

Datasheet for ABIN3111887

ATP1A1 Protein (AA 6-1023) (rho-1D4 tag)

1 Image

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Overview

Quantity:	1 mg
Target:	ATP1A1
Protein Characteristics:	AA 6-1023
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ATP1A1 protein is labelled with rho-1D4 tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), Crystallization (Crys), ELISA

Product Details

Sequence:	GRDKYEPAAV SEQGDKKGKK GKKDRDMDL KKEVSMDDHK LSLDELHRKY GTDLSRGLTS ARAAEILARD GPNALTPPPT TPEWIKFCRQ LFGGFSMLLW IGAILCFLAY SIQAATEEEP QNDNLYLGVV LSAVVIITGC FSYYQEAKSS KIMESFKNMV PQQALVIRNG EKMSINAEV VVGDLVEVKG GDRIPADLRI ISANGCKVDN SSLTGESEPQ TRSPDFTNEN PLETRNIAFF STNCVEGTAR GIVVYTGDR T VMGRIATLAS GLEGGQTPIA AEIEHFHII TGVAVFLGVS FFILSLILEY TWLEAVIFLI GIIVANVPEG LLATVTVCLT LTAKRMARKN CLVKNLEAVE TLGSTSTICS DKTGTLTQNR MTVAHMFWDN QIHEADTTEN QSGVSFDKTS ATWLALSRIA GLCNRAVFQA NQENLPILKR AVAGDASESA LLKCIELCCG SVKEMRERYA KIVEIPFNST NKYQLSIHKN PNTSEPHLL VMKGAPERIL DRCSSILLHG KEQPLDEELK DAFQNAYLEL GGLGERVLGF CHLFLPDEQF PEGFQFDTDD VNFIDNLCF VGLISMIDPP RAAVPDAVGK CRSAGIKVIM VTGDHPITAK AIAKGVGIIS EGNETVEDIA ARLNIPVSQV NPRDAKACVV HGSDLKDMTS EQLDDILKYH TEIVFARTSP QQKLIIVEGC QRQGAIVAVT GDGVNDSPAL KKADIGVAMG
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IAGSDVSKQA ADMILLDDNF ASIVTGVEEG RLIFDNLKKS IAYTLTSNIP EITPFLIFII ANIPLPLGTV
TILCIDLGTD MVPAISLAYE QAESDIMKRQ PRNPKTDKLV NERLISMAYG QIGMIQALGG
FFTYFVILAE NGFLPIHLLG LRVDWDDRWI NDVEDSYGQQ WTYEQRKIVE FTCHTAFFVS
IVVVQWADLV ICKTRRNSVF QQGMKNKILI FGLFEETALA AFLSYCPGMG VALRMYPLKP
TWWFCAFPYS LLIFVYDEVR KLIIRRRPGG WVEKETYY

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human ATP1A1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. We use the ExPASy's protParam tool to determine the absorption coefficient of each protein.

Purification:

Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

1. Membrane proteins are fractionated by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.
2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot.
3. Protein containing fractions of the best purification are subjected to second purification step

Product Details

through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin-free.
Grade:	Crystallography grade

Target Details

Target:	ATP1A1
Alternative Name:	ATP1A1 (ATP1A1 Products)
Background:	This is the catalytic component of the active enzyme, which catalyzes the hydrolysis of ATP coupled with the exchange of sodium and potassium ions across the plasma membrane. This action creates the electrochemical gradient of sodium and potassium ions, providing the energy for active transport of various nutrients.
Molecular Weight:	113.6 kDa Including tag.
UniProt:	P05023
Pathways:	Thyroid Hormone Synthesis , Regulation of Hormone Metabolic Process , Regulation of Hormone Biosynthetic Process , 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:	In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images



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