Datasheet for ABIN3112877

CFTR Protein (AA 1-1480) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	CFTR
Protein Characteristics:	AA 1-1480
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CFTR protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Brand:	AliCE®
Sequence:	MQRSPLEKAS VVSKLFFSWT RPILRKGYRQ RLELSDIYQI PSVDSADNLS EKLEREWDRE LASKKNPKLI NALRRCFFWR FMFYGIFLYL GEVTKAVQPL LLGRIIASYD PDNKEERSIA IYLGIGLCLL FIVRTLLLHP AIFGLHHIGM QMRIAMFSLI YKKTLKLSSR VLDKISIGQL VSLLSNNLNK FDEGLALAHF VWIAPLQVAL LMGLIWELLQ ASAFCGLGFL IVLALFQAGL GRMMMKYRDQ RAGKISERLV ITSEMIENIQ SVKAYCWEEA MEKMIENLRQ TELKLTRKAA YVRYFNSSAF FFSGFFVVFL SVLPYALIKG IILRKIFTTI SFCIVLRMAV TRQFPWAVQT WYDSLGAINK IQDFLQKQEY KTLEYNLTTT EVVMENVTAF WEEGFGELFE KAKQNNNNRK TSNGDDSLFF SNFSLLGTPV LKDINFKIER GQLLAVAGST GAGKTSLLMV IMGELEPSEG KIKHSGRISF CSQFSWIMPG TIKENIIFGV SYDEYRYRSV IKACQLEEDI SKFAEKDNIV LGEGGITLSG GQRARISLAR AVYKDADLYL LDSPFGYLDV LTEKEIFESC VCKLMANKTR ILVTSKMEHL KKADKILILH EGSSYFYGTF SELQNLQPDF SSKLMGCDSF DQFSAERRNS ILTETLHRFS

LEGDAPVSWT ETKKQSFKQT GEFGEKRKNS ILNPINSIRK FSIVQKTPLQ MNGIEEDSDE PLERRLSLVP DSEQGEAILP RISVISTGPT LQARRRQSVL NLMTHSVNQG QNIHRKTTAS TRKVSLAPQA NLTELDIYSR RLSQETGLEI SEEINEEDLK ECFFDDMESI PAVTTWNTYL RYITVHKSLI FVLIWCLVIF LAEVAASLVV LWLLGNTPLQ DKGNSTHSRN NSYAVIITST SSYYVFYIYV GVADTLLAMG FFRGLPLVHT LITVSKILHH KMLHSVLQAP MSTLNTLKAG GILNRFSKDI AILDDLLPLT IFDFIQLLLI VIGAIAVVAV LQPYIFVATV PVIVAFIMLR AYFLQTSQQL KQLESEGRSP IFTHLVTSLK GLWTLRAFGR QPYFETLFHK ALNLHTANWF LYLSTLRWFQ MRIEMIFVIF FIAVTFISIL TTGEGEGRVG IILTLAMNIM STLQWAVNSS IDVDSLMRSV SRVFKFIDMP TEGKPTKSTK PYKNGQLSKV MIIENSHVKK DDIWPSGGQM TVKDLTAKYT EGGNAILENI SFSISPGQRV GLLGRTGSGK STLLSAFLRL LNTEGEIQID GVSWDSITLQ QWRKAFGVIP QKVFIFSGTF RKNLDPYEQW SDQEIWKVAD EVGLRSVIEQ FPGKLDFVLV DGGCVLSHGH KQLMCLARSV LSKAKILLLD EPSAHLDPVT YQIIRRTLKQ AFADCTVILC EHRIEAMLEC QQFLVIEENK VRQYDSIQKL LNERSLFRQA ISPSDRVKLF PHRNSSKCKS KPQIAALKEE TEEEVQDTRL

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

Product Details

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:	CFTR
Alternative Name:	CFTR (CFTR Products)
Background:	Cystic fibrosis transmembrane conductance regulator (CFTR) (ATP-binding cassette sub-family C member 7) (Channel conductance-controlling ATPase) (EC 5.6.1.6) (cAMP-dependent chloride channel),FUNCTION: Epithelial ion channel that plays an important role in the regulation of epithelial ion and water transport and fluid homeostasis (PubMed:26823428). Mediates the transport of chloride ions across the cell membrane (PubMed:10792060, PubMed:11524016, PubMed:11707463, PubMed:12519745, PubMed:15010471, PubMed:12588899, PubMed:17036051, PubMed:19398555, PubMed:19621064, PubMed:22178883, PubMed:25330774, PubMed:1712898, PubMed:8910473, PubMed:9804160, PubMed:12529365, PubMed:17182731, PubMed:26846474, PubMed:28087700). Channel activity is coupled to ATP hydrolysis (PubMed:8910473). The ion channel is also permeable to HCO(3)(-), selectivity depends on the extracellular chloride concentration (PubMed:15010471, PubMed:19019741). Exerts its function also by modulating the activity of other ion channels and transporters (PubMed:12403779, PubMed:22178883, PubMed:22121115, PubMed:27941075). Plays an important role in airway fluid homeostasis (PubMed:16645176, PubMed:19621064, PubMed:26823428). Contributes to the regulation of

Target Details

	the pH and the ion content of the airway surface fluid layer and thereby plays an important role in defense against pathogens (PubMed:14668433, PubMed:16645176, PubMed:26823428). Modulates the activity of the epithelial sodium channel (ENaC) complex, in part by regulating the cell surface expression of the ENaC complex (PubMed:17434346, PubMed:27941075, PubMed:17182731). Inhibits the activity of the ENaC channel containing subunits SCNN1A, SCNN1B and SCNN1G (PubMed:17182731). Inhibits the activity of the ENaC channel containing subunits SCNN1D, SCNN1B and SCNN1G, but not of the ENaC channel containing subunits SCNN1A, SCNN1B and SCNN1G (PubMed:17182731, PubMed:27941075). May regulate bicarbonate secretion and salvage in epithelial cells by regulating the transporter SLC4A7 (PubMed:12403779). Can inhibit the chloride channel activity of ANO1 (PubMed:22178883). Plays a role in the chloride and bicarbonate homeostasis during sperm epididymal maturation and capacitation (PubMed:19923167, PubMed:27714810). {ECO:0000269|PubMed:10792060, ECO:0000269|PubMed:11524016, ECO:0000269|PubMed:11707463, ECO:0000269|PubMed:12403779, ECO:0000269|PubMed:12519745, ECO:0000269|PubMed:12529365, ECO:0000269|PubMed:12588899, ECO:0000269|PubMed:14668433, ECO:0000269|PubMed:15010471, ECO:0000269|PubMed:16645176, ECO:0000269|PubMed:17036051, ECO:0000269|PubMed:1712898, ECO:0000269|PubMed:17182731, ECO:0000269|PubMed:19019741, ECO:0000269|PubMed:19398555, ECO:0000269|PubMed:19621064, ECO:0000269|PubMed:22178883, ECO:0000269|PubMed:25330774, ECO:0000269|PubMed:26627831, ECO:0000269|PubMed:26823428, ECO:0000269|PubMed:26846474, ECO:0000269|PubMed:27714810, ECO:0000269|PubMed:27941075, ECO:0000269|PubMed:28087700, ECO:0000269|PubMed:8910473, ECO:0000269|PubMed:9804160, ECO:0000305|PubMed:19923167}.
Molecular Weight:	168.1 kDa
UniProt:	P13569

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

Application Details

	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