Datasheet for ABIN3118805

SLC17A7 Protein (AA 1-560) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	SLC17A7
Protein Characteristics:	AA 1-560
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC17A7 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MEFRQEEFRK LAGRALGKLH RLLEKRQEGA ETLELSADGR PVTTQTRDPP VVDCTCFGLP RRYIIAIMSG LGFCISFGIR CNLGVAIVSM VNNSTTHRGG HVVVQKAQFS WDPETVGLIH GSFFWGYIVT QIPGGFICQK FAANRVFGFA IVATSTLNML IPSAARVHYG CVIFVRILQG LVEGVTYPAC HGIWSKWAPP LERSRLATTA FCGSYAGAVV AMPLAGVLVQ YSGWSSVFYV YGSFGIFWYL FWLLVSYESP ALHPSISEEE RKYIEDAIGE SAKLMNPLTK FSTPWRRFFT SMPVYAIIVA NFCRSWTFYL LLISQPAYFE EVFGFEISKV GLVSALPHLV MTIIVPIGGQ IADFLRSRRI MSTTNVRKLM NCGGFGMEAT LLLVVGYSHS KGVAISFLVL AVGFSGFAIS GFNVNHLDIA PRYASILMGI SNGVGTLSGM VCPIIVGAMT KHKTREEWQY VFLIASLVHY GGVIFYGVFA SGEKQPWAEP EEMSEEKCGF VGHDQLAGSD DSEMEDEAEP PGAPPAPPPS YGATHSTFQP PRPPPPVRDY **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)

Target Details

Target:	SLC17A7
Alternative Name:	SLC17A7 (SLC17A7 Products)
Background:	Vesicular glutamate transporter 1 (VGluT1) (Brain-specific Na(+)-dependent inorganic phosphate cotransporter) (Solute carrier family 17 member 7),FUNCTION: Multifunctional transporter that transports L-glutamate as well as multiple ions such as chloride, proton, potassium, sodium and phosphate (PubMed:10820226). At the synaptic vesicle membrane, mainly functions as an uniporter which transports preferentially L-glutamate but also phosphate from the cytoplasm into synaptic vesicles at presynaptic nerve terminals of excitatory neural cells (By similarity). The L-glutamate or phosphate uniporter activity is electrogenic and is driven by the proton electrochemical gradient, mainly by the electrical gradient established by the vacuolar H(+)-ATPase across the synaptic vesicle membrane (By similarity). In addition, functions as a chloride channel that allows a chloride permeation through the synaptic vesicle membrane that affects the proton electrochemical gradient and promotes synaptic vesicles acidification (By similarity). Moreover, may function as a K(+)/H(+) antiport allowing to maintain the electrical gradient and to decrease chemical gradient and therefore sustain vesicular glutamate uptake (By similarity). The vesicular K(+)/H(+) antiport activity is electroneutral (By similarity). At the plasma membrane, following exocytosis, functions as a symporter of Na(+) and phosphate from the extracellular space to the cytoplasm allowing synaptic phosphate homeostasis regulation (PubMed:10820226). The symporter activity is driven by an inside negative membrane potential and is electrogenic (By similarity). Is necessary for synaptic signaling of visual-evoked responses from photoreceptors (By similarity). {ECO:0000250|UniProtKB:Q3TXX4, ECO:0000250|UniProtKB:Q62634, ECO:0000269|PubMed:10820226}.
Molecular Weight:	61.6 kDa
UniProt:	Q9P2U7

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)