

Anti-4R Tau antibody [EPR21725] ab218314

リコンビナント RabMAb

2 References [画像数 10](#)

製品の概要

製品名	Anti-4R Tau antibody [EPR21725]
製品の詳細	Rabbit monoclonal [EPR21725] to 4R Tau
由来種	Rabbit
アプリケーション	適用あり: IP, WB, IHC-P 適用なし: IHC-Fr
種交差性	交差種: Mouse, Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	IHC-P: Human breast carcinoma and cerebrum tissue; Mouse cerebrum and colon tissue; Rat cerebral cortex and colon tissue. WB: Recombinant human 0N4R Tau, 1N4R Tau and 2N4R Tau protein; Mouse hippocampus and brain lysate; Rat hippocampus lysate. IP: Rat hippocampus lysate
特記事項	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
バッファー	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
精製度	Protein A purified
ポリ/モノ	モノクローナル

クローン名 EPR21725
 アイソタイプ IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、次のテスト済みアプリケーションにおけるab218314の使用に適用されませ**
 アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
IP		1/30.
WB		1/1000. Detects a band of approximately 36-75 kDa (predicted molecular weight: 79 kDa).
IHC-P		1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

追加情報 Is unsuitable for IHC-Fr.

ターゲット情報

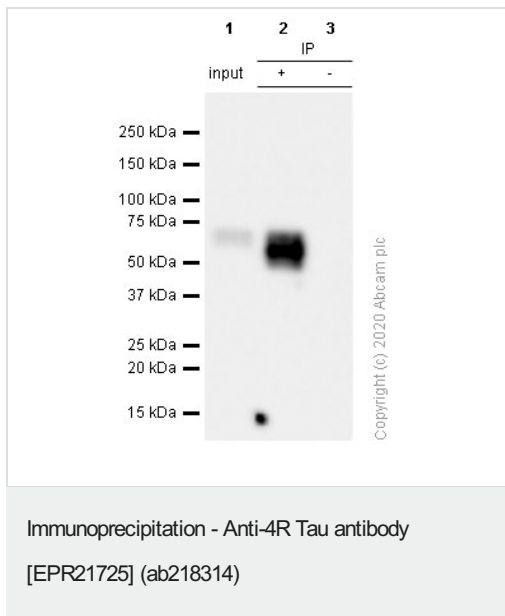
関連性

Developmental stage: 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.

Disease: 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 (PIDB) [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 disproportionally 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. Domain: The tau/MAP repeat binds to tubulin. Type I isoforms contain 3 repeats while type II isoforms contain 4 repeats. Function: 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. PTM: 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. Similarity: Contains 4 Tau/MAP repeats. Tissue specificity: Expressed in neurons. Expressed in the central nervous system.

画像



4R Tau was immunoprecipitated from 0.35 mg rat hippocampus lysate 10 µg with ab218314 at 1/30 dilution (2µg in 0.35mg lysates).

Western blot was performed on the immunoprecipitate using ab218314 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP)([ab131366](#)) was used at 1/5000 dilution.

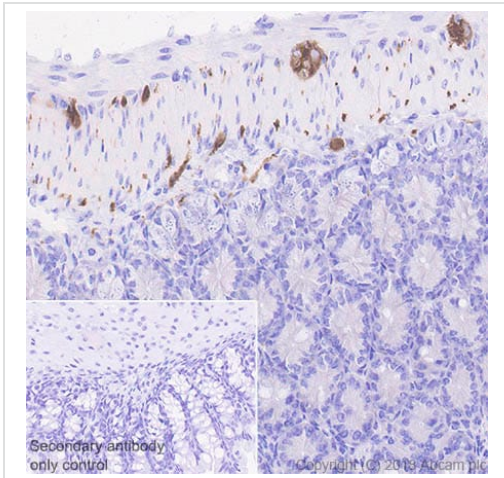
Lane 1: Rat hippocampus lysate 10 µg

Lane 2: ab218314 IP in rat hippocampus lysate

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab218314 in rat hippocampus lysate

Blocking and dilution buffer and concentration: 5% NFDm/TBST.

