Rabbit Anti-Human
Tau
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Introduction

Tau is one of the microtubule-associated proteins (MAPs) in the central nervous system. In phosphorylated form, tau is a major component of the paired helical filaments of the neurofibrillary tangles developed in Alzheimer's disease (1). One of the functions of tau is to stabilize microtubules. Phosphorylation of tau reduces the stabilizing effect. The C-terminal part of the tau protein shows a high degree of homology with other MAPs, such as MAP2, and it is suggested that it might serve as a microtubule-binding domain (2). DAKO Rabbit Anti-Human Tau does cross-react with MAP2.

Presentation

Rabbit Anti-Human Tau is the purified immunoglobulin fraction of rabbit antiserum.

Solvent: 0.1 M NaCl, 15 mmol/L NaN_3.

Protein concentration: 6.8 g/L.

Storage

2 - 8 °C.

Immunogen

The C-terminal part of human tau protein expressed in E. coli. The immunogen contains the four repeated sequences involved in microtubule binding.

Specificity

The antibody reacts on immunoblots with tau protein and with tau from Alzheimer paired helical filaments.

Application

Brain tissue from patients with Alzheimer's disease is characterized by several histopathological lesions, such as neurofibrillary tangles and senile plaques. For the study of lesions associated with Alzheimer's disease DAKO Rabbit Anti-Tau can be used in combination with DAKO Mouse Monoclonal Anti Beta-Amyloid (code No. M 0872) and DAKO Rabbit Anti-Ubiquitin (code No. Z 0458). Neurofibrillary tangles are labelled by anti-tau, while the senile plaques are labelled by the beta amyloid and the ubiquitin antibodies (3).

Staining procedure

Formalin-fixed and paraffin-embedded sections

Can be used on formalin-fixed, paraffin-embedded tissue sections.

A number of staining techniques are suitable, including the labelled streptavidin-HRP technique, the streptavidin-biotin complex technique and the peroxidase anti-peroxidase (PAP) technique.

The antibody has been shown to give optimal staining at a dilution of 1:100 - 1:200 when tested on formalin-fixed, paraffin-embedded sections of brain from patients with Alzheimer's disease using the streptavidin-based staining techniques mentioned above. The given antibody dilution range is a guideline only; an optimal dilution should be determined by the individual laboratory.

References

(1) Goedert M, Wischik C, Crowther R, Walker J, Klug A. Cloning and sequencing of the cDNA encoding a core protein of the paired helical filament of Alzheimer disease. Proc Natl Acad Sci 1988;85:4051-5.

(2) Butner KA, Kirschner MW. Tau-protein binds to microtubules through a flexible array of distributed weak sites. J Cell Biol 1991;115:717-30.

(3) Behrouz N, Defossez A, Delacourte A, Hublau P, Mazzuca M. Alzheimer's disease: glycolytic pretreatment dramatically enhances immunolabelling of senile plaques and cerebrovascular amyloid substance. Lab Invest 1989;61:576-83.