

## Tau-D Protein, Human, Recombinant (His)

### General Information

Synonyms:	PHF-Tau;MAPTL;MAPT;Paired Helical Filament-Tau;Microtubule-Associated Protein Tau; MTBT1;Neurofibrillary Tangle Protein;TAU
Protein Construction:	Gln249-Gln381
Species:	Human
Expression Host:	E. coli
Accession:	P10636-6
Molecular Weight:	16 KDa (reducing condition)
AA Sequence:	Gln249-Gln381

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 80% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, 1 mM PMSF, pH 7.4.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months.

Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Microtubule-Associated Protein TAU is abundantly expressed in neurons of the central nervous system and less commonly expressed elsewhere, but is also expressed at very low levels in CNS astrocytes and oligodendrocytes. Tau interacts with tubulin to stabilize microtubules and promotes tubulin assembly into microtubules. The C-terminus of TAU binds axonal microtubules while the N-terminus binds neural plasma membrane components,

suggesting that tau acts as a linker protein. When tau is defective, and no longer stabilize microtubules properly, it can result in dementias such as Alzheimer's disease and other tauopathies.

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