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Datasheet for ABIN3133296

# ATP-Binding Cassette, Sub-Family B (MDR/TAP), Member 1A (ABCB1A) (AA 1-1276) protein (Strep Tag)



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#### Overview

Quantity:	1 mg
Target:	ATP-Binding Cassette, Sub-Family B (MDR/TAP), Member 1A (ABCB1A)
Protein Characteristics:	AA 1-1276
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	Strep Tag
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

#### **Product Details**

Sequence:

MELEEDLKGR ADKNFSKMGK KSKKEKKEKK PAVSVLTMFR YAGWLDRLYM LVGTLAAIIH
GVALPLMMLI FGDMTDSFAS VGNVSKNSTN MSEADKRAMF AKLEEEMTTY AYYYTGIGAG
VLIVAYIQVS FWCLAAGRQI HKIRQKFFHA IMNQEIGWFD VHDVGELNTR LTDDVSKINE
GIGDKIGMFF QAMATFFGGF IIGFTRGWKL TLVILAISPV LGLSAGIWAK ILSSFTDKEL
HAYAKAGAVA EEVLAAIRTV IAFGGQKKEL ERYNNNLEEA KRLGIKKAIT ANISMGAAFL
LIYASYALAF WYGTSLVISK EYSIGQVLTV FFSVLIGAFS VGQASPNIEA FANARGAAYE
VFKIIDNKPS IDSFSKSGHK PDNIQGNLEF KNIHFSYPSR KEVQILKGLN LKVKSGQTVA
LVGNSGCGKS TTVQLMQRLY DPLDGMVSID GQDIRTINVR YLREIIGVVS QEPVLFATTI
AENIRYGRED VTMDEIEKAV KEANAYDFIM KLPHQFDTLV GERGAQLSGG QKQRIAIARA
LVRNPKILLL DEATSALDTE SEAVVQAALD KAREGRTTIV IAHRLSTVRN ADVIAGFDGG
VIVEQGNHDE LMREKGIYFK LVMTQTAGNE IELGNEACKS KDEIDNLDMS SKDSGSSLIR
RRSTRKSICG PHDQDRKLST KEALDEDVPP ASFWRILKLN STEWPYFVVG IFCAIINGGL

QPAFSVIFSK VVGVFTNGGP PETQRQNSNL FSLLFLILGI ISFITFFLQG FTFGKAGEIL
TKRLRYMVFK SMLRQDVSWF DDPKNTTGAL TTRLANDAAQ VKGATGSRLA VIFQNIANLG
TGIIISLIYG WQLTLLLLAI VPIIAIAGVV EMKMLSGQAL KDKKELEGSG KIATEAIENF RTVVSLTREQ
KFETMYAQSL QIPYRNAMKK AHVFGITFSF TQAMMYFSYA ACFRFGAYLV TQQLMTFENV
LLVFSAIVFG AMAVGQVSSF APDYAKATVS ASHIIRIIEK TPEIDSYSTQ GLKPNMLEGN
VQFSGVVFNY PTRPSIPVLQ GLSLEVKKGQ TLALVGSSGC GKSTVVQLLE RFYDPMAGSV
FLDGKEIKQL NVQWLRAQLG IVSQEPILFD CSIAENIAYG DNSRVVSYEE IVRAAKEANI
HQFIDSLPDK YNTRVGDKGT QLSGGQKQRI AIARALVRQP HILLLDEATS ALDTESEKVV
QEALDKAREG RTCIVIAHRL STIQNADLIV VIQNGKVKEH GTHQQLLAQK GIYFSMVSVQ AGAKRS

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 posttranslational 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.
- 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)

### **Target Details**

Target:	ATP-Binding Cassette, Sub-Family B (MDR/TAP), Member 1A (ABCB1A)
Alternative Name:	Abcb1a (ABCB1A Products)
Background:	ATP-dependent translocase ABCB1 (ATP-binding cassette sub-family B member 1A) (MDR1A) (Multidrug resistance protein 1A) (EC 7.6.2.2) (Multidrug resistance protein 3) (P-glycoprotein 3)
	(Phospholipid transporter ABCB1) (EC 7.6.2.1), FUNCTION: Translocates drugs and
	phospholipids across the membrane. Catalyzes the flop of phospholipids from the cytoplasmic
	to the exoplasmic leaflet of the apical membrane. Participates mainly to the flop of
	$phosphatidylcholine, phosphatidylethan olamine, beta-D-glucosylceramides\ and\ sphingomyelins$
	(PubMed:8898203). Energy-dependent efflux pump responsible for decreased drug
	accumulation in multidrug-resistant cells (By similarity). {ECO:0000250 UniProtKB:P08183,
	ECO:0000269 PubMed:8898203}.
Molecular Weight:	140.6 kDa
UniProt:	P21447

## **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)