# Product Data Sheet

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| Product Name: | **Anti-Tau (pSer$^{400}$)** |
| Catalog Number: | 54978 |
| Lot Number: | See label on vial |
| Product Description: | This polyclonal antibody is supplied as an epitope affinity purified rabbit IgG, 50 μg in 250 μl of 1X PBS (pH 7.4) containing 0.05% sodium azide. |
| Immunogen: | Rabbit anti-Tau (pSer400) polyclonal antibody was raised against a synthetic peptides corresponding to human Tau at the phosphorylated Serine 400 (SPVVpSGDTS). |
| Species Reactivity: | Species reactivity includes human, mouse, rat, and bovine, while others remain unknown. The antibody was evaluated for specificity with dot blot. It recognizes the phosphorylated Serine 400 of human Tau and not the non-phosphorylated Tau by dot blot. |
| Application Notes: | The following concentration ranges are recommended starting points for this product. Optimal working concentrations should be determined by the investigator for specific applications. |

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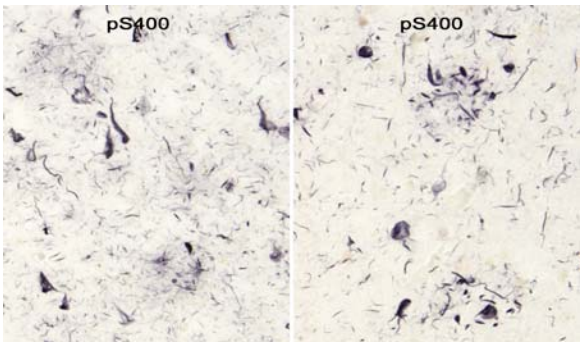
| ELISA for immunizing peptide: | 1: 5,000-20,000 |
| Dot blot: | 1:500-2,000 |
| Western blot: | 1:500-2,000 |
| IHC: | 1:500-2,500 |




IHC of the upper layers (II/III) with neurofibrillary tangles (left), and the deeper layers with dystrophic neurities in plaques of entorhinal cortex of Alzheimer disease brains (right), stained with anti-Tau (pSer$^{400}$) (Cat# 54978, 54978-025), biotinylated secondary antibody avidin-biotin-HRP, visualization by heavy metal intensification of DAB, 40X objective (Courtesy of Dr. Patrick L. McGeer, Kinsmen Laboratory of Neurological Research, University of British Columbia, Vancouver, Canada).

Background:

Tau is a collection of microtubule-associated proteins that is involved in microtubule assembly and stabilization (1). In adult human brain, 6 isoforms, ranging between 352 and 441 amino acids in length, are produced as a result of alternative RNA splicing (2, 3). The expression of tau isoforms is developmentally regulated, as only the smallest tau polypeptide is expressed in the fetal brain. Hyperphosphorylated Tau is the major component of the paired helical filament of Alzheimer's disease. Anti- phosphor-Tau antibodies are used to identify specific amino acids that are phosphorylated in Tau from normal brains and Alzheimer's disease brains. The Tau proteins, especially in developing brains and in Alzheimer brains, can found to be phosphorylated in vivo at many different sites (4).

References:


1. Cleveland DW, et al (1977) *J Mol Biol* 116, 207-225
2. Goedert M, et al (1989) *Neuron* 3, 519-526.
3. Geodert M, et al (1989) *EMBO J* 8, 393-399.
4. Billingsley M, et al (1997) *Biochem J* 323, 577-591


Storage:

Store at 2-8 ˚C for up to one year. Avoid repeated freezing and thawing.

This product is for *in vitro* research use only.