

# Tau-412 (1N4R) Wild-Type Pre- formed Fibrils

Human Recombinant Tau-412 (1N4R) Wild-Type  
Pre-formed Fibrils  
Catalog No. SPR-512



Discovery through Partnership | Excellence through Quality

distributed in the US/Canada by:

EAGLE BIOSCIENCES, INC.

20A NW Blvd, Suite 112 Nashua, NH 03063

Phone: 617-419-2019 FAX: 617-419-1110

[www.EagleBio.com](http://www.EagleBio.com) info@eaglebio.com



## Product Name

Tau-412 (1N4R) Wild-Type Pre-formed Fibrils

## Description

Human Recombinant Tau-412 (1N4R) Wild-Type Pre-formed Fibrils

## Applications

WB, SDS PAGE, In vitro Assay

## Concentration

Lot/batch specific. See included datasheet.

## Conjugates

No tag

## Nature

Recombinant

## Species

Human

## Expression System

E. coli

## Amino Acid Sequence

MAEPRQEFEVMEHDHAGTYGLGDRKDQGGYTMHQDQEGD TDAGLKESPLQTP TEDGSEEPGSETSDAKSTPTAE AEEAGIGD  
TPSLEDEAAGHVTQARMVSKSKDGTGSDDKKAKGADGKTKIATPRGAAPPGQKGQANATRIPAKTPPAPKTPPSSGEPKSG  
DRSGYSSPGSPGTPGSRSRTPSLPTPPTREPKKVAVVRTPPKSPSSAKSRLQTAPVPM PDLKNVSKIGSTENLKHQPGGGKVQI  
INKKLDLSNVQSKCGSKDNIKHVPGGGSVQIVYKVPVDLSKVTSKCGSLGNIHHKPGGGQVEVKSEKLD FKDRVQSKIGSLDNIT  
HVPGGGNKKIETHKLT FRENAAKAKTDHGAEIVYKSPVWVGDTSPRHLSNVSSTGSIDMVDSPQLATLADEV SASLAKQGL

## Purity

---

>95%

---

### Other Resources

---

Sonication Protocol

---

### Protein Length

---

412 aa

---

### Protein Size

---

42.967 kDa

---

### Field Of Use

---

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

---

## Properties

---

### Storage Buffer

---

10mM Hepes pH 7.4, 100mM NaCl

---

### Storage Temperature

---

-80°C

---

### Shipping Temperature

---

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

---

### Purification

---

Ion-exchange Purified

---

### Cite This Product

---

Human Recombinant Tau-412 (1N4R) Wild-Type Pre-formed Fibrils (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPR-512)

---

### Certificate Of Analysis

---

Protein certified >95% pure on SDS-PAGE & Nanodrop analysis. Low endotoxin <5 EU/mL @ 2mg/mL.

---

### Other Relevant Information

---

Monomer source is catalog# SPR-511.

---

## Biological Description

---

### Alternative Names

Tau monomer, Tau protein monomer, Tau protein, microtubule-associated protein Tau, MAPT, MAP, microtubule-associated protein, Truncated Tau Protein Monomer, Tau-E, Tau 412

### Research Areas

Alzheimer's Disease, Neurodegeneration, Neuroscience, Tangles & Tau

### Swiss Prot

P10636-7

### Scientific Background

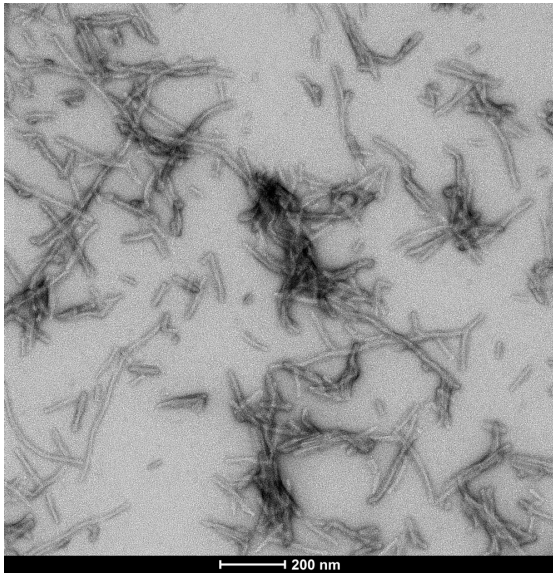
Several tau isoforms, including 1N3R, are expressed in the human brain, and the existence of multiple human tauopathies with distinct fibril morphologies suggests different molecular conformers incorporating different isoforms may exist (1, 2). NMR data indicates that both 3R and 4R tau are incorporated into AD-tau seeded fibrils (3).

