

## Tau Protein

Active Human Recombinant Tau441 (2N4R)  
Wild-Type Protein Monomer  
Catalog No. SPR-479



Discovery through partnership | Excellence through quality

### Product Name

Tau Protein

### Description

Active Human Recombinant Tau441 (2N4R) Wild-Type Protein Monomer

### Applications

WB, SDS-PAGE, In vivo assay, In vitro assay

### Concentration

Lot/batch specific. See included datasheet.

### Conjugates

No tag

### Nature

Recombinant

### Species

Human

### Expression System

E. coli

### Amino Acid Sequence

MAEPRQEFEV MEDHAGTYGL GDRKDQGGYT MHQDQEGDTD AGLKESPLQT PTEDGSEEPG SETSDAKSTP TAEDV  
TAPLV DEGAPGKQAA AQPHTIPEG TTAEEAGIGD TPSLEDEAAG HVTQARMVSK SKDGTGSDDK KAKGADGKTK I  
ATPRGAAPP GQKGQANATR IPAKTPPAPK TPPSSGEPPK SGDRSGYSSP GSPGTPGSRS RTPSLPTPPT REPKKVAVV  
R TPPKSPSSAK SRLQTAPVPM PDLKNVSKI GSTENLKHQP GGGKVQIINK KLDLSNVQSK CGSKDNIKHV PGGGSV  
QIVY KVDLSKVTS KCGSLGNIHH KPGGGQVEVK SEKLDKDRV QSKIGSLDNI THVPGGGNKK IETHKLFRE NAKA  
KTDHGA EIVYKSPVVS GDTSPRHLSN VSSTGSIDMV DSPQLATLAD EVSASLAKQG L

### Purity

>95%

### Protein Length

Full Length

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## Field Of Use

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Not for use in humans. Not for use in diagnostics or therapeutics. For in vitro research use only.

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## Properties

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### Storage Buffer

10 mM HEPES, 100 mM NaCl pH 7.4

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### Storage Temperature

-80°C

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### Shipping Temperature

Dry Ice. Shipping note: Product will be shipped separately from other products purchased in the same order.

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### Purification

Ion-exchange Purified

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### Specificity

~45.85 kDa

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### Certificate Of Analysis

Certified >95% pure using SDS-PAGE analysis.

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## Biological Description

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### Alternative Names

Active tau monomer, active tau protein monomer, active tau protein, microtubule-associated protein tau, MAPT, MAP, microtubule-associated protein, Truncated Tau Protein Monomer, Paired Helical Filament-Tau, Phf-Tau, Neurofibrillary Tangle Protein, G Protein Beta1/Gamma2 Subunit-Interacting Factor 1, Isoform 2, tubulin-associated unit, 95-amino acid tau protein fragment, Truncated Tau Protein, MAPT DeltaK280, ΔK280 tau, K18 delta K280 tau, truncated ΔK280 tau

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### Research Areas

Alzheimer's Disease, Axon Markers, Cell Markers, Cell Signaling, Cytoskeleton, Microtubules, MT Associated Proteins, Neurodegeneration, Neuron Markers, Neuroscience, Tangles & Tau

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### Cellular Localization

Axolemma, Axolemma Plasma Membrane, Axon, Cell Body, Cell membrane, Cytoplasm, Cytoplasmic Ribonucleoprotein Granule, Cytoplasmic Side, Cytoskeleton, Cytosol, Dendrite, Growth cone, Microtubule, Microtubule Associated Complex, Neurofibrillary Tangle, Neuronal Cell Body, Nuclear Periphery, Nuclear Speck, Nucleus, Peripheral membrane protein, Plasma Membrane, Tubulin Complex

## Gene ID

4137

## Swiss Prot

P10636

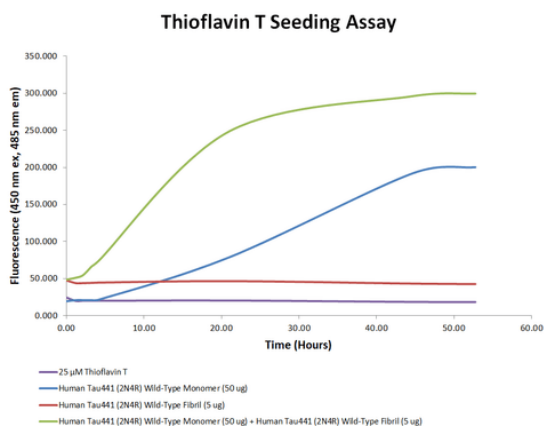
## Scientific Background

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). The  $\Delta$ K280 mutation is associated with frontotemporal dementia and promotes fibrillization into paired helical filaments (PHFs) in the absence of heparin and other inducers (4). K18 is a truncated form of human tau containing only the 4 microtubule binding repeats (5).

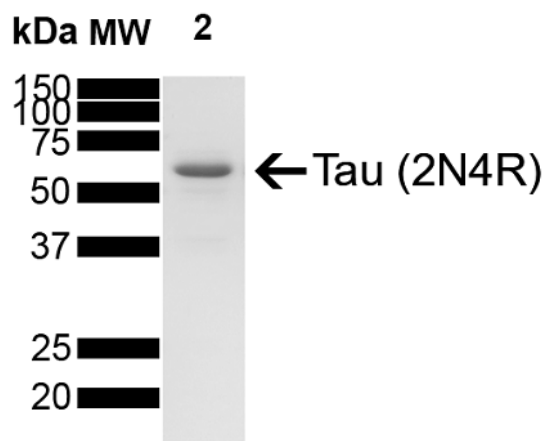
## References

1. [www.alz.org/alzheimers-dementia/facts-figures](http://www.alz.org/alzheimers-dementia/facts-figures)
2. Alzheimer, A. Über eine eigenartige Erkrankung der Hirnrinde. Allg. Z. Psychiatr. Psych.-Gerichtl. Med. 64, 146–148 (1907)
3. Matsumoto, G. et al. (2018). Int J Mol Sci. 19, 1497.
4. Von Bergen, M. et al. (2001). J Biol Chem. 276(51):48165-48174.
5. Guo, J. and Lee, M.Y. (2013). FEBS Lett. 587(6): 717-723.

## Product Images



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 when tau wild-type monomers (SPR-479) are combined with tau wild-type fibrils (SPR-480).



SDS-PAGE of Wild-Type Tau monomers (SPR-479)

## Product Citations (0)

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Currently there are no citations for this product.

## Reviews

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There are no reviews yet.