

Datasheet for ABIN3093803

**MTR Protein (AA 1-1265) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	MTR
Protein Characteristics:	AA 1-1265
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MTR protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

## Product Details

Sequence:	MSPALQDLSQ PEGLKKTLD EINALQKRI MVLGGMGTM IQREKLNEEH FRGQEFKDHA RPLKGNNDIL SITQPDVIYQ IHKEYLLAGA DIIETNTFSS TSIAQADYGL EHLAYRMNMC SAGVARKAAE EVTLQTGIKR FVAGALGPTN KTLSPSPSVE RPDYRNITFD ELVEAYQEQA KGLLDGGVDI LLIETIFDTA NAKAALFALQ NLFEEKYAPR PIFISGTIVD KSGRTLSGQT GEGFVISVSH GEPLCIGLNC ALGAAEMRPF IEIGKCTTA 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
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DLFGAGKMFL PQVIKSARVM KKAUGHILIPF MEKEREETRV LNGTVEEEDP YQGTIVLATV  
KGDVHDIGKN IVGVVLGCNN FRVIDLGVMT PCDKILKAAL DHKADIIGLS GLITPSLDEM  
IFVAKEMERL AIRIPLLIGG ATTSKTHAV KIAPRYSAPV IHVLDASKSV VVCSQLLDEN  
LKDEYFEEIM EEYEDIRQDH YESLKERRYL PLSQARKSGF QMDWLSEPHP VKPTFIGTQV  
FEDYDLQKLVDYIDWKPFDD VWQLRGKYPN RGFPKIFNDK TVGGEARKVY DDAHNMNLNTL  
ISQKKLRARG VVGFWPAQSI QDDIHLIAEA AVPQAAEPIA TFYGLRQQAE KDSASTEPYY  
CLSDFIAPLH SGIRDYLGFL AVACFGVEEL SKAYEDDGDD YSSIMVKALG DRLAEAFEE  
LHERVRRELW AYCQSEQLDV ADLRRRLRYKG IRPAPGYPSQ PDHTEKLTMW RLADIEQSTG  
IRLTESLAMA PASAVSGLYF SNLKSIFYAV 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 by multi-step, protein-specific process to ensure correct folding and modification.
- 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 will ensure that you receive a correctly folded 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

Concentration:

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

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):  1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	MTR
Alternative Name:	MTR ( <a href="#">MTR Products</a> )
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}.

## Target Details

Molecular Weight:	140.5 kDa
UniProt:	<a href="#">Q99707</a>
Pathways:	<a href="#">Methionine Biosynthetic Process</a>

## Application Details

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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
Restrictions:	For Research Use only

## Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)



**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process