

Datasheet for ABIN3118515  
**ATP8A2 Protein (AA 1-1148) (rho-1D4 tag)**



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1 Image

Overview

Quantity:	1 mg
Target:	ATP8A2
Protein Characteristics:	AA 1-1148
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ATP8A2 protein is labelled with rho-1D4 tag.
Application:	Crystallization (Crys), ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence: MSRATSVGDQ LEAPARTIYL NQPHLNKFRD NQISTAKYSV LTFLPRFLYE QIRRAANAF  
 LFIALLQQIP DVSPTRGYTT LVPLIILTI AGIKEIVEDF KRHKADNAV N KKKTIVLRNG  
 MWHTIMWKEV AVGDIVKVVN GQYLPADVVL LSSSEPMQAMC YVETANLDGE TNLKIRQGLS  
 HTADMQTREV LMKLSGTIEC EGPNRHLYDF TGNNLNDGKS LVALGPDQIL LRGTQLRNTQ  
 WVFGIVVYTG HDTKLMQNST KAPLKRSNVE KVTNVQILVL FGILLVMALV SSAGALYWNR  
 SHGEKNWYIK KMDTTSDFNG YNLLTFIILY NNLIPISLLV TLEVVKYQTA LFINWDTDMY  
 YIGNDTPAMA RTSNLNEELG QVKYLFSDKT GTLTCNIMNF KKCSIAGVTY GHFPELAREP  
 SSDDFCRMPP PCSDSCDFDD PRLKNIEDR HPTAPCIQEF LTLAVCHTV VPEKDGDNII  
 YQASSPDEAA LVKGAKKLG VFTARTPFSV IIEAMGQEQT FGILNVLEFS SDRKRMSVIV  
 RTPSGRLRLY CKGADNVIFE RLSKDSK YME ETLCHLEYFA TEGLR TLCVA YADLSENEYE  
 EWLKVVYQEAS TILKDRAQRL EECYEII EKN LLLL GATAIE DRLQAGVPET IATLLKAEIK  
 IWVLTGDKQE TAINIGYSCR LVSQNMALIL LKEDSLDATR AAITQHCTDL GNLLGKENDV

ALIIDGHTLK YALSFEVRRS FLDLALSCKA VICCRVSPLQ KSEIVDVVKK RVKAITLAIG  
DGANDVGMIIQ TAHVGVGISG NEGMQATNNS DYIAAQFSYL EKLLLVHGAW SYNRVTKCIL  
YCFYKNVVLY IIELWFAFVN GFSGQILFER WCIGLYNVIF TALPPFTLGI FERSCTQESM  
LRFQLYKIT QNGEGFNTKV FWGHCINALV HSLILFWFPM KALEHDTVLT SGHATDYLFV  
GNIVYTYVVV TVCLKAGLET TAWTKFSHLA VWGSMLTWLV FFGIYSTIWP TIPIAPDMRG  
QATMVLSSAH FWLGLFLVPT ACLIEDVAWR AAKHTCKKTL LEEVQELETK SRVLGKAVLR  
DSNGKRLNER DRLIKRLGRK TPPTLFRGSS LQQGVPHGYA FSQEEHGAVS QEEVIRAYDT  
TKKKSRRK

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

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### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human ATP8A2 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.

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### 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.

## Product Details

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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 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

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Target: ATP8A2

Alternative Name: ATP8A2 ([ATP8A2 Products](#))

Background: Catalytic component of a P4-ATPase flippase complex which catalyzes the hydrolysis of ATP coupled to the transport of aminophospholipids from the outer to the inner leaflet of various membranes and ensures the maintenance of asymmetric distribution of phospholipids. Phospholipid translocation seems also to be implicated in vesicle formation and in uptake of lipid signaling molecules. Reconstituted to liposomes, the ATP8A2:TMEM30A flippase complex predominantly transports phosphatidylserine (PS) and to a lesser extent phosphatidylethanolamine (PE). Proposed to function in the generation and maintenance of phospholipid asymmetry in photoreceptor disk membranes and neuronal axon membranes. May be involved in vesicle trafficking in neuronal cells. Involved in regulation of neurite outgrowth, acting in synergy with TMEM30A. Required for normal visual and auditory function, involved in photoreceptor and inner ear spiral ganglion cell survival.

Molecular Weight: 130.4 kDa Including tag.

UniProt: [Q9NTI2](#)

## Application Details

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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.

## Application Details

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**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.

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**Restrictions:** For Research Use only

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## Handling

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**Format:** Liquid

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**Buffer:** 100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

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**Handling Advice:** Avoid repeated freeze-thaw cycles.

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**Storage:** -80 °C

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**Storage Comment:** Store at -80°C.

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**Expiry Date:** Unlimited (if stored properly)

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## Images

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