Tau Protein

Active Human Recombinant Truncated Tau Fragment (AA297-391) (dGAE C322A) Protein Monomer
Catalog No. SPR-445

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

Product Name

Tau Protein

Description

Active Human Recombinant Truncated Tau Fragment (AA297-391) (dGAE C322A) Protein Monomer

Applications

Save

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

IKHVPGGGSV QIVYKPVDLS KVTSKAGSLG NIHHKPGGGQ VEVKSEKLDF KDRVQSKIGS LDNITHVPGG GNKKIETHKL TFRENAKAKT DHGA E

Purity

>95%

Protein Length

Fragment

Biological Activity

Thioflavin T emission curves show increased fluorescence (correlated to tau aggregation) over time when truncated tau fragment (AA297-391) (dGAE C322A) monomer is combined with truncated tau fragment (AA297-391) (dGAE C322A) preformed fibrils (Type 1). Learn about different tau products available at www.stressmarq.com/PFFs/tau

Field Of Use

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

Properties

Storage Buffer

PBS pH 7.4

Storage Temperature

-80ºC

Shipping Temperature

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

Purification

Ion-exchange Purified

Specificity

10.133 kDa

Cite This Product

Human Recombinant Tau Protein (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog #SPR-445)

Certificate Of Analysis

Certified >95% pure using SDS-PAGE analysis.

Biological Description

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

Research Areas

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

Cellular Localization

Cytoplasm, Axolemma, Axolemma Plasma Membrane, Axon, Cell Body, Cell membrane, 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

Accession Number

NP_005901.2

Gene ID

4137

Swiss Prot

P10636

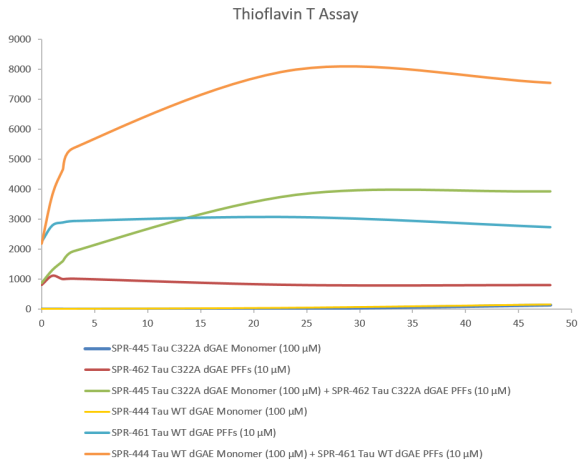
Scientific Background

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 paired helical filaments (PHFs). A truncated 95-amino acid fragment corresponding to residues 297-391 of full-length tau has been shown to assemble into PHF-like fibrils in vitro in the absence of additives or templates (3). This fragment has been found in the core of PHFs from AD brains and forms filaments that closely resemble PHFs isolated from AD brains (3). The C322A mutation leads to enhanced self-assembly into long and ordered PHFs (3).

References

1. 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. Al-Hilaly, Y.K. et al. Alzheimer's Disease-like Paired Helical Filament Assembly from Truncated Tau Protein Is Independent of Disulfide Crosslinking. J. Mol. Biol. 429(23):3650-3665 (2017)"

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 truncated tau fragment (AA297-391) (dGAE C322A) monomer is combined with truncated tau fragment (AA297-391) (dGAE C322A) preformed fibrils (Type 1).

Product Citations (0)

Currently there are no citations for this product.

Reviews

There are no reviews yet.