

Datasheet for ABIN3118920

SLC7A8 Protein (AA 1-535) (Strep Tag)**1** Image[Go to Product page](#)

Overview

Quantity:	1 mg
Target:	SLC7A8
Protein Characteristics:	AA 1-535
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC7A8 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MEEGARHRNN TEKKHPGGGE SDASPEAGSG GGGVALKKEI GLVSACGIIV GNIIGSGIFV
SPKGVLENAG SVGLALIVWI VTGFITVVG L CYAELGVTI PKSGGDYSYV KDIFGGLAGF
LRLWIAVLVI YPTNQAVIAL TFSNYVLQPL FPTCFPPESG LRLAAICLL LLTWVNCSSV
RWATRVQDIF TAGKLLALAL IIIMGIVQIC KGEYFWLEPK NAFENFQEPD IGLVALAFLQ
GSFAYGGWNF LNYVTEELVD PYKNLPRAIF ISIPLVTFVY VFANVAYVTA MSPQELLASN
AVAVTFGEKL LGVMAWIMPI SVALSTFGGV NGSLFTSSRL FFAGAREGHL PSVLAMIHVK
RCTPIPALLF TCISTLLMLV TSDMYTLIN VGFINYLFYG VTVAGQIVLR WKKPDIPRPI KINLLFPIIY
LLFWAFLLVF SLWSEPVCV IGLAIMLTGV PVYFLGVYVWQ HKPKCFSDFI ELLTLVSQKM
CVVVYPEVER GSGTEEANED MEEQQQPMYQ PTPTKDKDVA GQPQP

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: SLC7A8

Alternative Name: SLC7A8 ([SLC7A8 Products](#))

Background: Large neutral amino acids transporter small subunit 2 (L-type amino acid transporter 2) (hLAT2) (Solute carrier family 7 member 8),FUNCTION: Associates with SLC3A2 to form a functional heterodimeric complex that translocates small and large neutral amino acids with broad specificity and a stoichiometry of 1:1. Functions as amino acid antiporter mediating the influx of extracellular essential amino acids mainly in exchange with the efflux of highly concentrated intracellular amino acids (PubMed:10391915, PubMed:15918515, PubMed:11311135, PubMed:11847106, PubMed:12716892, PubMed:15081149, PubMed:29355479, PubMed:33298890, PubMed:34848541). Has relatively symmetrical selectivities but strongly asymmetrical substrate affinities at both the intracellular and extracellular sides of the transporter (PubMed:11847106). This asymmetry allows SLC7A8 to regulate intracellular amino acid pools (mM concentrations) by exchange with external amino acids (uM concentration range), equilibrating the relative concentrations of different amino acids across the plasma membrane instead of mediating their net uptake (PubMed:11847106, PubMed:10391915). May play an essential role in the reabsorption of neutral amino acids from the epithelial cells to the bloodstream in the kidney (PubMed:12716892). Involved in the uptake of methylmercury (MeHg) when administered as the L-cysteine or D,L-homocysteine complexes, and hence plays a role in metal ion homeostasis and toxicity (PubMed:12117417). Involved in the cellular activity of small molecular weight nitrosothiols, via the stereoselective transport of L-nitrosocysteine (L-CNSO) across the transmembrane (PubMed:15769744). Imports the thyroid hormone diiodothyronine (T2) and to a smaller extent triiodothyronine (T3) but not rT 3 or thyroxine (T4) (By similarity). Mediates the uptake of L-DOPA (By similarity). May participate in auditory function (By similarity). {ECO:0000250|UniProtKB:Q9QXW9, ECO:0000250|UniProtKB:Q9WVR6, ECO:0000269|PubMed:10391915, ECO:0000269|PubMed:11311135, ECO:0000269|PubMed:11847106, ECO:0000269|PubMed:12117417, ECO:0000269|PubMed:12716892,

Target Details

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ECO:0000269|PubMed:15918515, ECO:0000269|PubMed:29355479,
ECO:0000269|PubMed:33298890, ECO:0000269|PubMed:34848541}.

Molecular Weight: 58.4 kDa

UniProt: [Q9UHI5](#)

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