

## Tau [pT231] ABfinity™ Recombinant Rabbit Monoclonal Antibody – Purified

Publication Part no. MAN0005594

Rev. 1.0

Catalog Number: 701056

Store at 2 to 8°C (short-term), or –20°C (long-term)

**Clonality:** Monoclonal  
**Concentration:** 0.5 mg/mL

**Host/Class:** Rabbit IgG  
**Reactivity:** Human microtubule-associated protein Tau

**Quantity:** 100 µg  
**Volume:** 200 µL

**Predicted Reactivity:** Human

### Product Description

Tau protein, also known as microtubule associated protein Tau (MAPT), plays a very important role in nucleation and stabilization of microtubules by associating with tubulin subunits. In humans, Tau is predominantly expressed in the brain, and malfunction due to misfolding and hyperphosphorylation results in self-assembly into tangles. The C-terminus of Tau (positively charged) associates with microtubules (negatively charged), and there are six isoforms of Tau with varying degree of affinity to tubulin. Numerous serine/threonine kinases; including GSK-3β, protein kinase A (PKA), cyclin-dependent kinase 5 (cdk5), and casein kinase II (CK2), phosphorylate Tau. Phosphorylation of threonine 231 is triggered by GSK-3 β, cdk5, and cdk1. The gene encoding Tau protein contains 16 exons, and is located on chromosome 17q21.

### Product Specifications

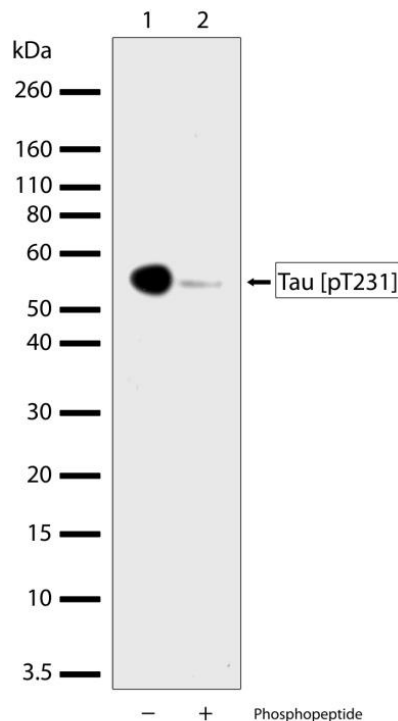
**Immunogen:** Phosphopeptide corresponding to amino acids 224–236 of human microtubule-associated protein tau  
**Alternate Names:** MAPTL, DDPAC, MSTD, PPND  
**Apparent MW:** ~56 kDa  
**Gene ID:** 4137  
**Protein Accession No.:** P10636  
**Sequence Identity:** Human  
**Clone/PAD:** 1H6L6  
**Lot:** See product label

### Product Applications

Application	Species	Test Material	Concentration
Western blotting	Rat	Total brain lysate	1–2 µg/mL
Immunocytochemistry	Human	HeLa cells	0.5–2 µg/mL
Indirect ELISA	Human	Phosphopeptide	1.5 x 10 <sup>-4</sup> to 3 µg/mL

### Storage and Handling

Store the antibody at 2 to 8°C for up to 1 month, or –20°C for long storage. Avoid repeated freezing and thawing.



**Figure 1** Western blot analysis of Tau [pT231] ABfinity™ Recombinant Rabbit Monoclonal Antibody (Cat. no. 701056). Western blot analysis was performed on total rat brain lysate (lanes 1 and 2). A band corresponding to phosphorylated Tau at ~56 kDa was detected using Tau [pT231] ABfinity™ Recombinant Rabbit Monoclonal Antibody at a concentration of 1 µg/mL (lane 1). To confirm specificity, competition was performed with the phosphopeptide (lane 2). The blot was developed using chemiluminescence (ECL) method.

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## Stability

Expires one year from date of receipt when stored as instructed.

## Storage Buffer

Phosphate buffered saline (PBS) with 0.09% sodium azide.

**Note:** Sodium azide is an extremely toxic and dangerous compound particularly when combined with acids or metals. Properly dispose of solutions containing sodium azide.

