

Tau-441, DYRK1A-phosphorylated & Biotinylated

Catalog # T08-50RNB

Lot # W3041-11

Product Description

Recombinant human tag-free Tau-441 was co-expressed with DYRK1A in *E. coli* cells, phosphorylated by DYRK1A *in vivo* and *in vitro*, then the purified protein was biotinylated 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 the buffer: 50mM Na₂HPO₄ pH 7.5 and 150mM NaCl.

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.

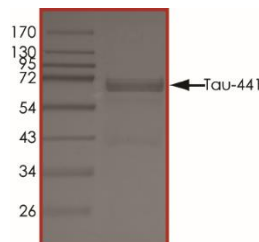
Scientific Background

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 (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).

References

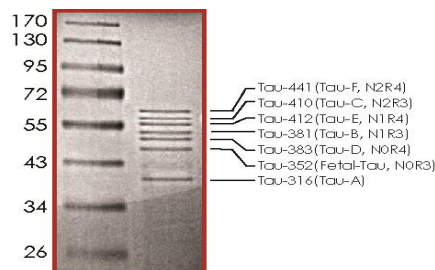
1. Zilka, N., et al. Truncated tau from sporadic Alzheimer's disease suffices to drive neurofibrillary degeneration *in vivo*. *FEBS Lett.* 2006; 508: 3582-3588.
2. Rial, A. et al: Calcium Dyshomeostasis in β-Amyloid and Tau-bearing Skeletal Myotubes. *J. Biol. Chem.*, 2004; 279: 3524-53532.

Purity



The purity of phosphorylated and biotinylated Tau-441 protein was determined to be >80% by densitometry. Approx. MW 68~72 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.

Tau-441, DYRK1A-phosphorylated & Biotinylated

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

Catalog #

T08-50RNB

Lot #

W3041-11

Purity

>80%

Concentration

0.1 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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FOR IN VITRO RESEARCH PURPOSES ONLY. NOT INTENDED FOR USE IN HUMAN OR ANIMALS.

MATERIAL SAFETY DATA SHEET

Article 1 - Product Identification and Use

Product Name: Tau-441, DYRK1A-phosphorylated & Biotinylated **Catalog #** T08-50RNB

This product is sold only for research use by qualified laboratory personnel, and is not to be used as a drug, medical device, food additive, cosmetic, nor household chemical. It is not to be used in diagnostic, therapeutic, consumer, agricultural, nor pesticidal applications.

Manufacturer's Name: SignalChem Pharmaceuticals Inc.
Street Address: 110-13120 Vanier Place
City, Prov. Postal Code: Richmond, BC, V6V 2J2
Fax: 604-232-4601
EMERGENCY PHONE: 604-232-4600

Article 2 - Hazardous Ingredients

NOT AVAILABLE. We are not aware of any hazards associated with this product or its ingredients, but the chemical, physical, and toxicological properties of this product have not been investigated thoroughly. Observe normal laboratory precautions.

Article 3 - Physical Data

This product consists of purified protein in phosphate buffer shipped on dry ice. The physical properties of this product have not been investigated thoroughly.

Article 4 - Fire and Explosion Hazard

NOT APPLICABLE

Article 5 - Reactivity Data

NOT APPLICABLE

Article 6 - Toxicologically Data

May be harmful by inhalation, ingestion, or skin absorption. The toxicological properties of this product have not been investigated thoroughly. Exercise due caution.

Article 7 - Preventative Measures

Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.

*****MULTIPLE COMPONENT SPILL OR LEAK PROCEDURES*****

- Wear protective equipment.
 - Absorb on sand or vermiculite and place in closed containers for disposal.
 - Observe all federal, state and local environmental regulations.
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Article 8 - First Aid Measures

- If swallowed, wash out mouth with water, provided person is conscious. Call a physician.
 - In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If a rash or other irritation develops, call a physician.
 - If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
 - In case of eye contact, flush with copious amounts of water for at least 15 minutes while separating the eyelids with fingers. Call a physician.
-

Article 9 - Preparation

Prepared By: Jun Yan

Phone #: 1-866-954-6273

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. SignalChem shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalog for additional terms and conditions of sale.

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