

Datasheet for ABIN3115034

SLC1A5 Protein (AA 1-541) (Strep Tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	SLC1A5
Protein Characteristics:	AA 1-541
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC1A5 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence: MVADPPRDSK GLAAAEPTAN GGLALASIED QGAAAGGYCG SRDQVRRCLR ANLLVLLTVV
AVVAGVALGL GVSGAGGALA LGPERLSAFV FPGELLLRLL RMIILPLVVC SLIGGAASLD
PGALGRLGAW ALLFFLVTTT LASALGVGLA LALQPGAASA AINASVGAAG SAENAPSKEV
LDSFLDLARN IFPSNLVSAA FRSYSTTYEE RNITGTRVKV PVGQEVEGMN ILGLVVFAIV
FGVALRKLGP EGELLIRFFN SFNEATMVLV SWIMWYAPVG IMFLVAGKIV EMEDVGLLFA
RLGKYILCCL LGHAIHGLLV LPLIYFLFTR KNPYRFLWGI VTPLATAFGT SSSSATLPLM
MKCVEENNGV AKHISRFILP IGATVNMDGA ALFQCVAAVF IAQLSQQSLD FVKIITILVT
ATASSVGAAG IPAGGVTLTA IILEAVNLPV DHISLILAVD WLVDRSCTVL NVEGDALGAG
LLQNYVDRTE SRSTEPELIQ VKSELPLDPL PVPTEEGNPL LKHYRGPAGD ATVASEKESV M

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: SLC1A5

Alternative Name: SLC1A5 ([SLC1A5 Products](#))

Background: Neutral amino acid transporter B(0) (ATB(0)) (Baboon M7 virus receptor) (RD114/simian type D retrovirus receptor) (Sodium-dependent neutral amino acid transporter type 2) (Solute carrier family 1 member 5),FUNCTION: Sodium-coupled antiporter of neutral amino acids. In a tri-substrate transport cycle, exchanges neutral amino acids between the extracellular and intracellular compartments, coupled to the inward cotransport of at least one sodium ion (PubMed:23756778, PubMed:26492990, PubMed:17094966, PubMed:34741534, PubMed:29872227, PubMed:8702519). The preferred substrate is the essential amino acid L-glutamine, a precursor for biosynthesis of proteins, nucleotides and amine sugars as well as an alternative fuel for mitochondrial oxidative phosphorylation. Exchanges L-glutamine with other neutral amino acids such as L-serine, L-threonine and L-asparagine in a bidirectional way. Provides L-glutamine to proliferating stem and activated cells driving the metabolic switch toward cell differentiation (PubMed:23756778, PubMed:24953180). The transport cycle is usually pH -independent, with the exception of L-glutamate. Transports extracellular L-glutamate coupled to the cotransport of one proton and one sodium ion in exchange for intracellular L-glutamine counter-ion. May provide for L-glutamate uptake in glial cells regulating glutamine/glutamate cycle in the nervous system (PubMed:32733894). Can transport D-amino acids. Mediates D-serine release from the retinal glia potentially affecting NMDA receptor function in retinal neurons (PubMed:17094966). Displays sodium- and amino acid-dependent but uncoupled channel-like anion conductance with a preference SCN(-) >> NO3(-) > I(-) > Cl(-) (By similarity). Through binding of the fusogenic protein syncytin-1/ERVW-1 may mediate trophoblasts syncytialization, the spontaneous fusion of their plasma membranes, an essential process in placental development (PubMed:10708449, PubMed:23492904). {ECO:0000250|UniProtKB:D3ZJ25, ECO:0000269|PubMed:10708449, ECO:0000269|PubMed:17094966, ECO:0000269|PubMed:23492904, ECO:0000269|PubMed:23756778, ECO:0000269|PubMed:24953180,

Target Details

ECO:0000269|PubMed:26492990, ECO:0000269|PubMed:29872227,
ECO:0000269|PubMed:32733894, ECO:0000269|PubMed:34741534,
ECO:0000269|PubMed:8702519}., FUNCTION: (Microbial infection) Acts as a cell surface
receptor for Feline endogenous virus RD114. {ECO:0000269|PubMed:10051606,
ECO:0000269|PubMed:10196349}., FUNCTION: (Microbial infection) Acts as a cell surface
receptor for Baboon M7 endogenous virus. {ECO:0000269|PubMed:10196349}., FUNCTION:
(Microbial infection) Acts as a cell surface receptor for type D simian retroviruses.
{ECO:0000269|PubMed:10196349}.

Molecular Weight:	56.6 kDa
UniProt:	Q15758
Pathways:	Dicarboxylic Acid Transport , Warburg Effect

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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
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

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)

Images



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process