

Tau-441, DYRK1A-phosphorylated

Human protein co-expressed with DYRK1A in E. coli cells

Catalog # T08-50RN

Lot # B1879-7

Product Description

Recombinant human tag-free Tau-441 was co-expressed with DYRK1A in E. coli cells. The Tau-441 was phosphorylated by DYRK1A *in vivo* and *in vitro* prior to the final chromatography purification. The protein accession number is [P10636-8](#).

Gene Aliases

Tau-F, (N2R4), Tau-4, MAPT, MSTD; PPND; DDPAC; MAPTL; MTBT1; MTBT2; FTDP-17; FLJ31424; MGC138549

Formulation

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM PMSF, 25% glycerol.

Storage and Stability

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.

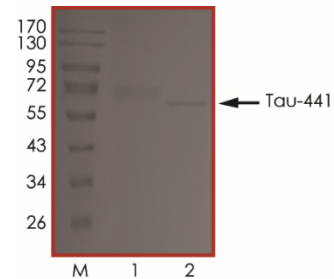
Scientific Background

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 (β APP), 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).

References

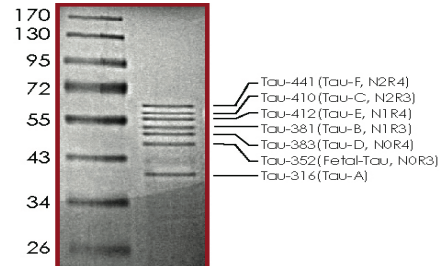
1. Zilka, N., et al. Truncated tau from sporadic Alzheimer's disease suffices to drive neurofibrillary degeneration *in vivo*. *FEBS Lett.* 2006; 508: 3582-3588.
2. Rial, A. et al: Calcium Dyshomeostasis in β -Amyloid and Tau-bearing Skeletal Myotubes. *J. Biol. Chem.*, 2004; 279: 3524-53532.

Purity



SDS-PAGE image of purified Tau Proteins. Lane 1, Tau-441, DYRK1A-phosphorylated. Lane 2, Tau-441 Protein control, Cat. # T08-54N. The purity of Tau-441, DYRK1A-phosphorylated was determined to be **>95%** by densitometry, approx. MW **68-71 kDa**.

Seven Tau Proteins



SDS-PAGE image of Tau Proteins. The seven Tau isoform proteins from top to bottom are: Tau-441, Tau-410, Tau-412, Tau-381, Tau-383, Tau-352 and Tau-316.

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Purity

>95%

Concentration

0.2 µg/µl

Stability

1yr at -70°C from date of shipment

Storage & Shipping

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. Product shipped on dry ice.

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