

# Anti-Tau (phospho S202 + T205) antibody [EPR20390] - BSA and Azide free ab237594

**重组** RabMAb

## 5 图像

### 概述

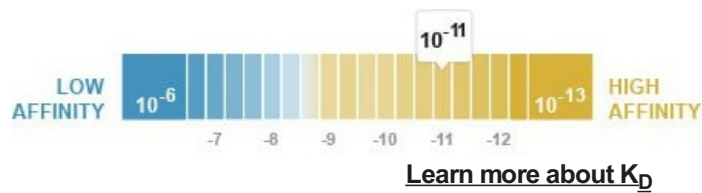
产品名称	Anti-Tau (phospho S202 + T205)抗体[EPR20390] - BSA and Azide free
描述	兔单克隆抗体[EPR20390] to Tau (phospho S202 + T205) - BSA and Azide free
宿主	Rabbit
特异性	The specificity of this antibody refers to P10636-8.
经测试应用	<b>适用于:</b> Dot blot, IP, WB
种属反应性	<b>与反应:</b> Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	WB: Human brain lysate.
常规说明	<p>ab237594 is the carrier-free version of <b>ab210703</b>.</p> <p>Our <b>carrier-free</b> antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our <b>conjugation kits</b> for antibody conjugates that are ready-to-use in as little as 20 minutes with &lt;1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>This product is compatible with the Maxpar<sup>®</sup> Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar<sup>®</sup> is a trademark of Fluidigm Canada Inc.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <b>see here</b>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <b>RabMAb<sup>®</sup> patents</b>.</p>

性能

形式Liquid

存放说明Shipped at 4°C. Store at +4°C. Do Not Freeze.

解离常数 (K<sub>D</sub>)K<sub>D</sub> = 1.65 x 10<sup>-11</sup> M



存储溶液pH: 7.2  
Constituent: PBS

无载体是

纯度Protein A purified

克隆单克隆

克隆编号EPR20390

同种型IgG

应用

The Abpromise guarantee **Abpromise™**承诺保证使用ab237594于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
Dot blot		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 50-80 kDa (predicted molecular weight: 78 kDa).

靶标

功能Promotes microtubule assembly and stability, and might be involved in the establishment and maintenance of neuronal polarity. The C-terminus binds axonal microtubules while the N-terminus binds neural plasma membrane components, suggesting that tau functions as a linker protein between both. Axonal polarity is predetermined by tau localization (in the neuronal cell) in the domain of the cell body defined by the centrosome. The short isoforms allow plasticity of the cytoskeleton whereas the longer isoforms may preferentially play a role in its stabilization.

组织特异性Expressed in neurons. Isoform PNS-tau is expressed in the peripheral nervous system while the others are expressed in the central nervous system.

疾病相关Note=In Alzheimer disease, the neuronal cytoskeleton in the brain is progressively disrupted and replaced by tangles of paired helical filaments (PHF) and straight filaments, mainly composed of

hyperphosphorylated forms of TAU (PHF-TAU or AD P-TAU).

Defects in MAPT are a cause of frontotemporal dementia (FTD) [MIM:600274]; also called frontotemporal dementia (FTD), pallido-ponto-nigral degeneration (PPND) or historically termed Pick complex. This form of frontotemporal dementia is characterized by presenile dementia with behavioral changes, deterioration of cognitive capacities and loss of memory. In some cases, parkinsonian symptoms are prominent. Neuropathological changes include frontotemporal atrophy often associated with atrophy of the basal ganglia, substantia nigra, amygdala. In most cases, protein tau deposits are found in glial cells and/or neurons.

Defects in MAPT are a cause of Pick disease of the brain (PDB) [MIM:172700]. It is a rare form of dementia pathologically defined by severe atrophy, neuronal loss and gliosis. It is characterized by the occurrence of tau-positive inclusions, swollen neurons (Pick cells) and argentophilic neuronal inclusions known as Pick bodies that disproportionately affect the frontal and temporal cortical regions. Clinical features include aphasia, apraxia, confusion, anomia, memory loss and personality deterioration.

Note=Defects in MAPT are a cause of corticobasal degeneration (CBD). It is marked by extrapyramidal signs and apraxia and can be associated with memory loss. Neuropathologic features may overlap Alzheimer disease, progressive supranuclear palsy, and Parkinson disease.

Defects in MAPT are a cause of progressive supranuclear palsy type 1 (PSNP1) [MIM:601104, 260540]; also abbreviated as PSP and also known as Steele-Richardson-Olszewski syndrome. PSNP1 is characterized by akinetic-rigid syndrome, supranuclear gaze palsy, pyramidal tract dysfunction, pseudobulbar signs and cognitive capacities deterioration. Neurofibrillary tangles and gliosis but no amyloid plaques are found in diseased brains. Most cases appear to be sporadic, with a significant association with a common haplotype including the MAPT gene and the flanking regions. Familial cases show an autosomal dominant pattern of transmission with incomplete penetrance; genetic analysis of a few cases showed the occurrence of tau mutations, including a deletion of Asn-613.

