

Tau Protein

Active Human Recombinant Tau441 (2N4R),
P301S mutant Protein Pre-formed Fibrils: ATTO
488
Catalog No. SPR-329-A488



Discovery through partnership | Excellence through quality

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Product Name

Tau Protein

Description

Active Human Recombinant Tau441 (2N4R), P301S mutant Protein Pre-formed Fibrils: ATTO 488

Applications

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

Concentration

Lot/batch specific. See included datasheet.

Conjugates

ATTO 488

Nature

Recombinant

Species

Human

Expression System

E. coli

Amino Acid Sequence

MAEPRQEFEV MEDHAGTYGL GDRKDQGGYT MHQDQEGDTD AGLKESPLQT PTEDGSEEPG SETSDAKSTP TAEDVTA
PLV DEGAPGKQAA AQPHTIEPEG TTAEEAGIGD TPSLEDEAAG HVTQARMVSK SKDGTGSDDK KAKGADGGTK IATPRG
AAPP GQKGQANATR IPAKTPPAPK TPPSSGEPK SGDRSGYSSP GSPGTPGSRS RTPSLPTPPT REPKKVAVR TPPKSPS
SAK SRLQTAPVPM PDLKNVSKI GSTENLKHQP GGGKVQIINK KLDLSNVQSK CGSKDNIKHVSGGGSVQIVY KPVDLSKV
TS KCGSLGNIHH KPGGGQVEVK SEKLDKDRV QSKIGSLDNI THVPGGGNKK IETHKLTFRE NAKAKTDHGA EIVYKSPV
S GDTSPRHLSN VSSTGSIDMV DSPQLATLAD EVSASLAKQG L

Purity

>95%

Protein Length

Full Length

Biological Activity

Under Investigation

Field Of Use

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

Properties

Storage Buffer

PBS pH7.4, 0.09% Azide

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 Protein (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPR-429-A488)

Certificate Of Analysis

Certified >95% pure using SDS-PAGE analysis.

Other Relevant Information

For best results, sonicate immediately prior to use.

Biological Description

Alternative Names

Active tau PFFs, active tau protein preformed fibrils, active tau aggregates, microtubule-associated protein tau, MAPT, MAP, microtubule-associated protein, Paired Helical Filament-Tau, Phf-Tau, Neurofibrillary Tangle Protein, G Protein Beta1/Gamma2 Subunit-Interacting Factor 1, Isoform 4, tubulin-associated unit, mouse tau protein, P301S mutant tau, 2N4R tau, Tau441, fluorescent tau fibrils, ATTO 488 conjugated tau, ATTO labelled tau fibrils

Research Areas

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

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

Accession Number

NP_005901.2

Gene ID

4137

Swiss Prot

P10636

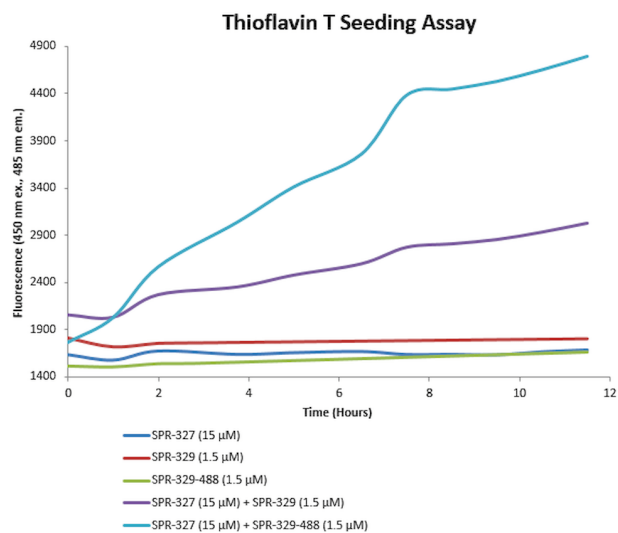
Scientific Background

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 hyperphosphorylated tau fibrils (3). There are six isoforms of tau in the adult human brain: three with four repeat units (4R) and three with three repeat units (3R) (4). 2N4R, or Tau-441 is the full length tau protein. P301S is a mutation encoded by exon 10 (4) that impairs the ability of tau to assemble microtubules (5). +

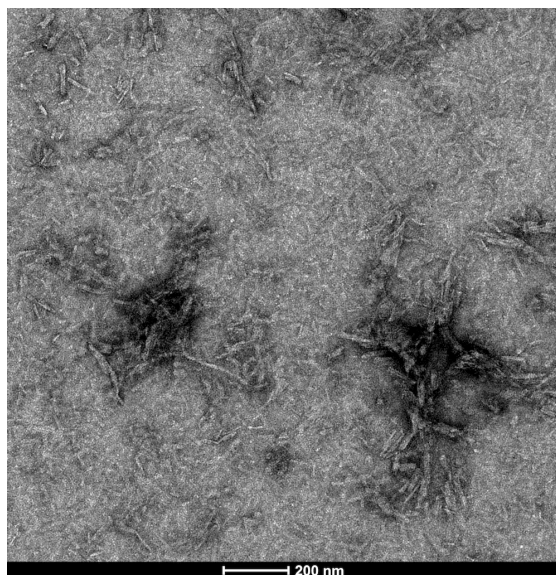
References

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. Matsumoto, G. et al. (2018). *Int J Mol Sci.* 19, 1497.
 4. Goedert, M. and Spillantini, M. G. (2017). *Mol Brain.* 10:18.
 5. Bugiani, O. et al. (1999). *J Neuropathol Exp Neurol.* 58(6):667-77.
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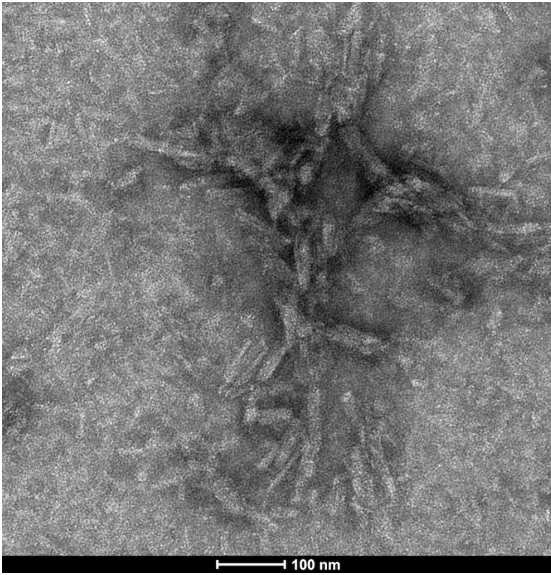
Product Images



Thioflavin T is a fluorescent dye that binds to beta-sheet rich structures, such as those in tau fibrils. When ATTO488-conjugated tau fibrils are combined with tau monomers, they show increased seeding compared to unconjugated tau fibrils combined with tau monomers. Plate Used: HTRF 96-well low volume white plate (Cisbio). Reaction Volume: 15 uL



TEM of ATTO 488-conjugated tau PFFs (SPR-329-A488)



TEM of ATTO 488-conjugated tau PFFs (SPR-329-A488)

Product Citations (0)

Currently there are no citations for this product.

Reviews

There are no reviews yet.