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Datasheet for ABIN3124742
ChT Protein (AA 1-580) (Strep Tag)

Overview

Quantity:	1 mg
Target:	ChT
Protein Characteristics:	AA 1-580
Origin:	Mouse
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ChT protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Sequence: MSFHVEGLVA IILFYLLIFL VGIWAAWKTK NSGNPEERSE AIIVGGRDIG LLVGGFTMTA
TWVGGGYING TAEAVYGPCG GLAWAQAPIG YLSLILGGL FFAKPMRSKG YVTMLDPFQQ
IYGKRMGGLL FIPALMGEMF WAAAI FSALG ATISVIIDVD VNISVIVSAL IAILYTLVGG
LYSVAYTDVV QLFCIFIGLW ISVPFALSHP AVTDIGFTAV HAKYQSPWLG TIESVEVYTW
LDNFLLLMLG GIPWQAYFQR VLSSSSATYA QVLSFLAAGF CLVMALPAIC IGAIGASTDW
NQTAYGYDPD KTKEEADMIL PIVLQYLCPV YISFFGLGAV SAAVMSSADS SILSASSMFA
RNIYQLSFRQ NASDKEIVWV MRITVLVFGA SATAMALLTK TVYGLWYLSS DLVYIIIFPQ
LLCVLFIKGT NTYGAVAGYI FGLFLRITGG EPYLYLQPLI FYPGYSDKN GIYNQRFPFK
TLSMVTSSFT NICVSYLAKY LFEESGTLPPK LDVFDVAVAR HSEENMDKTI LVRNENIKLN
ELAPVKPRQS LTLSSSTFTNK EALLDVDSSP EGSGTEDNLQ

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.

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!

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.

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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: $\geq 80\%$ as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Endotoxin Level: Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

Target Details

Target: ChT

Alternative Name: Slc5a7 ([ChT Products](#))

Background: High affinity choline transporter 1 (Hemicholinium-3-sensitive choline transporter) (CHT) (Solute carrier family 5 member 7),FUNCTION: High-affinity Na(+)-coupled choline transmembrane symporter (PubMed:11709061, PubMed:15173594). Functions as an electrogenic, voltage-dependent transporter with variable charge/choline stoichiometry (By similarity). Choline uptake and choline-induced current is also Cl(-)-dependent where Cl(-) is likely a regulatory ion rather than cotransported ion (By similarity). Plays a critical role in acetylcholine (ACh) synthesis by taking up the substrate choline from the synaptic cleft into the presynaptic nerve terminals after neurotransmitter release (By similarity). SLC5A7/CHT1-mediated choline high-affinity transport in cholinergic neurons is the rate-limiting step for production of ACh, thereby facilitating communication by subsequent action potentials (PubMed:11709061, PubMed:15173594). Localized predominantly in presynaptic terminal intracellular organelles, and translocated to the plasma membrane in active form in response to neuronal activity (By similarity). {ECO:0000250|UniProtKB:Q9GZV3, ECO:0000269|PubMed:11709061, ECO:0000269|PubMed:15173594}.

Molecular Weight: 63.4 kDa

UniProt: [Q8BGY9](#)

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: 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

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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

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)