

Tau-381 (1N3R) Wild-Type Pre- formed Fibrils

Human Recombinant Tau-381 (1N3R) Wild-Type
Pre-formed Fibrils
Catalog No. SPR-514



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Product Name

Tau-381 (1N3R) Wild-Type Pre-formed Fibrils

Description

Human Recombinant Tau-381 (1N3R) 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

MAEPRQEFVEMEDHAGTYGLGDRKDQGGYTMHQDQEGD TDAGLKESPLQTP TEDGSEEPGSETSDAKSTPTAE AEEAGIGD
TPSLEDEAAGHVTQARMVSKSKDGTGSDDKKAKGADGKTKIATPRGAAPPGQKGQANATRIPAKTPPAPKTPPSSGEPKSG
DRSGYSSPGSPGTPGSRSRTPSLPTPPTREPKKVAVVRTPPKSPSSAKSRLQTAPVMPDLKNVKSKIGSTENLKHQPGGGKVQI
VYKPV DLSKVTSKCGSLGNIHHKPGGGQVEVKSEKLD FKDRVQSKIGSLDNITHVPGGGNKKIETHKLTFR ENAKAKTDHGAEI
VYKSPVSGDTS PRHLSNVSSTGSIDMVDSPQLATLADEV SASLAKQGL

Purity

>95%

Other Resources

Sonication Protocol

Protein Length

381 aa

Protein Size

39.72 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-381 (1N3R) Wild-Type Pre-formed Fibrils (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPR-514)

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-513.

Biological Description

Alternative Names

Tau-B, Tau 381

Research Areas

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

Swiss Prot

P10636-4

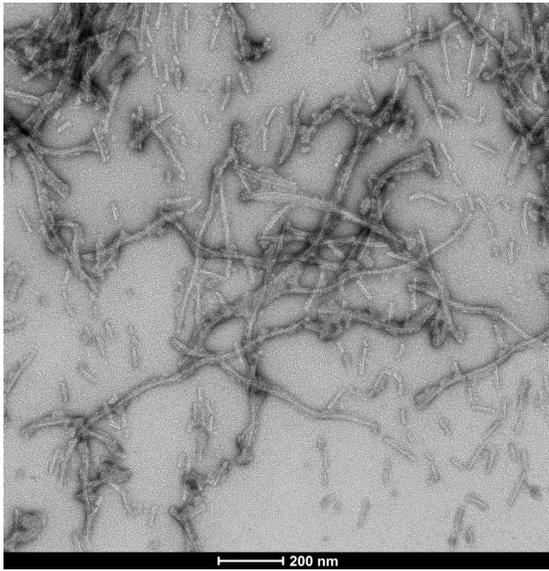
Scientific Background

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).

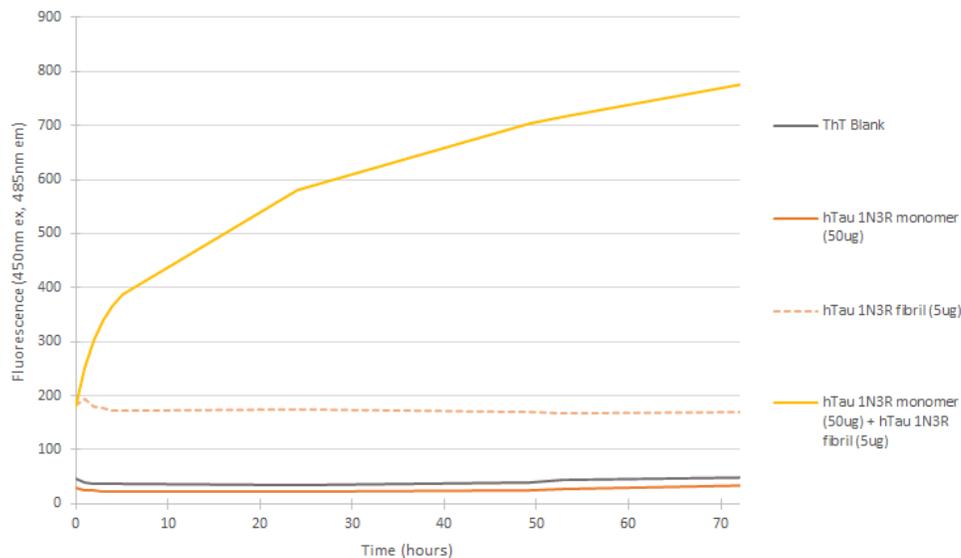
References

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
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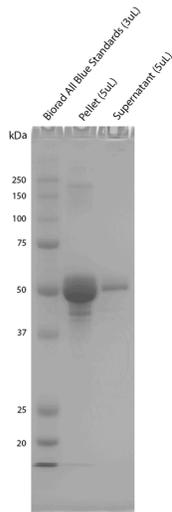
Product Images



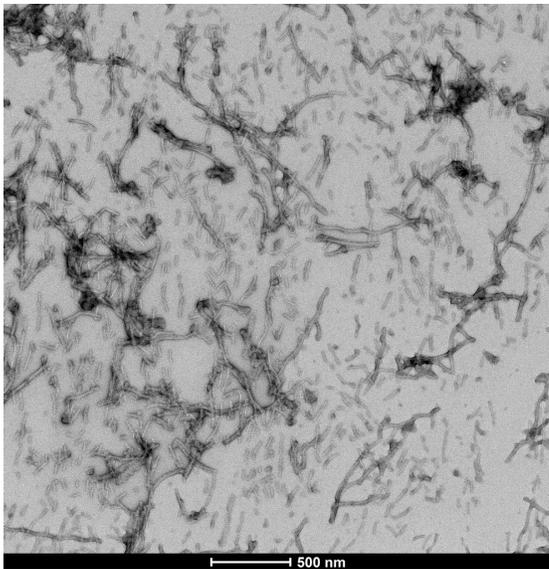
Representative TEM image of E. coli-expressed Tau 1N3R Pre-Formed Fibrils, 200nm scale. Negative stain transmission electron microscopy images of SPR-514 acquired at 80 Kv on carbon coated 400 mesh copper grids using phosphotungstic acid and uranyl acetate stain.



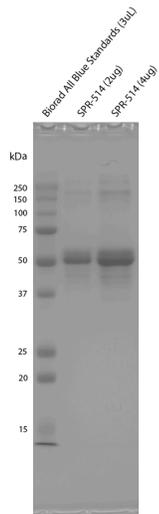
In vitro seeding activity of human tau-381 (1N3R) monomers in ThT assay. Tau 1N3R pre-formed fibrils (SPR-514) seed fibril formation of human tau 1N3R monomers over 72 hours. Reactions (100uL) shaken at 600 rpm in Greiner-Bio 96 Well Non-Binding Cell Culture Microplates, Black (Greiner-Bio Catalog #655900) at 37°C 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-381 (1N3R) Pre-formed Fibrils. Samples were spun down at 15,000 x g. Fibril samples are prepared in denaturing conditions prior to running on the gel. SDS-PAGE analysis on a 12% Tris-Glycine gel shows the majority of the fibrils are insoluble.



Representative TEM image of E. coli-expressed Tau 1N3R Pre-Formed Fibrils, 500nm scale. Negative stain transmission electron microscopy images of SPR-514 acquired at 80 Kv on carbon coated 400 mesh copper grids using phosphotungstic acid and uranyl acetate stain.



SDS-PAGE analysis of purified E. coli expressed hTau-381 (1N3R) PFFs on a 12% Tris-Glycine gel. Note: fibril samples are prepared in denaturing conditions prior to running on the gel, and are not SDS-stable.

Product Citations

Reviews

There are no reviews yet.