

Tau dGAE (297-391) AD-mimic Pre-formed Fibrils

Human Recombinant Tau dGAE (297-391) AD-mimic Pre-formed Fibrils (fibrilized without heparin)
Catalog No. SPR-502



Discovery through Partnership | Excellence through Quality

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Product Name

Tau dGAE (297-391) AD-mimic Pre-formed Fibrils

Description

Human Recombinant Tau dGAE (297-391) AD-mimic Pre-formed Fibrils (fibrilized without heparin)

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

IKHVPGGGSVQIVYKPVLDLSKVTSKCGSLGNIHHKPGGGQVEVKSEKLDKDRVQSKIGSLDNITHVPGGGNKKIETHKLTFRN
AKAKTDHGAE

Purity

>95%

Other Resources

Protein Length

Fragment of full length wild-type Tau 2N4R (297 - 391aa)

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 PB pH 7.4, 10mM DTT, 200mM MgCl₂

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 dGAE (297-391) AD-mimic Pre-formed Fibrils (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPR-502)

Certificate Of Analysis

Protein certified >95% pure on SDS-PAGE & Nanodrop analysis.

Biological Description

Alternative Names

Tau aggregate, Tau PFFs, Tau PFF, Tau protein aggregate, Tau protein, microtubule-associated protein Tau, MAPT, MAP, microtubule-associated protein, Truncated Tau Protein Aggregate, Paired Helical Filament-Tau, Phf-Tau, Neurofibrillary Tangle Protein, dGAE Tau Protein, Tau dGAE

Research Areas

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

Swiss Prot

P10636-8

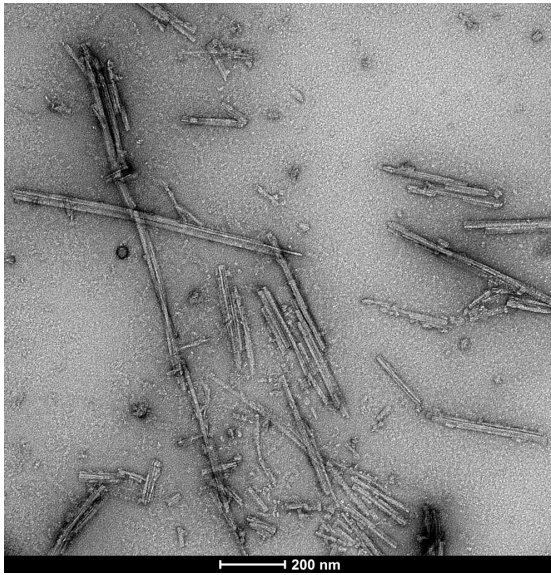
Scientific Background

Filamentous tau inclusions are a hallmark of many neurodegenerative diseases, including Alzheimer's disease (AD) and Chronic Traumatic Encephalopathy (CTE), collectively called tauopathies. Advances in Cryo-EM have revealed that tau filaments isolated from individuals with a particular neurodegenerative disease share a distinct tau fold – i.e. an AD-isolated Tau filaments' fold is distinct from a CTE-isolated Tau filaments' fold (1-3). Utilizing Tau filaments with the correct disease-specific fold is an important goal towards better mimicking specific human diseases in cellular and in vivo models. Recent Cryo-EM studies have demonstrated that recombinantly generated Tau dGAE monomers will form the disease-isolated AD or CTE Tau filament folds under highly specific conditions in vitro (4, 5). StressMarq's catalog# SPR-502 Tau dGAE (297-391) AD-mimic PFFs are purified and fibrilized under these exact published conditions that replicate the disease-isolated AD-fold (200 rpm at 37°C in 10 mM PB 10 mM DTT pH 7.4 200 mM MgCl₂ for 48 hours).

