

Datasheet for ABIN3094188
SLC11A2 Protein (AA 1-568) (Strep Tag)



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1 Image

Overview

Quantity:	0.5 mg
Target:	SLC11A2
Protein Characteristics:	AA 1-568
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC11A2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence: MVLGPEQKMS DDSVSGDHGE SASLGNINPA YSNP SLSQSP GDSEEFATY FNEKISIP EE
 EYSCFSFRKL WAFTGPGFLM SIAYLDPGNI ESDLQSGAVA GFKLLWILL ATLVLG LLLQR
 LAARLGVVTG LH LAEVCHRQ YPKVPRVILW LMVELA IIGS DMQEVIGSAI AINLLSVGRI
 PLWGGVLITI ADTFVFLFD KYGLRKLEAF FGFLITIMAL TFGYEVTVK PSQSQVLKGM
 FVPSCSGCRT PQIEQAVGIV GAVIMPHNMY LHSALVKSRQ VNRNNKQEV R EANKYFFIES
 CIALFVSFII NVFVVSVAE AFFGKTNEQV VEVCTNTSSP HAGLFPKDNS TLAVDIYKGG
 VVLGCYFGPA ALYIWAVGIL AAGQSSTMTG TYSGQFVM EG FLNLKWSRFA RVLTR SIAI
 IPTLLVAVFQ DVEHLTGMND FLNVLQSLQL PFALIPILTF TSLRPVMSDF ANGLGWRIAG
 GILVLIICSI NMYFVVVYVR DLGHVALYVW AAVSVAYLG FVFYLGWQCL IALGMSFLDC
 GHTCHLGLTA QPELYLLNTM DADSLVSR

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.

Product Details

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: SLC11A2

Alternative Name: SLC11A2 ([SLC11A2 Products](#))

Background: Natural resistance-associated macrophage protein 2 (NRAMP 2) (Divalent cation transporter 1) (Divalent metal transporter 1) (DMT-1) (Solute carrier family 11 member 2),FUNCTION: Proton-coupled metal ion symporter operating with a proton to metal ion stoichiometry of 1:1 (PubMed:17109629, PubMed:22736759, PubMed:25491917, PubMed:17293870, PubMed:25326704). Selectively transports various divalent metal cations, in decreasing affinity: Cd(2+) > Fe(2+) > Co(2+), Mn(2+) >> Zn(2+), Ni(2+), VO(2+) (PubMed:17109629, PubMed:22736759, PubMed:25491917, PubMed:17293870, PubMed:25326704). Essential for maintenance of iron homeostasis by modulating intestinal absorption of dietary Fe(2+) and TF-associated endosomal Fe(2+) transport in erythroid precursors and other cells (By similarity). Enables Fe(2+) and Mn(2+) ion entry into mitochondria, and is thus expected to promote mitochondrial heme synthesis, iron-sulfur cluster biogenesis and antioxidant defense (PubMed:24448823) (By similarity). Can mediate uncoupled fluxes of either protons or metal ions. {ECO:0000250|UniProtKB:O54902, ECO:0000250|UniProtKB:P49282, ECO:0000269|PubMed:17109629, ECO:0000269|PubMed:17293870, ECO:0000269|PubMed:22736759, ECO:0000269|PubMed:24448823, ECO:0000269|PubMed:25326704, ECO:0000269|PubMed:25491917}.

Molecular Weight: 62.3 kDa

UniProt: [P49281](#)

Pathways: [Transition Metal Ion Homeostasis](#), [Proton Transport](#), [Positive Regulation of Endopeptidase Activity](#)

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