Datasheet for ABIN3117461

SLC46A1 Protein (AA 1-459) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	SLC46A1
Protein Characteristics:	AA 1-459
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC46A1 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Brand:	AliCE®
Sequence:	MEGSASPPEK PRARPAAAVL CRGPVEPLVF LANFALVLQG PLTTQYLWHR FSADLGYNGT RQRGGCSNRS ADPTMQEVET LTSHWTLYMN VGGFLVGLFS STLLGAWSDS VGRRPLLVLA SLGLLLQALV SVFVVQLQLH VGYFVLGRIL CALLGDFGGL LAASFASVAD VSSSRSRTFR MALLEASIGV AGMLASLLGG HWLRAQGYAN PFWLALALLI AMTLYAAFCF GETLKEPKST RLFTFRHHRS IVQLYVAPAP EKSRKHLALY SLAIFVVITV HFGAQDILTL YELSTPLCWD SKLIGYGSAA QHLPYLTSLL ALKLLQYCLA DAWVAEIGLA FNILGMVVFA FATITPLMFT GYGLLFLSLV ITPVIRAKLS KLVRETEQGA LFSAVACVNS LAMLTASGIF NSLYPATLNF MKGFPFLLGA GLLLIPAVLI GMLEKADPHL EFQQFPQSP **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.**

Product Details

Characteristics:	Key Benefits: • Made in Germany - from design to production - by highly experienced protein experts. • Protein expressed with ALiCE® and purified in one-step affinity chromatography • 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 try to ensure that you receive soluble 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 against its specific reference buffer. • We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.
Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).
Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	SLC46A1
Alternative Name:	SLC46A1 (SLC46A1 Products)
Background:	Proton-coupled folate transporter (HsPCFT) (hPCFT) (Heme carrier protein 1) (PCFT/HCP1) (Solute carrier family 46 member 1),FUNCTION: Proton-coupled folate symporter that mediates folate absorption using an H(+) gradient as a driving force (PubMed:17129779, PubMed:17446347, PubMed:17475902, PubMed:19389703, PubMed:19762432, PubMed:25504888, PubMed:30858177, PubMed:31792273, PubMed:34619546, PubMed:29344585, PubMed:31494288, PubMed:32893190). Involved in the intestinal absorption of folates at the brush-border membrane of the proximal jejunum, and the transport from blood to cerebrospinal fluid across the choroid plexus (PubMed:17129779, PubMed:17446347, PubMed:17475902, PubMed:19389703, PubMed:25504888, PubMed:30858177, PubMed:29344585, PubMed:31494288, PubMed:32893190). Functions at acidic pH via alternate outward- and inward-open conformation states (PubMed:34040256, PubMed:32893190). Protonation of residues in the outward open state primes the protein for transport (PubMed:34040256). Binding of folate promotes breaking of salt bridge network and subsequent closure of the extracellular gate, leading to the inward-open state and release of protons and folate (PubMed:34040256). Also able to transport antifolate drugs, such as methotrexate and pemetrexed, which are established treatments for cancer and autoimmune diseases (PubMed:18524888, PubMed:19762432, PubMed:25608532, PubMed:28802835, PubMed:29326243, PubMed:34619546, PubMed:34040256, PubMed:22345511). Involved in FOLR1-mediated endocytosis by serving as a route of export of folates from acidified endosomes (PubMed:19074442). Also acts as a lower-affinity, pH -independent heme carrier protein and constitutes the main importer of heme in the intestine (PubMed:17156779). Imports heme in the retina and retinal pigment epithelium, in neurons of the hippocampus, in hepatocytes and in the renal epithelial cells (PubMed:32621820). Hence, participates in the trafficking of heme and increases intracellular iron content (PubMed:32621820). {ECO:0000269|PubMed:17129779, ECO:0000269|PubMed:17156779, ECO:0000269|PubMed:17446347, ECO:0000269|PubMed:17475902, ECO:0000269|PubMed:18524888, ECO:0000269|PubMed:19074442, ECO:0000269|PubMed:19389703, ECO:0000269|PubMed:19762432, ECO:0000269|PubMed:22345511, ECO:0000269|PubMed:25504888, ECO:0000269|PubMed:25608532, ECO:0000269|PubMed:28802835, ECO:0000269|PubMed:29326243, ECO:0000269|PubMed:29344585, ECO:0000269|PubMed:30858177, ECO:0000269|PubMed:31494288, ECO:0000269|PubMed:31792273, ECO:0000269|PubMed:32621820,

Target Details

	ECO:0000269|PubMed:32893190, ECO:0000269|PubMed:34040256, ECO:0000269|PubMed:34619546}., FUNCTION: [Isoform 2]: Inactive isoform which is not able to mediate proton-coupled folate transport. {ECO:0000269|PubMed:17129779}.
Molecular Weight:	49.8 kDa
UniProt:	Q96NT5
Pathways:	Transition Metal Ion Homeostasis, Dicarboxylic Acid Transport

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. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months