



[Go to Product page](#)

Datasheet for ABIN3113917

SLC16A1 Protein (AA 1-500) (Strep Tag)

1 Image

Overview

Quantity:	1 mg
Target:	SLC16A1
Protein Characteristics:	AA 1-500
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC16A1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence: MPPAVGGPVG YTPPDGGWGW AVVIGAFISI GFSYAFPKSI TVFFKEIEGI FHATTSEVSW
ISSIMLAVMY GGGPISSILV NKYGSRIVMI VGGCLSGCGL IAASFCNTVQ QLYVCIGVIG
GLGLAFNLNP ALTMIGKYFY KRRPLANGLA MAGSPVFLCT LAPLNQVFFG IFGWRGSFLI
LGLLLLNCCV AGALMRPIGP KPTKAGKDKS KASLEKAGKS GVKKDLHDAN TDLIGRHPKQ
EKRSVFQTIN QFLDLTLFTH RGFLLYLSGN VIMFFGLFAP LVFLSSYGKS QHYSSEKSAF
LLSILAFVDM VARPSMGLVA NTKPIRPRIQ YFFAASVAN GVCHMLAPLS TTYVGFVYA
GFFGFAGWL SSVLFETLMD LVGPQRFSSA VGLVTIVECC PVLLGPPLLG RLNDMYGDYK
YTYWACGVVL IISGIYLFIG MGINYRLLAK EQKANEQKKE SKEETSIDV AGKPNEVTKA
AESPDQKDTD GGPKEEESPV

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.
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

Product Details

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: SLC16A1

Alternative Name: SLC16A1 ([SLC16A1 Products](#))

Background: Monocarboxylate transporter 1 (MCT 1) (Solute carrier family 16 member 1),FUNCTION: Bidirectional proton-coupled monocarboxylate transporter (PubMed:12946269, PubMed:33333023, PubMed:32946811). Catalyzes the rapid transport across the plasma membrane of many monocarboxylates such as lactate, pyruvate, acetate and the ketone bodies acetoacetate and beta-hydroxybutyrate, and thus contributes to the maintenance of intracellular pH (PubMed:12946269, PubMed:33333023). The transport direction is determined by the proton motive force and the concentration gradient of the substrate monocarboxylate. MCT1 is a major lactate exporter (By similarity). Plays a role in cellular responses to a high-fat diet by modulating the cellular levels of lactate and pyruvate that contribute to the regulation of central metabolic pathways and insulin secretion, with concomitant effects on plasma insulin levels and blood glucose homeostasis (By similarity). Facilitates the protonated monocarboxylate form of succinate export, that its transient protonation upon muscle cell acidification in exercising muscle and ischemic heart (PubMed:32946811). Functions via alternate outward- and inward-open conformation states. Protonation and deprotonation of 309-Asp is essential for the conformational transition (PubMed:33333023). {ECO:0000250|UniProtKB:P53986, ECO:0000250|UniProtKB:P53987, ECO:0000269|PubMed:12946269, ECO:0000269|PubMed:32946811, ECO:0000269|PubMed:33333023}.

Molecular Weight: 53.9 kDa

UniProt: [P53985](#)

Pathways: [Warburg Effect](#)

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies

Application Details

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

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