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Datasheet for 009-001-U01S

Tau-441 (P301S) protein

Overview

Description:	Tau-441 (P301S) recombinant protein - 009-001-U01S
Item No.:	009-001-U01S
Size:	20 µg
Applications:	EM
Origin:	Human
Expressed in:	E. coli

Product Details

Background:	Tau-441 or Tau-F is a member of the Tau family of proteins which function to stabilize the microtubules by binding to them. Tau proteins are subject to phosphorylation and this phenomenon regulates the association of the Tau protein with the microtubules (1). Deposits of Alzheimer's disease AD-associated proteins, such as hyperphosphorylated Tau, as well as other shared misfolded proteins, such as, β-amyloid precursor protein (βAPP), ubiquitin, and various chaperones and protein kinases are thought to play a pathologic role in the cognitive decline and muscular failure. Malfunctioning of Tau proteins is associated with microtubules disintegration and collapsing of the neuronal transport system (2). Tau-441 Protein is ideal for investigators involved in Signaling Proteins, Tau Proteins, Invasion/Metastasis, Neurobiology, and p38 Pathway research.
Synonyms:	Tau-F, (N2R4), Tau-4, MAPT, MSTD, PPND, DDPAC, MAPTL, MTBT1, MTBT2, FTDP-17, FLJ31424, MGC138549, Microtubule-associated protein tau
Species of Origin:	Human
Expressed in:	E. coli
Type:	Recombinant Protein

Target Details

Gene Name:	MAPT
Purity/Specificity:	Recombinant human tag-free Tau-441 (P301S) was expressed in E. coli cells. The purity was determined to be >90% by densitometry.

Relevant Links:	• UniProtKB - P10636-8

Application Details

Suggested Applications:	EM (Based on references)
Application Note:	Tau-441 Protein is stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM PMSF, 25% glycerol. Tau-441 Protein is suitable for use in Western Blot and Kinase Assay. Expect a band approximately ~63kDa on specific lysates or tissues. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
WB:	User Optimized

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.2ug/ul
Buffer:	See application note.

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store product at –70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

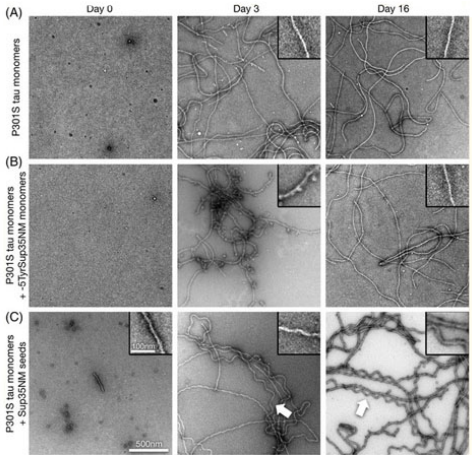

Figure
Sup35NM seeds P301S mutant tau aggregation in vitro. A-C, Transmission electron microscope images of negatively stained preparations of human 2N4R P301S mutant tau monomer aggregates, formed under low heparin conditions (A), and after addition of -5TyrSup35NM monomers (B), or Sup35NM seeds (C), at days 0, 3, and 16. Note the occurrence of corkscrew-shaped tau fibrils at days 3 and 16 upon seeding with Sup35NM fibrils (arrows, C). Scale bar for all images: 500 nm, for all magnified insets: 100 nm. Fig 1. PMID: 35142027.

References

- Flach M et al. Trans-seeding of Alzheimer-related tau protein by a yeast prion. *Alzheimers Dement.* (2022)

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