

**Anti-Tau [pS422]  
Mouse Monoclonal Antibody  
(clone 2H9)**

**Ref. 4BDX-1501S**

**Biomolecule**

Anti-Tau [pS422]  
Mouse monoclonal antibody

**Clone**

2H9

**Size**

20 µg/20 µL

**Formulation**

Solution in PBS at 1 mg/mL

**Storage**

+4°C / -20°C

**Immunogen**

Peptide

**Specificity**

Anti-Tau phosphorylated  
at serine 422

**Cross-reactivity**

Human, Mouse, Rat

**Immunoglobulin type**

Human Tau specific  
mouse IgG

**Isotype**

IgG2a Kappa

**Applications**

Western-blot,  
Immunohistochemistry,  
Immunofluorescence,  
Immunotherapy

• **Preparation**

This antibody was produced from a mouse hybridoma resulting from a mouse immunized with a peptide covering the human Tau protein sequence with the phospho-serine 422.

• **Purity**

Mouse monoclonal antibodies 2H9 was purified by protein A/G affinity chromatography. Purity > 90%, as determined by SDS-PAGE and visualized by Coomassie blue staining.

• **Concentration**

The measured concentration of the purified Anti-Tau [pS422] was 1 mg/ml as determined using a total protein concentration assay.

• **Specificity**

Determined by its ability to recognise human Tau phosphorylated at serine 422.

• **Storage**

Store at +4°C for short term use (1-2 weeks) - Store at -20°C for long term use.

• **Applications**

Recommended concentration of use are:

*Western-blot:* 0.2 µg/mL (working with cell and tissue).

*IHC/IF:* 2 µg/mL (working with cell, tissue, frozen and paraffin embedded tissue).

## • General information

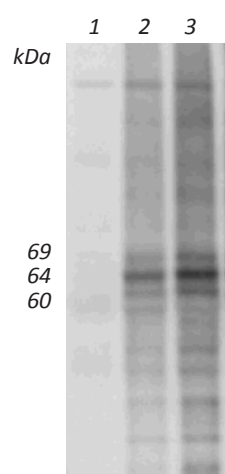
Tau proteins are encoded by a single gene *MAPT* (Gene ID: 4137). They belong to the family of microtubule-associated proteins. The phosphorylation of Tau protein at serine 422 is a pathological epitope and a specific marker of neurofibrillary degeneration, one of the neuropathological hallmark of Alzheimer's disease and also found in more than 20 Tauopathies. On cerebral tissue, frozen or paraffin embedded tissue, 2H9 Tau antibody detects neurons in neurofibrillary degeneration. The serine 422 is phosphorylated by the following kinases: CaMKII (Calcium Calmodulin-kinase II), PKA (protein kinase A), JNKs (c-Jun N-terminal kinases), ERK1/2 or p42/44 MAPK (mitogen-activated kinases), p38 MAPK and MARK (Microtubule-associated protein/microtubule affinity-regulating kinase).

## • References

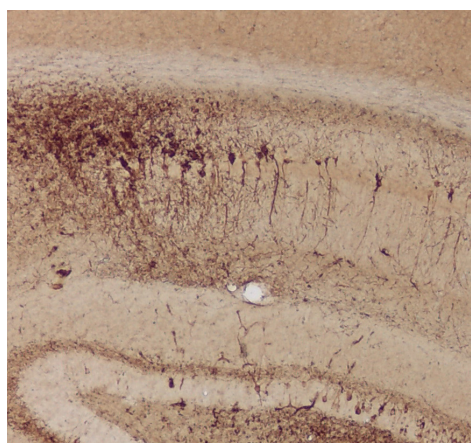
*Troquier L, Caillierez R, Burnouf S, Fernandez-Gomez FJ, Grosjean ME, Zommer N, Sergeant N, Schraen-Maschke S, Blum D and Buee L (2012) Targeting phospho-Ser422 by active Tau Immunotherapy in the THY-Tau22 mouse model: a suitable therapeutic approach. Curr Alzheimer Res. 9(4):397-405.*

*Sergeant N, Bretteville A, Hamdane M, Caillet-Boudin ML, Grognet P, Bombois S, Blum D, Delacourte A, Pasquier F, Vanmechelen E, Schraen-Maschke S, and Buee L (2008) Biochemistry of Tau in Alzheimer's disease and related neurological disorders. Expert review of proteomics 5:207–224.*

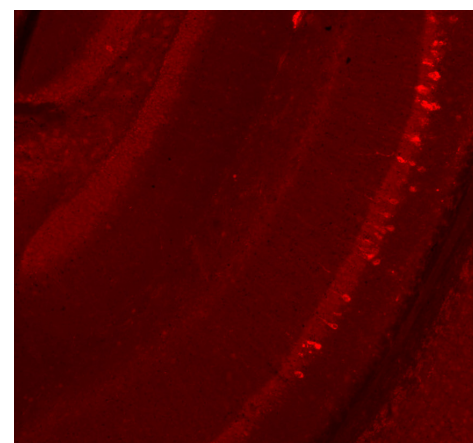
## • Application exemples



Western-blotting of human brain tissue (1: control, 2 and 3: Alzheimer)



Immunohistochemistry of Thy-Tau22 transgenic model of neurofibrillary degeneration



Immunofluorescence of Thy-Tau22 transgenic model of neurofibrillary degeneration

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