

**Phospho Ser416 Tau Antibody**  
**Affinity purified rabbit polyclonal antibody**  
**Catalog # AN1156**

**Specification**

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**Phospho Ser416 Tau Antibody - Product Information**

|                   |                              |
|-------------------|------------------------------|
| Application       | WB                           |
| Primary Accession | <a href="#">P19332</a>       |
| Reactivity        | Rat                          |
| Predicted         | Bovine, Human, Mouse, Monkey |
| Host              | Rabbit                       |
| Clonality         | polyclonal                   |
| Calculated MW     | 59/65/68 KDa                 |

**Phospho Ser416 Tau Antibody - Additional Information**

|                                                                                                                            |       |
|----------------------------------------------------------------------------------------------------------------------------|-------|
| Gene ID                                                                                                                    | 69329 |
| Gene Name                                                                                                                  | MAPT  |
| <b>Other Names</b>                                                                                                         |       |
| Microtubule-associated protein tau, Neurofibrillary tangle protein, Paired helical filament-tau, PHF-tau, Mapt, Mtapt, Tau |       |

**Target/Specificity**

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser416 conjugated to KLH.

**Dilution**

WB~~ 1:1000

**Format**

Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephospho-peptide affinity columns.

**Antibody Specificity**

Specific for ~59, 65, 68k tau protein phosphorylated at Ser416.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Phospho Ser416 Tau Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Shipping**

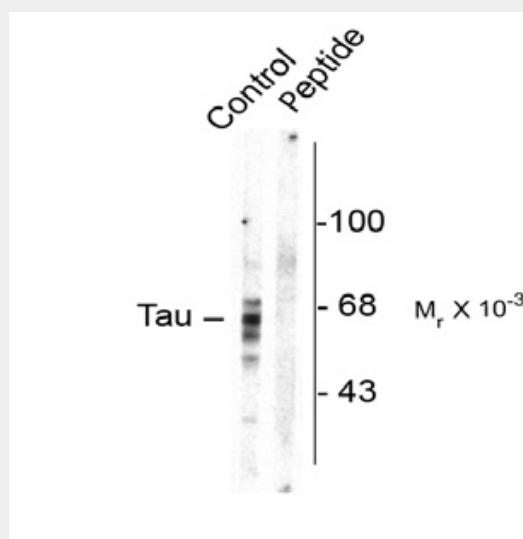
Blue Ice

**Phospho Ser416 Tau Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Phospho Ser416 Tau Antibody - Images



Western blot of rat brain homogenate showing specific immunolabeling of the ~59, 65, 68k Tau isoforms phosphorylated at Ser416 (control). Immunolabeling is blocked by preadsorption with the phospho-peptide used as antigen (Peptide) but not by the corresponding dephospho-peptide (not shown).

### Phospho Ser416 Tau Antibody - Background

Tau is a key microtubule-associated protein that plays an important role in the formation of microtubules in axons (Binder et al. 1985). Six tau isoforms have been identified as products of a single gene produced by alternative mRNA splicing (Goedert 1990). Tau mutations have been implicated in many neurodegenerative disorders such as Alzheimer's disease (AD), Pick's disease and progressive supranuclear palsy. It has been well documented that hyperphosphorylated tau is a major component of paired helical filaments in AD brain (Lee 1995). Serine 416 has been demonstrated to be a major phosphorylation site in vitro by CaM kinase II (Steiner et al. 1990).

### Phospho Ser416 Tau Antibody - References

- Binder LI, Frankfurter A, Rebhun LI (1985) The distribution of tau in the mammalian central nervous system. *J Cell Bio* Oct; 101(4):1371-8.
- Lee V.M.Y. (1995) Disruption of the cytoskeleton in Alzheimer's disease. *Curr. Opin. Neurobiol.* 5, 663-668.
- Goedert M. and Jakes R. (1990) Expression of separate isoforms of human tau protein: correlation with the tau pattern in brain and effects on tubulin polymerization. *EMBO J* 9, 4225-4230.
- Steiner B., Mandelkow E.M., Biernat J. et al. (1990) Phosphorylation of microtubule-associated

protein tau: identification of the site for  $\text{Ca}^{2+}$ -calmodulin dependent kinase and relationship with tau phosphorylation in Alzheimer tangles. EMBO J. 9, 3539-3544.