

Datasheet for ABIN3093803  
**MTR Protein (AA 1-1265) (Strep Tag)**



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## Overview

Quantity:	250 µg
Target:	MTR
Protein Characteristics:	AA 1-1265
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MTR protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

## Product Details

Brand:	AliCE®
Sequence:	MSPALQDLSQ PEGLKKTLRD EINAILQKRI MVLDTGGMGTM IQREKLNEEH FRGQEFKDHA RPLKGNNDIL SITQPDVIYQ IHKEYLLAGA DIIETNTFSS TSIAQADYGL EHLAYRMNMC SAGVARKAAE EVTLQTGIKR FVAGALGPTN KTLSPSPSVE RPDYRNITFD ELVEAYQEQA KGLLDGGVDI LLIETIFDTA NAKAALFALQ NLFEEKYAPR PIFISGTIVD KSGRTLSGQT GEGFVISVSH GEPLCIGLNC ALGAAEMRPF IEIIGKCTTA YVLCYPNAGL PNTFGDYDET PSMMAKHLKD FAMDGLVNIV GGCCGSTPDH IREIAEAVKN CKPRVPPATA FEGHMLLSGL EPFRIGPYTN FVNIGERCNV AGSRKFAKLI MAGNYEEALC VAKVQVEMGA QVLDVNMDDG MLDGPSAMTR FCNLIASEPD IAKVPLCIDS SNFAVIEAGL KCCQGKCIVN SISLKEGEDD FLEKARKIKK YGAAMVVMAF DEEGQATETD TKIRVCTRAY HLLVKKLGFN PNDIIFDPNI LTIGTGMEEH NLYAINFIHA TKVIKETLPG ARISGGLSNL SFSFRGMEAI REAMHGVFLY HAIKSGMDMG IVNAGNLPVY DDIHKELLQL CEDLIWNKDP EATEKLLRYA QTQGTGGKKV

IQTDEWRNGP VEERLEYALV KGIEKHIID TEEARLNQKK YPRPLNIEG PLMNGMKIVG  
DLFGAGKMFL PQVIKSARVM KKAUGHILIPF MEKEREETRV LNGTVEEEDP YQGTIVLATV  
KGDVHDIGKN IVGVVLGCNN FRVIDLGVMT PCDKILKAAL DHKADIIGLS GLITPSLDEM  
IFVAKEMERL AIRIPLLIGG ATTSKHTAV KIAPRYSAPV IHVLDASKSV VVCSQLLDEN  
LKDEYFEEIM EEYEDIRQDH YESLKERRYL PLSQARKSGF QMDWLSEPHP VKPTFIGTQV  
FEDYDLQKLV DYIDWKPFDF VWQLRGKYPN RGFPKIFNDK TVGGEARKVY DDAHNMNLNTL  
ISQKKLRARG VVGFWPAQSI QDDIHLIAEA AVPQAAEPIA TFYGLRQQAE KDSASTEPYY  
CLSDFIAPLH SGIRDYLGLF AVACFGVEEL SKAYEDDGDD YSSIMVKALG DRLAEFAFAEE  
LHERVRRELW AYCGSEQLDV ADLRRRLRYKG IRPAPGYPSQ PDHTEKLTMW RLADIEQSTG  
IRLTESLAMA PASAVSGLYF SNLKSIFYFAV GKISKDQVED YALRKNISVA EVEKWLGPIIL GYDTD

**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified in one-step affinity chromatography
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

#### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

## Product Details

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### Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.
- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

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Purification: One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALICE®).

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Purity: > 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

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Grade: custom-made

## Target Details

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Target: MTR

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Alternative Name: MTR ([MTR Products](#))

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Background: Methionine synthase (MS) (EC 2.1.1.13) (5-methyltetrahydrofolate–homocysteine methyltransferase) (Cobalamin-dependent methionine synthase) (Vitamin-B12 dependent methionine synthase),FUNCTION: Catalyzes the transfer of a methyl group from methylcob(III)alamin (MeCbl) to homocysteine, yielding enzyme-bound cob(I)alamin and methionine in the cytosol (PubMed:16769880, PubMed:27771510, PubMed:17288554). MeCbl is an active form of cobalamin (vitamin B12) used as a cofactor for methionine biosynthesis. Cob(I)alamin form is regenerated to MeCbl by a transfer of a methyl group from 5-methyltetrahydrofolate (PubMed:16769880, PubMed:27771510, PubMed:17288554). The processing of cobalamin in the cytosol occurs in a multiprotein complex composed of at least MMACHC, MMADHC, MTRR (methionine synthase reductase) and MTR which may contribute to shuttle safely and efficiently cobalamin towards MTR in order to produce methionine (PubMed:16769880, PubMed:27771510). {ECO:0000269|PubMed:16769880, ECO:0000269|PubMed:17288554, ECO:0000269|PubMed:27771510}.

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Molecular Weight: 140.5 kDa

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UniProt: [Q99707](#)

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Pathways: [Methionine Biosynthetic Process](#)

## Application Details

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**Application Notes:** In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

**Comment:** ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

**Restrictions:** For Research Use only

## Handling

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**Format:** Liquid

**Buffer:** The buffer composition is at the discretion of the manufacturer.  
Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**

**Handling Advice:** Avoid repeated freeze-thaw cycles.

**Storage:** -80 °C

**Storage Comment:** Store at -80°C.

**Expiry Date:** 12 months