of recombinant human Tau treated with GSK-3β for 45 minutes. The reactivity of the antibody is blocked with the pSerine 422 peptide but not the non-phosphopeptide or a generic phosphoSerine-containing peptide.

BACKGROUND: Tau is a neuronal microtubule-associated protein found predominantly on axons and functions to promote tubulin polymerization and stabilize microtubules. Tau, in its hyperphosphorylated form, is the major component of paired helical filaments (PHF), the building block of neurofibrillary lesions in Alzheimer's disease (AD) brain. Hyperphosphorylated Tau is also found in neurofibrillary lesions in a range of other central nervous system disorders. Hyperphosphorylation impairs the microtubule binding function of Tau, resulting in the destabilization of microtubules in AD brains, ultimately leading to the degeneration of the affected neurons. Numerous serine/threonine kinases, including GSK-3β, protein kinase A (PKA), cyclin-dependent kinase 5 (cdk5) and casein kinase II (CK2), phosphorylate Tau. Serine 422 can be phosphorylated by members of the MAP kinase (MAPK) family.

IMMUNOGEN: Synthetic peptide of amino acids surrounding the phosphoSerine 422 site of human Tau.

APPLICATIONS: Western blot: 1:1,000. Suggested blocking buffer is 5% BSA-TBST for one hour at room temperature. Suggested antibody dilution buffer is 3% BSA-TBST. Suggested antibody incubation time is 2 hours at room temperature.



Western Blot of recombinant human tau treated with GSK-3β for 45 minutes.

Optimal working dilutions must be determined by the end user.

SPECIES REACTIVITIES: Human. Other species have not been tested. The immunogen is conserved in rat and mouse.

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FORMAT: Affinity purified immunoglobulin

PRESENTATION: Liquid in Dulbecco's PBS (without Mg^{2+} and Ca^{2+}), pH 7.3, 50% glycerol with 1.0 mg/mL BSA and 0.05% sodium azide.

STORAGE/HANDLING: Maintain at -20°C in undiluted for up to 6 months after date of receipt. Avoid repeated freeze/thaw cycles. Do not store in a self defrosting freezer.

RELATED REFERENCES:

Augustinack, J.C., et al. (2002) Specific tau phosphorylation sites correlate with severity of neuronal cytopathology in Alzheimer's disease. Acta Neuropathol. 103:26-35.

Kins, S., et al. (2001) Reduced protein phosphatase 2A activity induces hyperphosphorylation and altered compartmentalization of tau in transgenic mice. J. Biol. Sci. 276(41):38193-200 (cites the use of this antibody).

Gong, C.X., et al. (2000) Phosphorylation of microtubule-associated protein tau is regulated by protein phosphatase 2A in mammalian brain. Implications for neurofibrillary degeneration in Alzheimer's disease. J. Biol. Chem. 275(8):5535-5544.

Bussiere, T., et al. (1999) Phosphorylated serine 422 on tau proteins is a pathological epitope found in several diseases with neurofibrillary degeneration. Acta Neuropathol. (Berl). 97(3):221-30.

Reynolds, C.H., et al. (1997) Stress-activated protein kinase/c-jun N-terminal kinase phosphorylates tau protein. J. Neurochem. 68(4):1736-44.

Important Note: *During shipment, small volumes of product will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 µL or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.*

FOR RESEARCH USE ONLY; NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR HUMAN OR ANIMAL CONSUMPTION

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