Datasheet for ABIN3088900

APLF Protein (AA 1-511) (Strep Tag)

Go to Product page

1 Image

Overview

Quantity:	1 mg
Target:	APLF
Protein Characteristics:	AA 1-511
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This APLF protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence:	MSGGFELQPR DGGPRVALAP GETVIGRGPL LGITDKRVSR RHAILEVAGG QLRIKPIHTN PCFYQSSEKS QLLPLKPNLW CYLNPGDSFS LLVDKYIFRI LSIPSEVEMQ CTLRNSQVLD EDNILNETPK SPVINLPHET TGASQLEGST EIAKTQMTPT NSVSFLGENR DCNKQQPILA ERKRILPTWM LAEHLSDQNL SVPAISGGNV IQGSGKEEIC KDKSQLNTTQ QGRRQLISSG SSENTSAEQD TGEECKNTDQ EESTISSKEM PQSFSAITLS NTEMNNIKTN AQRNKLPIEE LGKVSKHKIA TKRTPHKEDE AMSCSENCSS AQGDSLQDES QGSHSESSSN PSNPETLHAK ATDSVLQGSE GNKVKRTSCM YGANCYRKNP VHFQHFSHPG DSDYGGVQIV GQDETDDRPE CPYGPSCYRK NPQHKIEYRH NTLPVRNVLD EDNDNVGQPN EYDLNDSFLD DEEEDYEPTD EDSDWEPGKE DEEKEDVEEL LKEAKRFMKR K **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 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.
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

Product Details

	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:	APLF
Alternative Name:	APLF (APLF Products)
Background:	Aprataxin and PNK-like factor (EC 3.1.-.-) (Apurinic-apyrimidinic endonuclease APLF) (PNK and APTX-like FHA domain-containing protein) (XRCC1-interacting protein 1),FUNCTION: Histone chaperone involved in single-strand and double-strand DNA break repair (PubMed:17353262, PubMed:17396150, PubMed:21211721, PubMed:21211722, PubMed:30104678, PubMed:29905837). Recruited to sites of DNA damage through interaction with branched poly-ADP-ribose chains, a polymeric post-translational modification synthesized transiently at sites of chromosomal damage to accelerate DNA strand break repair reactions (PubMed:17353262, PubMed:17396150, PubMed:21211721, PubMed:30104678). Following recruitment to DNA damage sites, acts as a histone chaperone that mediates histone eviction during DNA repair and promotes recruitment of histone variant MACROH2A1 (PubMed:21211722, PubMed:30104678, PubMed:29905837). Also has a nuclease activity: displays apurinic-apyrimidinic (AP) endonuclease and 3'-5' exonuclease activities in vitro (PubMed:17353262, PubMed:17396150). Also able to introduce nicks at hydroxyuracil and other types of pyrimidine base damage (PubMed:17353262, PubMed:17396150). Together with PARP3, promotes the retention of the LIG4-XRCC4 complex on chromatin and accelerate DNA ligation during non-homologous end-joining (NHEJ) (PubMed:21211721, PubMed:23689425). Also acts as a negative regulator of cell pluripotency by promoting histone exchange (By similarity). Required for the embryo implantation during the epithelial to mesenchymal transition in females (By similarity). {ECO:0000250|UniProtKB:Q9D842, ECO:0000269|PubMed:17353262, ECO:0000269|PubMed:17396150, ECO:0000269|PubMed:21211721, ECO:0000269|PubMed:21211722, ECO:0000269|PubMed:23689425, ECO:0000269|PubMed:29905837, ECO:0000269|PubMed:30104678}.
Molecular Weight:	57.0 kDa
UniProt:	Q8IW19

Target Details

Pathways:	DNA Damage Repair

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)

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process