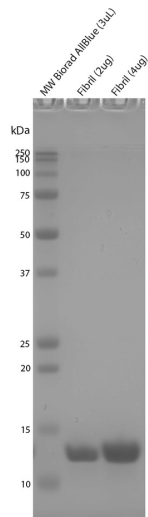
References

1. Goedert, Eisenberg and Crowther. 2017. Propagation of Tau Aggregates and Neurodegeneration. *Annu Rev Neurosci*. DOI: <https://doi.org/10.1146/annurev-neuro-072116-031153>
2. Fitzpatrick et al. 2017. Cryo-EM structures of tau filaments from Alzheimer's disease. *Nature*. DOI: [10.1038/nature23002](https://doi.org/10.1038/nature23002)
3. Falcon et al. 2019. Novel tau filament fold in chronic traumatic encephalopathy encloses hydrophobic molecules. *Nature*. DOI: <https://doi.org/10.1038/s41586-019-1026-5>.
4. Lovestam et al. 2022. Assembly of Recombinant Tau into Filaments Identical to those of Alzheimer's disease and Chronic Traumatic Encephalopathy. *eLife*. DOI: <https://doi.org/10.7554/eLife.76494>
5. Lovestam et al. 2023. Disease-specific Tau Filaments Assemble via Polymorphic Intermediates. *bioRxiv*. <https://doi.org/10.1101/2023.07.24.550295>

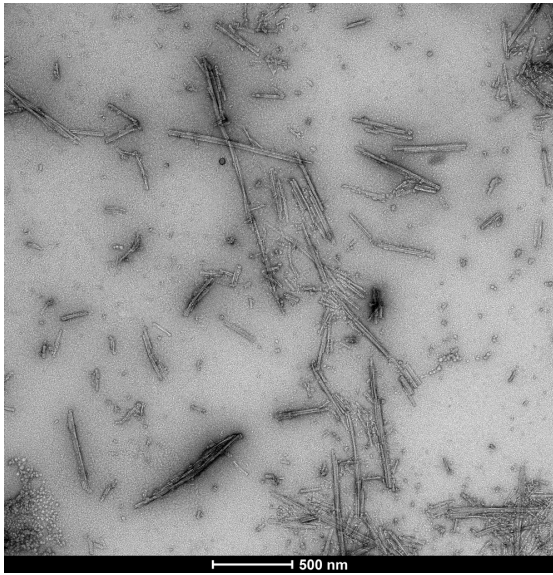
Product Images



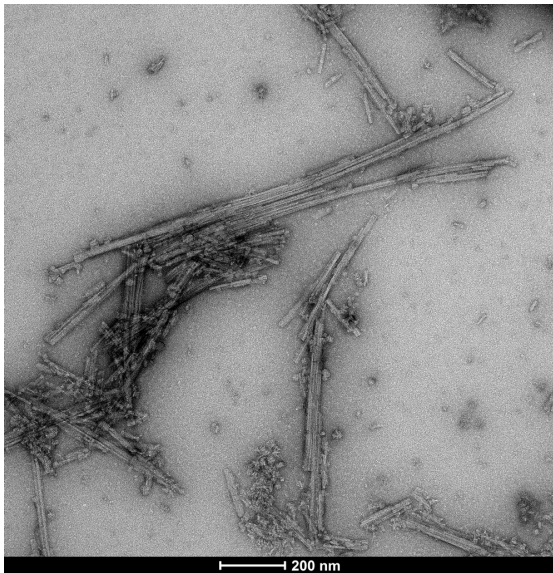
TEM of Tau dGAE AD-mimic fibrils (SPR-502) generated from Tau dGAE monomers (SPR-501) by shaking 200 rpm at 37°C for 48 hours in 10 mM PB 10 mM DTT pH 7.4 with 200 mM MgCl₂ added (Lovestam et al. 2022, eLife). Negative stain transmission electron microscopy images acquired at 80 Kv on carbon coated 400 mesh copper grids using phosphotungstic acid and uranyl acetate stain. Scale bar = 200 nm.



SDS-PAGE of Tau dGAE AD-mimic fibrils (SPR-502) on a 12% Tris-Glycine Gel.



TEM of Tau dGAE AD-mimic fibrils (SPR-502). Negative stain transmission electron microscopy images acquired at 80 Kv on carbon coated 400 mesh copper grids using phosphotungstic acid and uranyl acetate stain. Scale bar = 500 nm.



TEM of Tau dGAE AD-mimic fibrils (SPR-502). Negative stain transmission electron microscopy images acquired at 80 Kv on carbon coated 400 mesh copper grids using phosphotungstic acid and uranyl acetate stain. Scale bar = 200 nm.

Product Citations (0)

Currently there are no citations for this product.

Reviews

There are no reviews yet.