Datasheet for ABIN3109814

SLC22A2 Protein (AA 1-555) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	SLC22A2
Protein Characteristics:	AA 1-555
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC22A2 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MPTTVDDVLE HGGEFHFFQK QMFFLLALLS ATFAPIYVGI VFLGFTPDHR CRSPGVAELS LRCGWSPAEE LNYTVPGPGP AGEASPRQCR RYEVDWNQST FDCVDPLASL DTNRSRLPLG PCRDGWVYET PGSSIVTEFN LVCANSWMLD LFQSSVNVGF FIGSMSIGYI ADRFGRKLCL LTTVLINAAA GVLMAISPTY TWMLIFRLIQ GLVSKAGWLI GYILITEFVG RRYRRTVGIF YQVAYTVGLL VLAGVAYALP HWRWLQFTVS LPNFFFLLYY WCIPESPRWL ISQNKNAEAM RIIKHIAKKN GKSLPASLQR LRLEEETGKK LNPSFLDLVR TPQIRKHTMI LMYNWFTSSV LYQGLIMHMG LAGDNIYLDF FYSALVEFPA AFMIILTIDR IGRRYPWAAS NMVAGAACLA SVFIPGDLQW LKIIISCLGR MGITMAYEIV CLVNAELYPT FIRNLGVHIC SSMCDIGGII TPFLVYRLTN IWLELPLMVF GVLGLVAGGL VLLLPETKGK ALPETIEEAE NMQRPRKNKE KMIYLQVQKL DIPLN **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:	SLC22A2
Alternative Name:	SLC22A2 (SLC22A2 Products)
Background:	Solute carrier family 22 member 2 (Organic cation transporter 2) (hOCT2),FUNCTION: Electrogenic voltage-dependent transporter that mediates the transport of a variety of organic cations such as endogenous bioactive amines, cationic drugs and xenobiotics (PubMed:9260930, PubMed:9687576). Functions as a Na(+)-independent, bidirectional uniporter (PubMed:9687576, PubMed:21128598). Cation cellular uptake or release is driven by the electrochemical potential, i.e. membrane potential and concentration gradient (PubMed:9260930, PubMed:9687576, PubMed:15212162). However, may also engage electroneutral cation exchange when saturating concentrations of cation substrates are reached (By similarity). Predominantly expressed at the basolateral membrane of hepatocytes and proximal tubules and involved in the uptake and disposition of cationic compounds by hepatic and renal clearance from the blood flow (PubMed:15783073). Implicated in monoamine neurotransmitters uptake such as histamine, dopamine, adrenaline/epinephrine, noradrenaline/norepinephrine, serotonin and tyramine, thereby supporting a physiological role in the central nervous system by regulating interstitial concentrations of neurotransmitters (PubMed:9687576, PubMed:16581093, PubMed:17460754). Also capable of transporting dopaminergic neuromodulators cyclo(his-pro), salsolinol and N-methyl-salsolinol, thereby involved in the maintenance of dopaminergic cell integrity in the central nervous system (PubMed:17460754). Mediates the bidirectional transport of acetylcholine (ACh) at the apical membrane of ciliated cell in airway epithelium, thereby playing a role in luminal release of ACh from bronchial epithelium (PubMed:15817714). Also transports guanidine and endogenous monoamines such as vitamin B1/thiamine, creatinine and N-1-methylnicotinamide (NMN) (PubMed:9260930, PubMed:12089365, PubMed:15212162, PubMed:17072098, PubMed:24961373). Mediates the uptake and efflux of quaternary ammonium compound choline (PubMed:9260930). Mediates the bidirectional transport of polyamine agmatine and the

Target Details

	uptake of polyamines putrescine and spermidine (PubMed:12538837, PubMed:21128598). Able to transport non-amine endogenous compounds such as prostaglandin E2 (PGE2) and prostaglandin F2-alpha (PGF2-alpha) (PubMed:11907186). Also involved in the uptake of xenobiotic 4-(4-(dimethylamino)styryl)-N-methylpyridinium (ASP) (PubMed:12395288, PubMed:16394027). May contribute to regulate the transport of organic compounds in testis across the blood-testis-barrier (Probable). {ECO:0000250|UniProtKB:Q9R0W2, ECO:0000269|PubMed:11907186, ECO:0000269|PubMed:12089365, ECO:0000269|PubMed:12395288, ECO:0000269|PubMed:12538837, ECO:0000269|PubMed:15212162, ECO:0000269|PubMed:15783073, ECO:0000269|PubMed:15817714, ECO:0000269|PubMed:16394027, ECO:0000269|PubMed:16581093, ECO:0000269|PubMed:17072098, ECO:0000269|PubMed:17460754, ECO:0000269|PubMed:21128598, ECO:0000269|PubMed:24961373, ECO:0000269|PubMed:9260930, ECO:0000269|PubMed:9687576, ECO:0000305|PubMed:35307651}., FUNCTION: [Isoform 2]: In contrast with isoform 1, not able to transport guanidine, creatinine, cimetidine and metformin. {ECO:0000269|PubMed:12089365, ECO:0000269|PubMed:15212162, ECO:0000269|PubMed:16272756}.
Molecular Weight:	62.6 kDa
UniProt:	O15244

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:	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!

Application Details

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)

Images

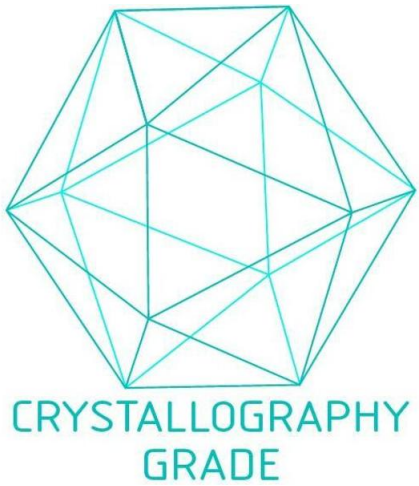

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process