## Safety Data Sheets (SDS)

Safety Data Sheets (SDSs) are available at [www.invitrogen.com/sds](http://www.invitrogen.com/sds).

## Certificate of Analysis

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## Related Products

Product Name	Quantity	Catalog No.
iBlot® Dry Blotting System	1 unit	IB1001
WesternBreeze™ Chromogenic Kit Anti-Rabbit	1 kit	WB7105
WesternBreeze™ Chemiluminescent Kit, Anti-Rabbit	1 kit	WB7106
Goat anti-mouse (H+L), HRP conj.	1 mg	G21040
Goat anti-rabbit (H+L), HRP conj.	1 mg	G21234
Goat anti-mouse (H+L), AP conj.	1 mg	G21060
Goat anti-rabbit (H+L), AP conj.	1 mg	G21079
Nitrocellulose, 0.2 µm	20/pack	LC2000

### Explanation of symbols

Symbol	Description	Symbol	Description
	Catalogue Number		Batch code
	Research Use Only		In vitro diagnostic medical device
	Use by		Temperature limitation
	Manufacturer		European Community authorised representative
	Without, does not contain		With, contains
	Protect from light		Consult accompanying documents
	Directs the user to consult instructions for use (IFU), accompanying the product.		

## Limited Use Label License: Research Use Only

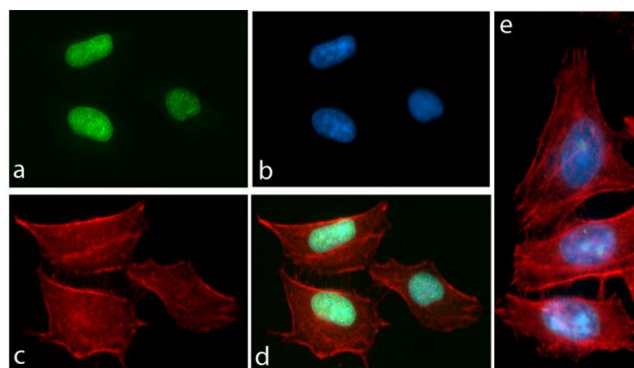
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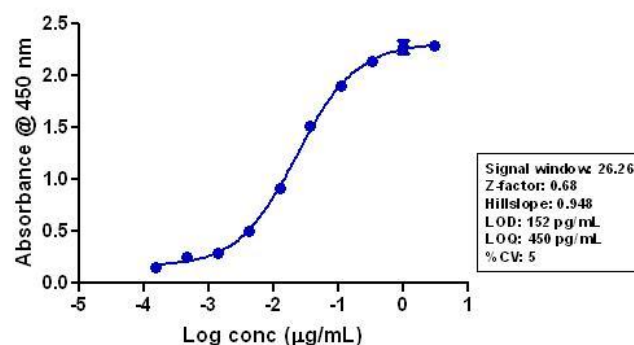
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**Figure 2** Immunocytochemistry analysis of Tau [pT231] ABfinity™ Recombinant Rabbit Monoclonal Antibody (Cat. no. 701056). Immunocytochemistry analysis of HeLa cells stained with Tau [pT231] ABfinity™ Recombinant Rabbit Monoclonal Antibody, using **a:** Alexa Fluor® 488 goat anti-rabbit as a secondary antibody (green). **b:** DAPI was used to stain the nucleus (blue), and **c:** Alexa Fluor® 594 phalloidin was used to stain actin (red). **d:** Composite image of cells showing nuclear localization of phosphorylated Tau. **e:** Composite image of cells showing competition with the phospho Tau [pT231] peptide.



**Figure 3** Indirect ELISA of Tau [pT231] ABfinity™ Recombinant Rabbit Monoclonal Antibody (Cat. no. 701056). Indirect ELISA was performed using various dilutions of Tau [pT231] ABfinity™ Recombinant Rabbit Monoclonal Antibody (Cat. no. 701056) to detect phospho Tau [pT231] peptide coated onto the plate. A non-linear regression analysis was performed (4 PL) and LOD and LOQ for the antibody was determined.

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