

Datasheet for ABIN6929400
tau Protein (partial, Pro301Leu-Mutant)[Go to Product page](#)

4 Images

Overview

Quantity:	100 µg
Target:	tau
Protein Characteristics:	Pro301Leu-Mutant, partial
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Application:	SDS-PAGE (SDS), Western Blotting (WB), In vitro Assay (in vitro), In vivo Studies (in vivo)

Product Details

Purpose:	Active Human Recombinant Tau (K18), P301L mutant Protein Pre-formed Fibrils
Sequence:	SRLQTAPVPM PDLKNVKS KI GSTENLKHQP GGGKVQIINK KLDLSNVQSK CGSKDNIKHV LGGGSVQIVY KPVDSLKVTS KCGSLGNIHH KPGGGQVEVK SEKLDFKDRV QSKIGSLDNI THVPGGGNKK IETHKLTFRE
Specificity:	~15.1 kDa
Purification:	Ion-exchange Purified
Biological Activity Comment:	Thioflavin T emission curve shows increased fluorescence (correlated to tau protein fibrillation) when active tau PFFs are combined with active tau monomers.

Target Details

Target:	tau
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Target Details

Alternative Name: Tau ([tau Products](#))

Background: Alzheimer's Disease (AD) is the most common neurodegenerative disease, affecting 10 % of seniors over the age of 65 (1). It was named after Alois Alzheimer, a German scientist who discovered tangled bundles of fibrils where neurons had once been in the brain of a deceased patient in 1907 (2). Tau (tubulin-associated unit) is normally located in the axons of neurons where it stabilizes microtubules. Tauopathies such as AD are characterized by neurofibrillary tangles containing hyperphosphorylated tau fibrils (3). There are six isoforms of tau in the adult human brain: three with four repeat units (4R) and three with three repeat units (3R) (4). K18 is a truncated form of human tau containing only the 4 microtubule binding repeats (5). P301L (PL) is a mutation where proline is replaced by leucine at codon 301 of tau, and has been linked to frontotemporal dementia (6).

UniProt: [P10636](#)

Application Details

Application Notes: Optimal working dilution should be determined by the investigator.

Restrictions: For Research Use only

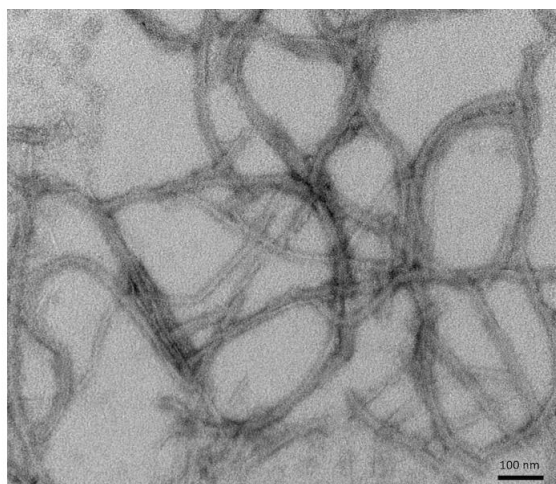
Handling

Concentration: Lot specific

Buffer: 10 mM HEPES, 100 mM NaCl pH 7.4

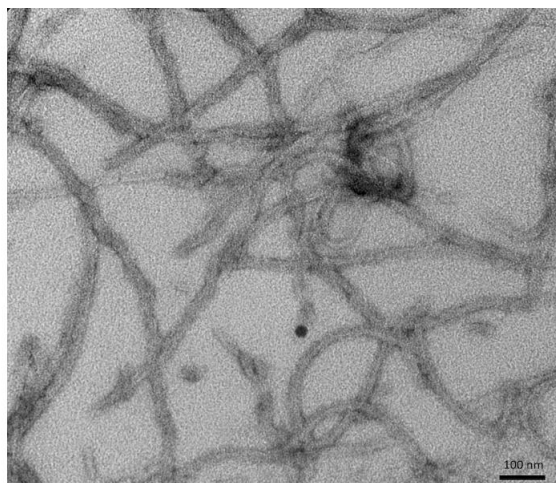
Storage: -80 °C

Images



Electron Microscopy

Image 1. TEM of recombinaant Tau (K18), P301L mutant Pre-formed Fibrils (PFFs) at 150kx magnification. HV=80kV.



Electron Microscopy

Image 2. TEM of recombinant Tau (K18), P301L mutant Pre-formed Fibrils (PFFs) at 150kx magnification. HV=80kV.

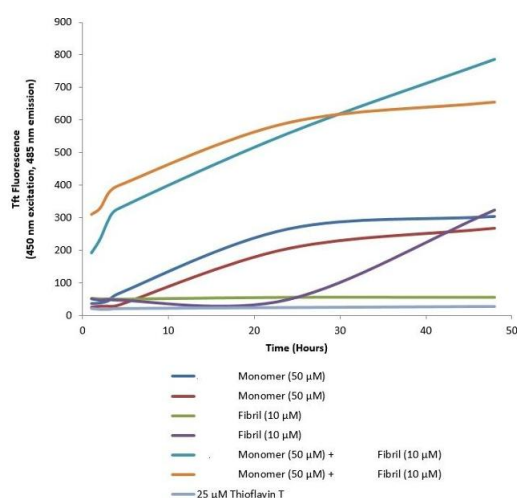


Image 3. Thioflavin T is a fluorescent dye that binds to beta sheet-rich structures, such as those in tau fibrils. Upon binding, the emission spectrum of the dye experiences a red-shift and increased fluorescence intensity. Thioflavin T emission curves show increased fluorescence (correlated to tau aggregation) over time in tau Pre-formed Fibrils (ABIN6929400, ABIN6929401 and ABIN6929402). Tau Pre-formed Fibrils (ABIN6929400, ABIN6929401 and ABIN6929402) seed the formation of new tau fibrils when combined with tau monomers (ABIN6929400, ABIN6929401 and ABIN6929402). Thioflavin T ex = 450 nm, em = 485 nm. 10 uM heparin was added to each well.

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN6929400.