

Product description

Human microtubule-associated protein Tau (MAPT) promotes microtubule assembly and stability. Tau exists in six isoforms which vary for presence or absence of specific amino acidic regions. It is the main component of the intracellular filamentous inclusions that are involved in neurodegenerative diseases (1).

Labelled TAU is a recombinant protein, stable isotope labelled (SIL), designed for use as an internal standard for quantitative analysis of TAU by mass spectrometry (MS).

Synonyms: TAU-F, Tau-4, 2N4R



Product name Human TAU-441 SIL-protein



Catalog number TA928521

Uniprot ID P10636-8

Protein sequence

MAEPRQFEFVEMEDHAGTYGLGDRKDQGGYTMHQDQEGDTDAGLKESPLQTPTEGSEEPGSETSDAKSTPTAEDVTAPLVDEGAPGKQA
AAQPHTIPEGTTAAEEAGIGDTPSLEDEAAGHVTQARMVSKSKDGTGSDDKKAKGADGKTKIATPRGAAPPQKQGANATRIPAKTPPAPKT
PPSSGEPKSGDRSGYSSPGSPGTPGSRSRTPSLPTPPTREPKKAVAVRTPPKSPSSAKSRLQTAPVPMPLDKNVKSKIGSTENLKHQPGGGKV
QIINKLDSLNVQSKCGSKDNIKHVPGGGSVQIVYKPVDSLKVTSKCGSLGNIHHPKGGGQVEVKSEKLFKDRVQSKIGSLDNITHVPGGGNK
KIETHKLTFRENAKAKTDHGAIEIVYKSPVVSIGDTSRHLNSVSTGSIDMV DSPQLATLADEVASASLAKQGL

Product features and protocols

Key features

- 1** Purity >90% as determined by SDS-PAGE
- 2** Labelling Arg-¹³C₆, ¹⁵N₄ | Lys-¹³C₆, ¹⁵N₂
- 3** Isotopic incorporation >99% as determined by LC-MS/MS analysis of digested SIL-protein

Other features

Predicted MW	45.8 kDa
Expression System	<i>E. coli</i>
Purification Tag	No tag
Protein content	Determined by UV spectroscopy at 205 nm
Formulation	Lyophilized from 50 mM Tris pH=8; 100 mM NaCl; 1 mM DTT; 1 mM EDTA buffer

Template009-datashheet protein-V01 TA928521_V02

Product preparation

For product preparation we recommend the following steps:

- Briefly centrifuge the tube before opening
- Reconstitute by adding the appropriate volume of ultrapure water for a final concentration of 200 µg/ml (e.g. 50 µl for 10 µg or 250 µl for 50 µg conditioning)
- Vortex gently to insure complete dissolution
- Wait 15 minutes at room temperature before proceeding further
- Vortex gently again and centrifuge briefly

Product storage

The product is lyophilized and shipped at room temperature. **Store at -80 °C upon receipt.**

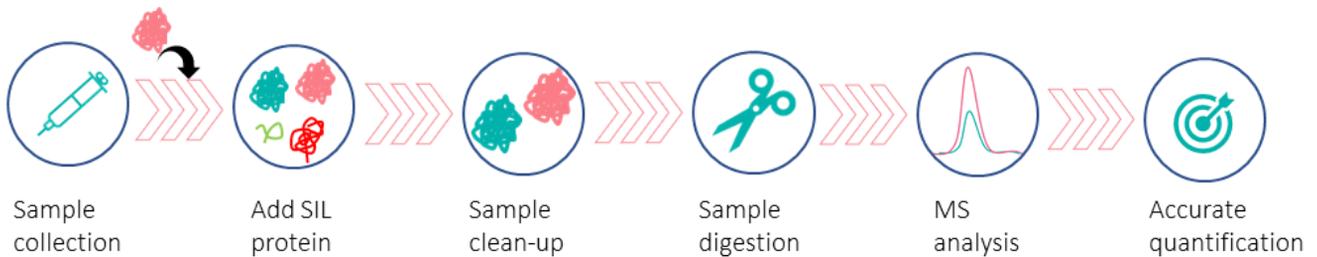
After reconstitution, the protein can be preserved at 4°C for a few weeks.

Avoid multiple freeze-thaw cycles

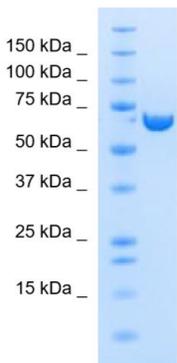
How to use our product



SIL proteins allow to overcome the process variability since they are added at the very beginning of a sample preparation. This has potential positive impact on your analyte quantification, especially if the analyte interacts with other species commonly present within the matrix (2).



Supporting information



SDS-PAGE gel analysis of TAU 441 protein in Reducing/Heated conditions (RH) and stained with Coomassie blue.

References

1. **T. McAvoy et al.**, Quantification of Tau in Cerebrospinal Fluid by Immunoaffinity Enrichment and TandemMass Spectrometry, 2014 Clinical Chemistry 60:4
2. **G.Picard, D. Lebert, et al.** PSAQ standards for accurate MS-based quantification of proteins: from the concept to biomedical applications, J. Mass Spectrom. 2012, 47, 1353-1363



The product is intended for research use only. Not for diagnostic or therapeutic use.

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