Exposure time: 8 s



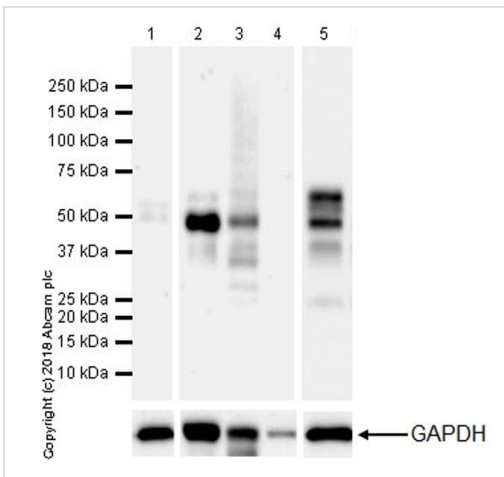
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-4R Tau antibody [EPR21725] (ab218314)

Immunohistochemical analysis of paraffin-embedded mouse colon tissue labeling 4R Tau with ab218314 at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Cytoplasmic staining on myenteric plexus of mouse colon is observed.

Counterstained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).



Western blot - Anti-4R Tau antibody [EPR21725] (ab218314)

All lanes : Anti-4R Tau antibody [EPR21725] (ab218314) at 1/1000 dilution

Lane 1 : Human hippocampus lysate

Lane 2 : Mouse hippocampus lysate

Lane 3 : Mouse brain lysate

Lane 4 : Mouse stomach lysate

Lane 5 : Rat hippocampus lysate

Lysates/proteins at 20 µg per lane.

Secondary

Lane 1 : VeriBlot for IP Detection Reagent (HRP) (**ab131366**) at 1/1000 dilution

Lanes 2-5 : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Developed using the ECL technique.

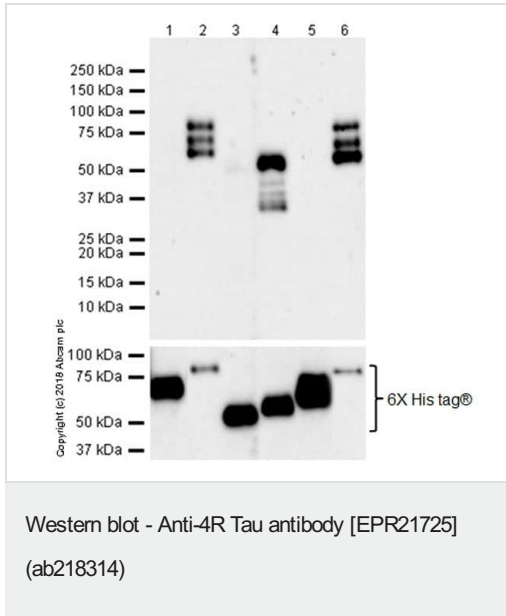
Predicted band size: 79 kDa

Negative control: Mouse stomach PMID:8752131;

PMID:11727254.

Blocking/Dilution buffer: 5% NFD/MTBST.

Exposure times: Lanes 1-4: 3 minutes; Lanes 5: 37 seconds.



All lanes : Anti-4R Tau antibody [EPR21725] (ab218314) at 1/1000 dilution

Lane 1 : His-tagged human 2N3R Tau recombinant protein (aa1-410) 10 ng

Lane 2 : His-tagged human 2N4R Tau recombinant protein (aa1-441) 10ng

Lane 3 : His-tagged human 0N3R Tau recombinant protein (aa1-352) 10ng

Lane 4 : His-tagged human 0N4R Tau recombinant protein (aa1-383) 10ng

Lane 5 : His-tagged human 1N3R Tau recombinant protein (aa1-381) 10ng

Lane 6 : His-tagged human 1N4R Tau recombinant protein (aa1-412) 10ng

Secondary

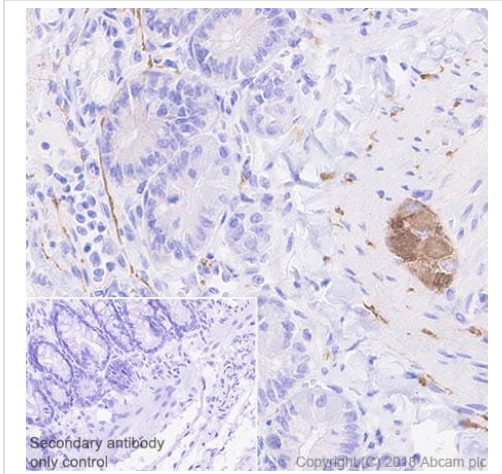
All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Predicted band size: 79 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFD/MTBST.

This antibody specifically recognizes 0N4R, 1N4R and 2N4R tau recombinant proteins. The lower bands maybe degraded tau fragments (PMID:28045602).

