

## Tau-412 Protein

Full-length recombinant protein expressed in *E. coli* cells

**Catalog # T07-54N**

Lot # L075-1

### Product Description

Recombinant full-length human tag-free Tau-412 was expressed in *E. coli* cells. The protein accession number is [P10636-7](#).

### Gene Aliases

Tau-E, (N1R4), 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  $-70^{\circ}\text{C}$ . 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

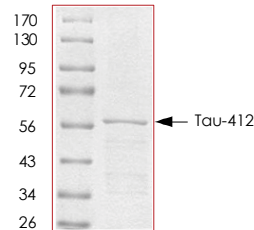
Tau-412 or Tau-E is a member of the Tau family of proteins which function to stabilize the microtubules by binding to them. Tau proteins are subject to phosphorylation and this phenomenon regulates the association of the Tau protein with the microtubules (1). Deposits of Alzheimer's disease AD-associated proteins, such as hyperphosphorylated Tau, as well as other shared misfolded proteins, such as,  $\beta$ -amyloid precursor protein ( $\beta$ 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; 580: 3582-3588.
2. Rial, A. et al: Calcium Dyshomeostasis in  $\beta$ -Amyloid and Tau-bearing Skeletal Myotubes. *J. Biol. Chem.*, 2004; 279: 3524-3532.

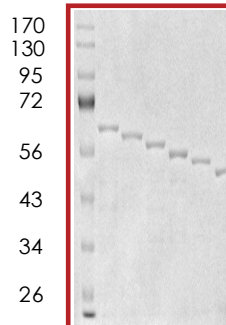
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### Purity



The purity was determined to be **>90%** by densitometry. Approx. MW **58kDa** (42.9kDa by MW calculation).

### Six Tau Proteins



The image of six Tau proteins, from left to right: Tau-441, Tau-410, Tau-412, Tau-381, Tau-383 and Tau-352.

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Specific Lot Number L075-1

Purity	>90%
Concentration	0.2 $\mu\text{g}/\mu\text{l}$
Stability	1yr At $-70^{\circ}\text{C}$ from date of shipment
Storage & Shipping	Store product at $-70^{\circ}\text{C}$ . 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.