Datasheet for ABIN3113915

SLC5A3 Protein (AA 1-718) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	SLC5A3
Protein Characteristics:	AA 1-718
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SLC5A3 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MRAVLDTADI AIVALYFILV MCIGFFAMWK SNRSTVSGYF LAGRSMTWVA IGASLFVSNI GSEHFIGLAG SGAASGFAVG AWEFNALLLL QLLGWVFIPI YIRSGVYTMP EYLSKRFGGH RIQVYFAALS LILYIFTKLS VDLYSGALFI QESLGWNLYV SVILLIGMTA LLTVTGGLVA VIYTDTLQAL LMIIGALTLM IISIMEIGGF EEVKRRYMLA SPDVTSILLT YNLSNTNSCN VSPKKEALKM LRNPTDEDVP WPGFILGQTP ASVWYWCADQ VIVQRVLAAK NIAHAKGSTL MAGFLKLLPM FIIVVPGMIS RILFTDDIAC INPEHCMLVC GSRAGCSNIA YPRLVMKLVP VGLRGLMMAV MIAALMSDLD SIFNSASTIF TLDVYKLIRK SASSRELMIV GRIFVAFMVV ISIAWVPIIV EMQGGQMYLY IQEVADYLTP PVAALFLLAI FWKRCNEQGA FYGGMAGFVL GAVRLILAFA YRAPECDQPD NRPGFIKDIH YMYVATGLFW VTGLITVIVS LLTPPPTKEQ IRTTTFWSKK NLVVKENCSP KEEPYKMQEK SILRCSENNE TINHIIPNGK SEDSIKGLQP EDVNLLVTCR EEGNPVASLG HSEAETPVDA YSNGQAALMG EKERKKETDD GGRYWKFIDW FCGFKSKSLS

	KRSLRDLMEE EAVCLQMLEE TRQVKVILNI GLFAVCSLGI FMFVYFSL **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 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®).

Product Details

Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	SLC5A3
Alternative Name:	SLC5A3 (SLC5A3 Products)
Background:	Sodium/myo-inositol cotransporter (Na(+)/myo-inositol cotransporter) (Sodium/myo-inositol transporter 1) (SMIT1) (Solute carrier family 5 member 3),FUNCTION: Electrogenic Na(+)-coupled sugar symporter that actively transports myo-inositol and its stereoisomer scyllo-inositol across the plasma membrane, with a Na(+) to sugar coupling ratio of 2:1 (By similarity). Maintains myo-inositol concentration gradient that defines cell volume and fluid balance during osmotic stress, in particular in the fetoplacental unit and central nervous system (By similarity). Forms coregulatory complexes with voltage-gated K(+) ion channels, allosterically altering ion selectivity, voltage dependence and gating kinetics of the channel. In turn, K(+) efflux through the channel forms a local electrical gradient that modulates electrogenic Na(+)-coupled myo-inositol influx through the transporter (PubMed:24595108, PubMed:28793216). Associates with KCNQ1-KCNE2 channel in the apical membrane of choroid plexus epithelium and regulates the myo-inositol gradient between blood and cerebrospinal fluid with an impact on neuron excitability (PubMed:24595108) (By similarity). Associates with KCNQ2-KCNQ3 channel altering ion selectivity, increasing Na(+) and Cs(+) permeation relative to K(+) permeation (PubMed:28793216). Provides myo-inositol precursor for biosynthesis of phosphoinositides such as PI(4,5)P2, thus indirectly affecting the activity of phosphoinositide-dependent ion channels and Ca(2+) signaling upon osmotic stress (PubMed:27217553). {ECO:0000250|UniProtKB:P31637, ECO:0000250|UniProtKB:Q9JKZ2, ECO:0000269|PubMed:24595108, ECO:0000269|PubMed:27217553, ECO:0000269|PubMed:28793216}.
Molecular Weight:	79.7 kDa
UniProt:	P53794
Pathways:	Inositol Metabolic Process

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

Application Details

	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