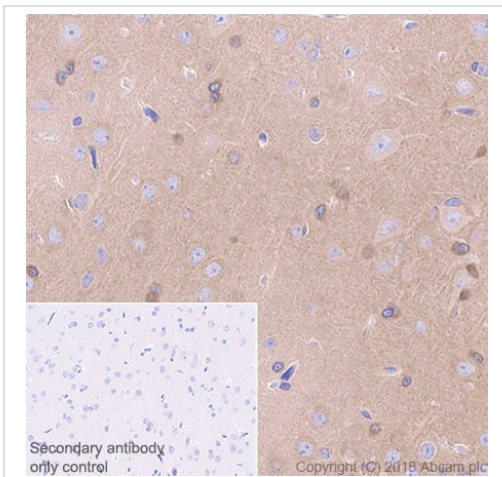


Immunohistochemical analysis of paraffin-embedded rat colon tissue labeling 4R Tau with ab218314 at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Cytoplasmic staining on myenteric plexus of rat colon is observed. Counterstained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-4R Tau antibody [EPR21725] (ab218314)

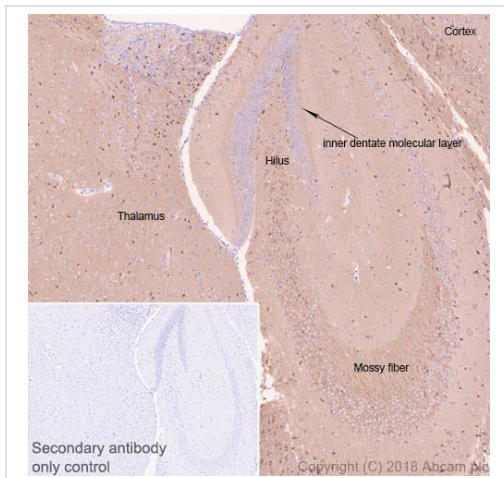


Immunohistochemical analysis of paraffin-embedded rat cerebral cortex tissue labeling 4R Tau with ab218314 at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Cytoplasmic staining on rat cerebral cortex is observed. Counterstained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

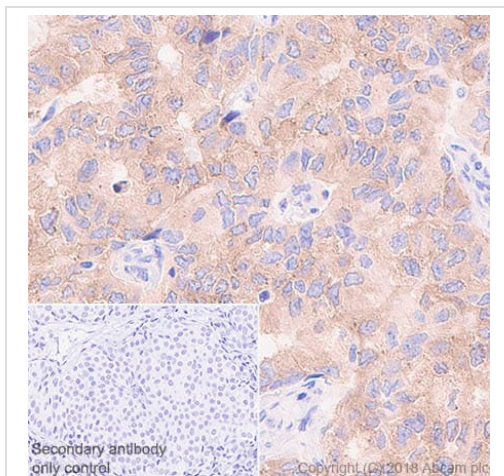
Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-4R Tau antibody [EPR21725] (ab218314)



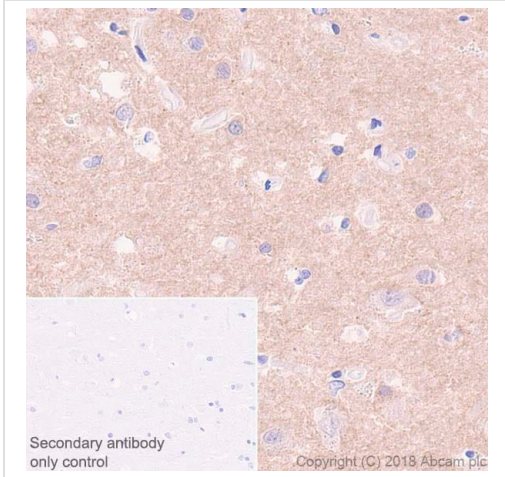
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-4R Tau antibody [EPR21725] (ab218314)

Immunohistochemical analysis of paraffin-embedded mouse cerebrum tissue labeling 4R Tau with ab218314 at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Cytoplasmic staining on mouse cerebrum (PMID: 18925637) is observed. Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP). Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-4R Tau antibody [EPR21725] (ab218314)

Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue labeling 4R Tau with ab218314 at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Cytoplasmic staining on human breast carcinoma (PMID: 15914550) is observed. Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP). Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).







Immunohistochemical analysis of paraffin-embedded human cerebrum tissue labeling 4R Tau with ab218314 at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Cytoplasmic staining in human cerebrum is observed. Counterstained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-4R Tau antibody [EPR21725] (ab218314)

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-4R Tau antibody [EPR21725] (ab218314)

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