#### 序列相似性

Contains 4 Tau/MAP repeats.

#### 发展阶段

Four-repeat (type II) tau is expressed in an adult-specific manner and is not found in fetal brain, whereas three-repeat (type I) tau is found in both adult and fetal brain.

#### 结构域

The tau/MAP repeat binds to tubulin. Type I isoforms contain 3 repeats while type II isoforms contain 4 repeats.

#### 翻译后修饰

Phosphorylation at serine and threonine residues in S-P or T-P motifs by proline-directed protein kinases (PDPK: CDK1, CDK5, GSK-3, MAPK) (only 2-3 sites per protein in interphase, seven-fold increase in mitosis, and in PHF-tau), and at serine residues in K-X-G-S motifs by MAP/microtubule affinity-regulating kinase (MARK) in Alzheimer diseased brains.

Phosphorylation decreases with age. Phosphorylation within tau's repeat domain or in flanking regions seems to reduce tau's interaction with, respectively, microtubules or plasma membrane components. Phosphorylation on Ser-610, Ser-622, Ser-641 and Ser-673 in several isoforms during mitosis.

Polyubiquitinated. Requires functional TRAF6 and may provoke SQSTM1-dependent degradation by the proteasome (By similarity). PHF-tau can be modified by three different forms of polyubiquitination. 'Lys-48'-linked polyubiquitination is the major form, 'Lys-6'-linked and 'Lys-11'-linked polyubiquitination also occur.

Glycation of PHF-tau, but not normal brain tau. Glycation is a non-enzymatic post-translational modification that involves a covalent linkage between a sugar and an amino group of a protein molecule forming ketoamine. Subsequent oxidation, fragmentation and/or cross-linking of ketoamine leads to the production of advanced glycation endproducts (AGES). Glycation may play a role in stabilizing PHF aggregation leading to tangle formation in AD.

#### 细胞定位

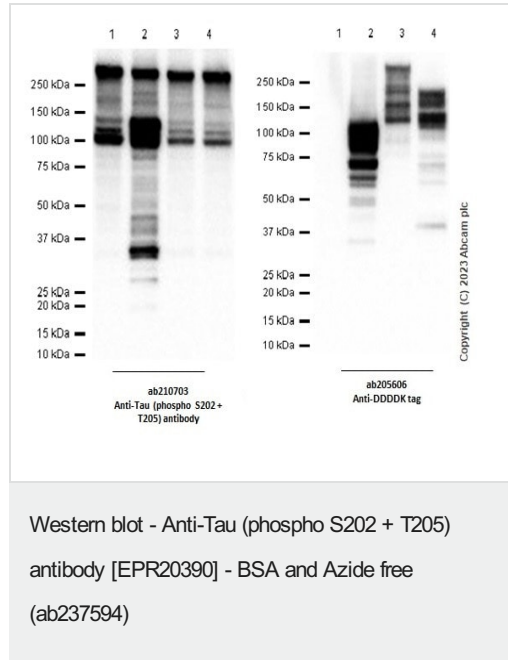
Cytoplasm > cytosol. Cell membrane. Cytoplasm > cytoskeleton. Cell projection > axon. Mostly

found in the axons of neurons, in the cytosol and in association with plasma membrane components.

## 形式

There are 9 isoforms produced by alternative splicing.

## 图片



**All lanes :** Anti-Tau (phospho S202 + T205) antibody [EPR20390] ([ab210703](#)) at 1/1000 dilution

**Lane 1 :** 293T cells transfected with an empty vector containing a flag tag whole cell lysate

**Lane 2 :** 293T cells transfected with a human Tau expression vector containing a flag whole cell lysate

**Lane 3 :** 293T cells transfected with a human MAP2 expression vector containing a flag whole cell lysate

**Lane 4 :** 293T cells transfected with a human MAP4 expression vector containing a flag whole cell lysate

Lysates/proteins at 20 µg per lane.

## Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

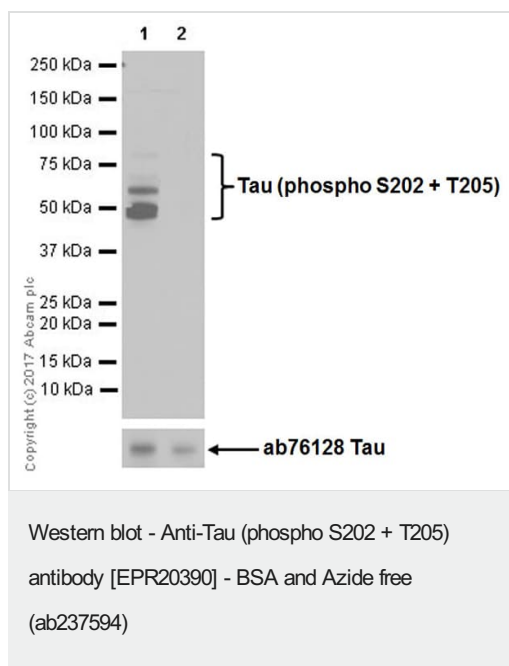
**Predicted band size:** 78 kDa

**Observed band size:** 55-100 kDa

**Exposure time:** 1 second

This data was developed using [ab210703](#), the same antibody clone in a different buffer formulation

**Blocking/dilution buffer:** 5% NFDM/TBST



**All lanes :** Anti-Tau (phospho S202 + T205) antibody [EPR20390] ([ab210703](#)) at 1/1000 dilution

**Lane 1 :** Human brain tissue lysate

**Lane 2 :** Alkaline phosphatase treated human brain tissue lysate (1 hour)

Lysates/proteins at 10 µg per lane.

#### Secondary

**All lanes :** VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) at 1/100000 dilution

Developed using the ECL technique.

**Predicted band size:** 78 kDa

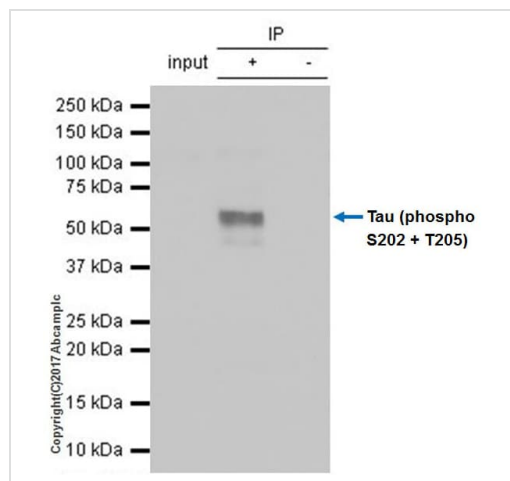
**Observed band size:** 50-80 kDa

**Exposure time:** 3 minutes

**Blocking and dilution buffer:** 5% NFDM/TBST.

The molecular weight observed is consistent with what has been described in the literature (PMID: 21932121, PMID: 20660113).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab210703](#)).



Immunoprecipitation - Anti-Tau (phospho S202 + T205) antibody [EPR20390] - BSA and Azide free (ab237594)

Tau (phospho S202 + T205) was immunoprecipitated from 0.35 mg of human brain lysate with [ab210703](#) at 1/30 dilution. Western blot was performed from the immunoprecipitate using [ab210703](#) at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/10000 dilution.

**Lane 1:** Human brain lysate 10 µg (Input).

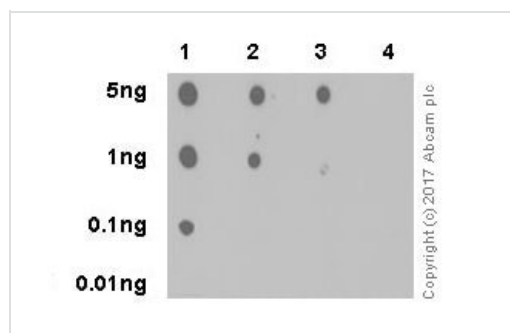
**Lane 2:** [ab210703](#) IP in human brain lysate.

**Lane 3:** Rabbit monoclonal IgG ([ab172730](#)) instead of [ab210703](#) in human brain lysate.

**Blocking and dilution buffer:** 5% NFDM/TBST.

**Exposure time:** 8 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab210703](#)).



Dot Blot - Anti-Tau (phospho S202 + T205) antibody [EPR20390] - BSA and Azide free (ab237594)

Dot blot analysis of Tau (phospho S202+ T205) labeled with [ab210703](#) at 1/1000 dilution.

**Lane 1:** Tau (phospho S202 + T205) peptide.

**Lane 2:** Tau (phospho S202) peptide.

**Lane 3:** Tau (phospho T205) peptide.

**Lane 4:** Tau non-phospho peptide.

Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution was used as secondary antibody.

**Blocking and dilution buffer:** 5% NFDM/TBST.

**Exposure time:** 3 minutes.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab210703](#)).

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-Tau (phospho S202 + T205) antibody  
[EPR20390] - BSA and Azide free (ab237594)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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