Datasheet for ABIN3117992

SLC22A4 Protein (AA 1-551) (Strep Tag)

1 Image

Go to Product page

Overview

Quantity:	1 mg
Target:	SLC22A4
Protein Characteristics:	AA 1-551
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC22A4 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MRDYDEVIAF LGEWGPFQRL IFFLLSASII PNGFNGMSVV FLAGTPEHRC RVPDAANLSS AWRNNSVPLR LRDGREVPHS CSRYRLATIA NFSALGLEPG RDVDLGQLEQ ESCLDGWEFS QDVYLSTVVT EWNLVCEDNW KVPLTTSLFF VGVLLGSFVS GQLSDRFGRK NVLFATMAVQ TGFSFLQIFS ISWEMFTVLF VIVGMGQISN YVVAFILGTE ILGKSVRIIF STLGVCTFFA VGYMLLPLFA YFIRDWRMLL LALTVPGVLC VPLWWFIPES PRWLISQRRF REAEDIIQKA AKMNNIAVPA VIFDSVEELN PLKQQKAFIL DLFRTRNIAI MTIMSLLLWM LTSVGYFALS LDAPNLHGDA YLNCFLSALI EIPAYITAWL LLRTLPRRYI IAAVLFWGGG VLLFIQLVPV DYYFLSIGLV MLGKFGITSA FSMLYVFTAE LYPTLVRNMA VGVTSTASRV GSIIAPYFVY LGAYNRMLPY IVMGSLTVLI GILTLFFPES LGMTLPETLE QMQKVKWFRS GKKTRDSMET EENPKVLITA F **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:	SLC22A4
Alternative Name:	SLC22A4 (SLC22A4 Products)
Background:	Solute carrier family 22 member 4 (Ergothioneine transporter) (ET transporter) (ETTh) (Organic cation/carnitine transporter 1) (OCTN1),FUNCTION: Transporter that mediates the transport of endogenous and microbial zwitterions and organic cations (PubMed:15795384, PubMed:10215651, PubMed:16729965, PubMed:20601551, PubMed:22569296, PubMed:29530864, PubMed:15107849, PubMed:22206629). Functions as a Na(+)-dependent and pH -dependent high affinity microbial symporter of potent food-derived antioxidant ergothioeine (PubMed:15795384, PubMed:29530864, PubMed:33124720). Transports one sodium ion with one ergothioeine molecule (By similarity). Involved in the absorption of ergothioneine from the luminal/apical side of the small intestine and renal tubular cells, and into non-parenchymal liver cells, thereby contributing to maintain steady-state ergothioneine level in the body (PubMed:20601551). Also mediates the bidirectional transport of acetycholine, although the exact transport mechanism has not been fully identified yet (PubMed:22206629). Most likely exports anti-inflammatory acetylcholine in non-neuronal tissues, thereby contributing to the non-neuronal cholinergic system (PubMed:22569296, PubMed:22206629). Displays a general physiological role linked to better survival by controlling inflammation and oxidative stress, which may be related to ergothioneine and acetycholine transports (PubMed:15795384, PubMed:22206629). May also function as a low-affinity Na(+)-dependent transporter of L-carnitine through the mitochondrial membrane, thereby maintaining intracellular carnitine homeostasis (PubMed:10215651, PubMed:16729965, PubMed:15107849). May contribute to regulate the transport of cationic compounds in testis across the blood-testis-barrier (PubMed:35307651). {ECO:0000250|UniProtKB:Q9R141, ECO:0000269|PubMed:10215651, ECO:0000269|PubMed:15107849, ECO:0000269|PubMed:15795384, ECO:0000269|PubMed:16729965, ECO:0000269|PubMed:20601551, ECO:0000269|PubMed:22206629,

Target Details

	ECO:0000269|PubMed:22569296, ECO:0000269|PubMed:29530864, ECO:0000269|PubMed:35307651}.
Molecular Weight:	62.2 kDa
UniProt:	Q9H015

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!
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