

Tau441 Active Protein | Tau active protein

Active Human Recombinant Tau441 (2N4R), P301S Mutant Protein Monomer

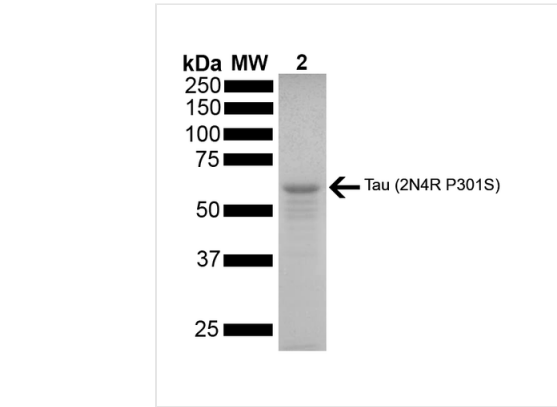
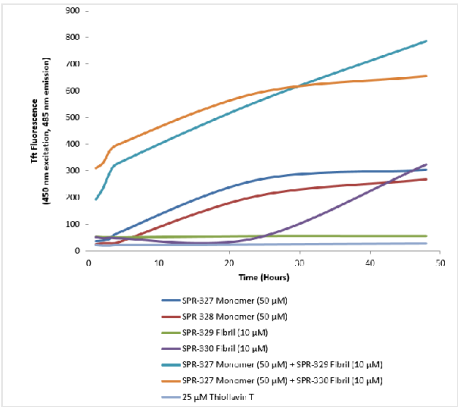
CATALOG # AAA253967	HOST E Coli	APPLICATIONS SDS-Page, Western Blot
-------------------------------	-----------------------	---

PRODUCT SYNONYMS

Tau441; Active Human Recombinant Tau441 (2N4R); P301S Mutant Protein Monomer; Tau Protein; Active tau monomer; active tau protein monomer; active tau protein; microtubule-associated protein tau; MAPT; MAP; microtubule-associated protein; tau-441; Paired Helical Filament-Tau; Phf-Tau; Neurofibrillary Tangle Protein; G Protein Beta1/Gamma2 Subunit-Interacting Factor 1; Isoform 2; tubulin-associated unit; Tau active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Specificity	~45.8 kDa
Purity/Purification	>95% Ion-Exchange Purified
Form/Format	10 mM HEPES, 100 mM NaCl pH 7.4
Sequence	MAEPRQEFEV MEDHAGTYGL GDRKDQGGYT MHQDQEGDTD AGLKESPLQT PTEDGSEEPG SETSDAKSTP TAEDVTAPLV DEGAPGKQAA AQPHTIEPEG TTAEEAGIGD TPSLEDEAAG HVTQARMVSK SKDGTGSDDK KAKGADGKTK IATPRGAAPP GQKGQANATR IPAKTPPAPK TPPSSGEPPK SGDRSGYSSP GSPGTPGSRS RTPSLTPPT REPKKVAVVR TPPKSPSSAK SRLQTAPVPM PDLKNVSKI GSTENLKHQP GGGKVQIINK KLDLSNVQSK CGSKDNIKHV SGGGSVQIVY KPVDSLKVT S KCGSLGNIHH KPGGGQVEVK SEKLDKDRV QSKIGSLDNI THVPGGGNKK IETHKLTFRE NAKAKTDHGA EIVYKSPVVS GDTSPRHLSN VSSTGSIDMV DSPQLATLAD EVSASLAKQG L
Sequence Length	Full Length
Applicable Applications for Tau active protein	Invitro Assay, SDS-PAGE, WB (Western Blot)
Species	Human
Tag	No tag
Biological Activity	Thioflavin T emission curve shows increased fluorescence (correlated to tau protein fibrillation) when tau PFFs are combined with tau monomers.
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
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Store at -80 degree C.



SDS-PAGE
SDS-PAGE of ~67 kDa Human Tau Protein 2N4R P301S Monomer. Lane 1: MW ladder. Lane 2: Tau Protein Monomer

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 in tau monomers. A greater increase in fluorescence is seen when 50 μM monomer is combined with 10 μM PFFs, as the fibrils seed the formation of new fibrils from the pool of monomers. Thioflavin T ex = 450 nm, em = 485 nm.

ADDITIONAL INFORMATION

Related Product Information for Tau active protein	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).
Product Categories/Family for Tau active protein	Alzheimer's Disease; Axon Markers; Cell Markers; Cell Signaling; Cytoskeleton; Microtubules; MT Associated Proteins; Neurodegeneration; Neuron Markers; Neuroscience; Tangles & Tau
References	1. Alzheimer, A. Über eine eigenartige Erkrankung der Hirnrinde. Allg. Z. Psychiatr. Psych.-Gerichtl. Med. 64, 146-148 (1907). 2. Matsumoto, G. et al. (2018). Int J Mol Sci. 19, 1497. 3. Goedert, M. and Spillantini, M. G. (2017). Mol Brain. 10:18. 4. Bugiani, O. et al. (1999). J Neuropathol Exp Neurol. 58(6):667-77.

NCBI AND UNIPROT INFORMATION

NCBI GI #	294862258
NCBI GeneID	4137
NCBI Accession #	NP_001116538.2
NCBI GenBank Nucleotide #	NP_001116538.2
UniProt Accession #	P10636
NCBI Official Full Name	microtubule-associated protein tau isoform 6
NCBI Official Synonym Full Names	microtubule associated protein tau
NCBI Official Symbol	MAPT
NCBI Official Synonym Symbols	TAU; MSTD; PPND; DDPAC; MAPTL; MTBT1; MTBT2; FTDP-17; PPP1R103
NCBI Protein Information	microtubule-associated protein tau
UniProt Protein Name	Microtubule-associated protein tau

UniProt Gene Name	MAPT
UniProt Synonym Gene Names	MAPTL; MTBT1; TAU; PHF-tau
UniProt Entry Name	TAU_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/tau441/253967>