Datasheet for ABIN3113941

ATP12A Protein (AA 1-1039) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	ATP12A
Protein Characteristics:	AA 1-1039
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ATP12A protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MHQKTPEIYS VELSGTKDIV KTDKGDGKEK YRGLKNNCLE LKKKNHKEEF QKELHLDDHK LSNRELEEKY GTDIIMGLSS TRAAELLARD GPNSLTPPKQ TPEIVKFLKQ MVGGFSILLW VGAFLCWIAY GIQYSSDKSA SLNNVYLGCV LGLVVILTGI FAYYQEAKST NIMSSFNKMI PQQALVIRDS EKKTIPSEQL VVGDIVEVKG GDQIPADIRV LSSQGCRVDN SSLTGESEPQ PRSSEFTHEN PLETKNICFY STTCLEGTVT GMVINTGDRT IIGHIASLAS GVGNEKTPIA IEIEHFVHIV AGVAVSIGIL FFIIAVSLKY QVLDSIIFLI GIIVANVPEG LLATVTVTLS LTAKRMAKKN CLVKNLEAVE TLGSTSIICS DKTGTLTQNR MTVAHLWFDN QIFVADTSED HSNQVFDQSS RTWASLSKII TLCNRAEFKP GQENVPIMKK AVIGDASETA LLKFSEVILG DVMEIRKRNR KVAEIPFNST NKFQLSIHEM DDPHGKRFLM VMKGAPERIL EKCSTIMING EEHPLDKSTA KTFHTAYMEL GGLGERVLGF CHLYLPADEF PETYSFDIDA MNFPTSNLCF VGLLSMIDPP RSTVPDAVTK CRSAGIKVIM VTGDHPITAK AIAKSVGIIS ANSETVEDIA HRLNIAVEQV NKRDAKAAVV TGMELKDMSS EQLDEILANY QEIVFARTSP QQKLIIVEGC QRQDAVVAVT

GDGVNDSPAL KKADIGIAMG IAGSDAAKNA ADMVLLDDNF ASIVTGVEEG RLIFDNLKKT IAYSLTKNIA ELCPFLIYII VGLPLPIGTI TILFIDLGTD IIPSIALAYE KAESDIMNRK PRHKNKDRLV NQPLAVYSYL HIGLMQALGA FLVYFTVYAQ EGFLPRTLIN LRVEWEKDYV NDLKDSYGQE WTRYQREYLE WTGYTAFFVG ILVQQIADLI IRKTRRNSIF QQGLFRNKVI WVGITSQIII GLILSYGLGS VTALSFTMLR AQYWFVAVPH AILIWVYDEV RKLFIRLYPG SWWDKNMYY

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

Product Details

	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 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:	ATP12A
Alternative Name:	ATP12A (ATP12A Products)
Background:	Potassium-transporting ATPase alpha chain 2 (HK alpha 2) (Non-gastric H(+)/K(+) ATPase subunit alpha) (EC 7.2.2.19) (Non-gastric Na(+)/K(+) ATPase subunit alpha) (EC 7.2.2.13) (Proton pump) (Sodium pump),FUNCTION: The catalytic subunit of a H(+)/K(+) ATPase and/or Na(+)/K(+) ATPase pump which transports K(+) ions in exchange for Na(+) and/or H(+) ions across the apical membrane of epithelial cells. Uses ATP as an energy source to pump K(+) ions into the cell while transporting Na(+) and/or H(+) ions to the extracellular compartment (PubMed:9774385, PubMed:7485470, PubMed:8853415, PubMed:11341842). Involved in the maintenance of electrolyte homeostasis through K(+) ion absorption in kidney and colon (By similarity). In the airway epithelium, may play a primary role in mucus acidification regulating its viscosity and clearance (PubMed:29391451). {ECO:0000250|UniProtKB:Q9Z1W8, ECO:0000269|PubMed:11341842, ECO:0000269|PubMed:29391451, ECO:0000269|PubMed:7485470, ECO:0000269|PubMed:8853415, ECO:0000269|PubMed:9774385}.
Molecular Weight:	115.5 kDa
UniProt:	P54707

Target Details

Pathways:	Proton Transport, Ribonucleoside Biosynthetic 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 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

