Datasheet for ABIN3095250

SLC6A4 Protein (AA 1-630) (Strep Tag)

1 Image

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Overview

Quantity:	0.5 mg
Target:	SLC6A4
Protein Characteristics:	AA 1-630
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC6A4 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	METTPLNSQK QLSACEDGED CQENGVLQKV VPTPGDKVES GQISNGYSAV PSPGAGDDTR HSIPATTTTL VAELHQGERE TWGKKVDFLL SVIGYAVDLG NVWRFPYICY QNGGGAFLLP YTIMAIFGGI PLFYMELALG QYHRNGCISI WRKICPIFKG IGYAICIIAF YIASYYNTIM AWALYYLISS FTDQLPWTSC KNSWNTGNCT NYFSEDNITW TLHSTSPAEE FYTRHVLQIH RSKGLQDLGG ISWQLALCIM LIFTVIYFSI WKGVKTSGKV VWVTATFPYI ILSVLLVRGA TLPGAWRGVL FYLKPNWQKL LETGVWIDAA AQIFFSLGPG FGVLLAFASY NKFNNNCYQD ALVTSVVNCM TSFVSGFVIF TVLGYMAEMR NEDVSEVAKD AGPSLLFITY AEAIANMPAS TFFAIIFFLM LITLGLDSTF AGLEGVITAV LDEFPHVWAK RRERFVLAVV ITCFFGSLVT LTFGGAYVVK LLEEYATGPA VLTVALIEAV AVSWFYGITQ FCRDVKEMLG FSPGWFWRIC WVAISPLFLL FIICSFLMSP PQLRLFQYNY PYWSIILGYC IGTSSFICIP TYIAYRLIIT PGTFKERIIK SITPETPTEI PCGDIRLNAV
	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

Product Details

	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 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:	SLC6A4
Alternative Name:	SLC6A4 (SLC6A4 Products)
Background:	Sodium-dependent serotonin transporter (SERT) (5HT transporter) (5HTT) (Solute carrier family 6 member 4),FUNCTION: Serotonin transporter that cotransports serotonin with one Na(+) ion in exchange for one K(+) ion and possibly one proton in an overall electroneutral transport cycle. Transports serotonin across the plasma membrane from the extracellular compartment to the cytosol thus limiting serotonin intercellular signaling (PubMed:27756841, PubMed:34851672, PubMed:21730057, PubMed:10407194, PubMed:27049939, PubMed:12869649). Essential for serotonin homeostasis in the central nervous system. In the developing somatosensory cortex, acts in glutamatergic neurons to control serotonin uptake and its trophic functions accounting for proper spatial organization of cortical neurons and elaboration of sensory circuits. In the mature cortex, acts primarily in brainstem raphe neurons to mediate serotonin uptake from the synaptic cleft back into the pre-synaptic terminal thus terminating serotonin signaling at the synapse (By similarity). Modulates mucosal serotonin levels in the gastrointestinal tract through uptake and clearance of serotonin in enterocytes. Required for enteric neurogenesis and gastrointestinal reflexes (By similarity). Regulates blood serotonin levels by ensuring rapid high affinity uptake of serotonin from plasma to platelets, where it is further stored in dense granules via vesicular monoamine transporters and then released upon stimulation (PubMed:17506858, PubMed:18317590). Mechanistically, the transport cycle starts with an outward-open conformation having Na1(+) and Cl(-) sites occupied. The binding of a second extracellular Na2(+) ion and serotonin substrate leads to structural changes to outward-occluded to inward-occluded to inward-open, where the Na2(+) ion and serotonin are released into the cytosol. Binding of intracellular K(+) ion induces conformational transitions to inward-occluded to outward-open and completes the cycle by releasing K(+) possibly together with a proton bound to Asp-98 into the extracellular

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	compartment. Na1(+) and Cl(-) ions remain bound throughout the transport cycle (PubMed:27756841, PubMed:34851672, PubMed:21730057, PubMed:10407194, PubMed:27049939, PubMed:12869649). Additionally, displays serotonin-induced channel-like conductance for monovalent cations, mainly Na(+) ions. The channel activity is uncoupled from the transport cycle and may contribute to the membrane resting potential or excitability (By similarity). {ECO:0000250|UniProtKB:P31652, ECO:0000250|UniProtKB:Q60857, ECO:0000269|PubMed:10407194, ECO:0000269|PubMed:12869649, ECO:0000269|PubMed:17506858, ECO:0000269|PubMed:18317590, ECO:0000269|PubMed:21730057, ECO:0000269|PubMed:27049939, ECO:0000269|PubMed:27756841, ECO:0000269|PubMed:34851672}.
Molecular Weight:	70.3 kDa
UniProt:	P31645

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

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

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