### References

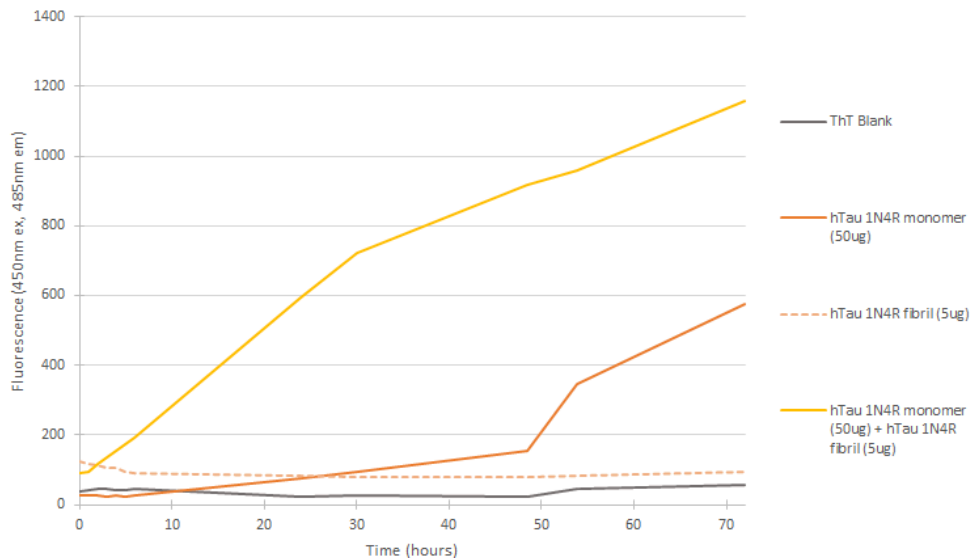
1. Goedert et al. 1989. Multiple isoforms of human microtubule-associated protein tau: sequences and localization in neurofibrillary tangles of Alzheimer's disease. *Neuron*. DOI: 10.1016/0896-6273(89)90210-9
2. Goedert, Eisenberg and Crowther. 2017. Propagation of Tau Aggregates and Neurodegeneration. *Annual Review of Neuroscience*. DOI: 10.1146/annurev-neuro-072116-031153
3. Dregni et al. 2022. Fluent molecular mixing of Tau isoforms in Alzheimer's disease neurofibrillary tangles. *Nature communications*. DOI: 10.1038/s41467-022-30585-0

## Product Images

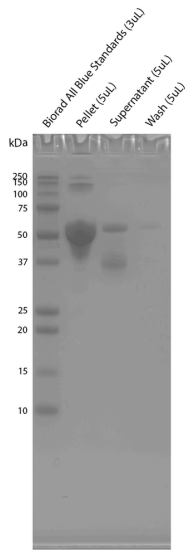
---



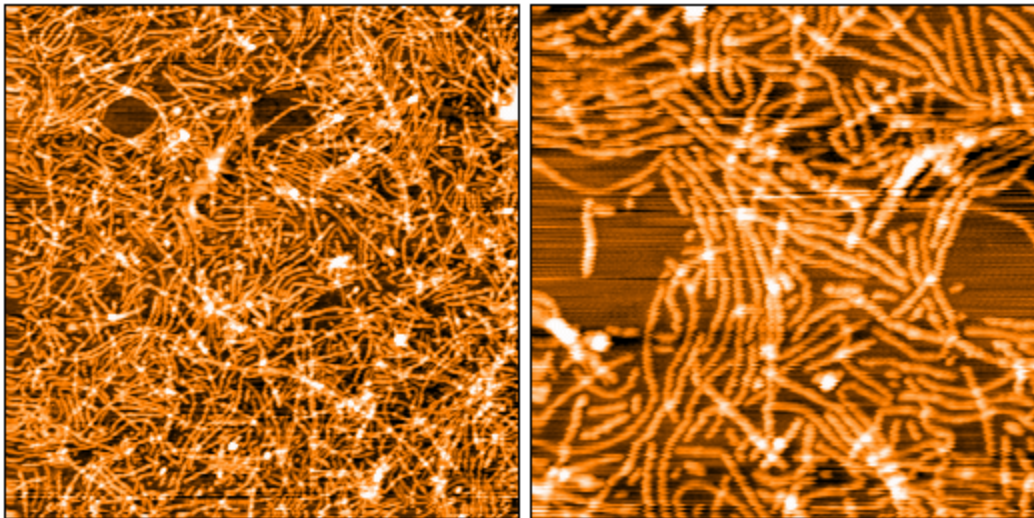
Representative TEM image of E. coli-expressed Tau 1N4R Pre-Formed Fibrils, 200nm scale. Negative stain transmission electron microscopy images of SPR-512 acquired at 80 Kv on carbon coated 400 mesh copper grids using phosphotungstic acid and uranyl acetate stain.



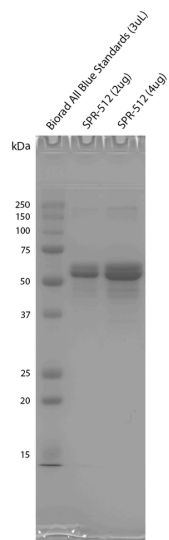
In vitro seeding activity of human Tau-412 (1N4R) monomer in ThT assay. Tau 1N4R pre-formed fibrils seed fibril formation of human Tau-412 (1N4R) monomers over 72 hours. Reactions (100uL) shaken at 600 rpm in Greiner-Bio 96 Well Non-Binding Cell Culture Microplates, Black (Greiner-Bio Catalog #655900) at 37oC in the presence of 25 uM ThT and 10 uM heparin and read with an XPS Microplate Reader set at 450nmex/485nmem.



Sedimentation assay on E. coli expressed hTau-412 (1N4R) Pre-formed Fibrils. Samples were spun down at 15,000 x g, washed, and then spun down again. Fibril samples are prepared in denaturing conditions prior to running on the gel. SDS-PAGE analysis on a 12% Bis-Tris gel shows that the majority of the fibril prep shifts to insoluble post-fibrillization of monomers.



Atomic force microscopy analysis of 1 mg/mL fibrils diluted to 0.001 mg/mL with dH<sub>2</sub>O mounted on freshly cleaved mica, washed, dried and analyzed with tapping mode. Representative images are 5 x 5 μm x-y (left) and 2 x 2 μm x-y (right), both with a Z-range set at 12nm.



SDS-PAGE analysis of purified E. coli expressed hTau-412 (1N4R) Pre-formed Fibrils on a 12% Tris-Glycine gel. Fibril samples are prepared in denaturing conditions prior to running on the gel.

## Product Citations

---

## Reviews

---

There are no reviews yet.