

Datasheet for ABIN3119216
SLC7A11 Protein (AA 1-501) (Strep Tag)[Go to Product page](#)

1 Image

Overview

Quantity:	1 mg
Target:	SLC7A11
Protein Characteristics:	AA 1-501
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC7A11 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence: MVRKPVVSTI SKGGYLQGNV NGRLPSLGNK EPPGQEKVQL KRKVTLLRGV SIIIGTIIGA
GIFISPKGVL QNTGSGVMSL TIWTVCGVLS LFGALSYAEL GTTIKKSGGH YTYILEVFGP
LPAFVRVWVE LLIIRPAATA VISLAFGRYI LEPFFIQCEI PELAIKLITA VGITVVMVLN SMSVSWSARI
QIFLTFCFLT AILIIIVPGV MQLIKGQTQN FKDAFSGRDS SITRLPLAFY YGMAYAGWF
YLNFTVEEVE NPEKTIPLAI CISMAIVTIG YVLTNVAYFT TINAEELLS NAVAVTFSER
LLGNFSLAVP IFVALSCFGS MNGGVFAVSR LFYVASREGH LPEILSMIHV RKHTPLPAVI
VLHPLTMIML FSGDLDSLNN FLSFARWLF GLAVAGLIYL RYKCPDMHRP FKVPLFIPAL
FSFTCLFMVA LSLYSDPFST GIGFVITLTG VPAYYLFIIW DKKPRWFRIM SEKTRTLQI
ILEVVPEEDK L

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:	SLC7A11
Alternative Name:	SLC7A11 (SLC7A11 Products)
Background:	<p>Cystine/glutamate transporter (Amino acid transport system xc-) (Calcium channel blocker resistance protein CCB1) (Solute carrier family 7 member 11) (xCT),FUNCTION: Heterodimer with SLC3A2, that functions as an antiporter by mediating the exchange of extracellular anionic L-cystine and intracellular L-glutamate across the cellular plasma membrane (PubMed:15151999, PubMed:34880232, PubMed:35352032, PubMed:35245456, PubMed:11417227, PubMed:14722095, PubMed:11133847). Provides L-cystine for the maintenance of the redox balance between extracellular L-cystine and L-cysteine and for the maintenance of the intracellular levels of glutathione that is essential for cells protection from oxidative stress (By similarity). The transport is sodium-independent, electroneutral with a stoichiometry of 1:1, and is driven by the high intracellular concentration of L-glutamate and the intracellular reduction of L-cystine (PubMed:11417227, PubMed:11133847). In addition, mediates the import of L-kynurenine leading to anti-ferroptotic signaling propagation required to maintain L-cystine and glutathione homeostasis (PubMed:35245456). Moreover, mediates N-acetyl-L-cysteine uptake into the placenta leading to subsequently down-regulation of pathways associated with oxidative stress, inflammation and apoptosis (PubMed:34120018). In vitro can also transport L-aspartate (PubMed:11417227). May participate in astrocyte and meningeal cell proliferation during development and can provide neuroprotection by promoting glutathione synthesis and delivery from non-neuronal cells such as astrocytes and meningeal cells to immature neurons (By similarity). Controls the production of pheomelanin pigment directly (By similarity). {ECO:0000250 UniProtKB:Q9WTR6, ECO:0000269 PubMed:11133847, ECO:0000269 PubMed:11417227, ECO:0000269 PubMed:14722095, ECO:0000269 PubMed:15151999, ECO:0000269 PubMed:34120018, ECO:0000269 PubMed:34880232, ECO:0000269 PubMed:35245456, ECO:0000269 PubMed:35352032}.</p>
Molecular Weight:	55.4 kDa

Target Details

UniProt: [Q9UPY5](#)

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.

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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