

Datasheet for ABIN3089373

**ARL8B Protein (AA 1-186) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	ARL8B
Protein Characteristics:	AA 1-186
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ARL8B protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Sequence:	<p>MLALISRLLD WFRSLFWKEE MELTLVGLQY SGKTTFVNVI ASGQFSEDMI PTVGFNMRKV TKGNVTIKIW DIGGQPRFRS MWERYCRGVN AIVYMIDAAD REKIEASRNE LHNLLDKPQL QGIPVLVLGN KRDLPNALDE KQLIEKMNLS AIQDREICCY SISCKEKDN I DITLQWLIQH SKSRRS</p> <p><b>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.</b></p>
Characteristics:	<p>Key Benefits:</p> <ul style="list-style-type: none"><li>• Made in Germany - from design to production - by highly experienced protein experts.</li><li>• Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.</li><li>• These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).</li></ul>

- 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 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:	ARL8B
Alternative Name:	ARL8B ( <a href="#">ARL8B Products</a> )
Background:	<p>ADP-ribosylation factor-like protein 8B (EC 3.6.5.2) (ADP-ribosylation factor-like protein 10C) (Novel small G protein indispensable for equal chromosome segregation 1),FUNCTION: Small GTPase which cycles between active GTP-bound and inactive GDP-bound states (PubMed:15331635, PubMed:16537643). In its active state, binds to a variety of effector proteins playing a key role in the regulation of lysosomal positioning which is important for nutrient sensing, natural killer cell-mediated cytotoxicity and antigen presentation. Along with its effectors, orchestrates lysosomal transport and fusion (PubMed:16650381, PubMed:16537643, PubMed:28325809, PubMed:25898167, PubMed:27808481). Localizes specifically to lysosomal membranes and mediates anterograde lysosomal motility by recruiting PLEKHM2, which in turn recruits the motor protein kinesin-1 on lysosomes. Required for lysosomal and cytolytic granule exocytosis (PubMed:22172677, PubMed:29592961, PubMed:24088571). Critical factor involved in NK cell-mediated cytotoxicity. Drives the polarization of cytolytic granules and microtubule-organizing centers (MTOCs) toward the immune synapse between effector NK lymphocytes and target cells (PubMed:24088571). In neurons, mediates the anterograde axonal long-range transport of presynaptic lysosome-related vesicles required for presynaptic biogenesis and synaptic function (By similarity). Also acts as a regulator of endosome to lysosome trafficking pathways of special significance for host defense (PubMed:21802320). Regulates cargo trafficking to lysosomes by binding to PLEKHM1 and recruiting the HOPS subunit VPS41, resulting in functional assembly of the HOPS complex on lysosomal membranes (PubMed:16537643, PubMed:25908847). Plays an important role in cargo delivery to lysosomes for antigen presentation and microbial killing. Directs the intersection of CD1d with lipid antigens in lysosomes, and plays a role in intersecting phagosomes with lysosomes to generate phagolysosomes that kill microbes (PubMed:25908847, PubMed:21802320). Involved in the process of MHC II presentation. Regulates the delivery of antigens to lysosomes and the formation of MHC II-peptide complexes through the recruitment of the HOPS complex to lysosomes allowing the fusion of late endosomes to lysosomes (By similarity). May play a role in chromosome segregation (PubMed:15331635). {ECO:0000250 UniProtKB:Q9CQW2, ECO:0000269 PubMed:15331635, ECO:0000269 PubMed:16537643, ECO:0000269 PubMed:16650381, ECO:0000269 PubMed:21802320, ECO:0000269 PubMed:22172677, ECO:0000269 PubMed:24088571, ECO:0000269 PubMed:25898167, ECO:0000269 PubMed:25908847, ECO:0000269 PubMed:27808481, ECO:0000269 PubMed:28325809, ECO:0000269 PubMed:29592961}., FUNCTION: (Microbial infection) During Mycobacterium</p>

## Target Details

tuberculosis (Mtb) infection, is required for plasma membrane repair by controlling the exocytosis of lysosomes in macrophages. ARL8B secretion pathway is crucial to control the type of cell death of the M. tuberculosis-infected macrophages, distinguishing avirulent from virulent Mtb induced necrotic cell death. {ECO:0000269|PubMed:29592961}., FUNCTION: (Microbial infection) During infection, coronaviruses such as SARS-CoV-2 and the chaperone HSPA5/GRP78 are probably co-released through ARL8B-dependent lysosomal exocytic pathway for unconventional egress. {ECO:0000269|PubMed:33157038}.

Molecular Weight: 21.5 kDa

UniProt: [Q9NVJ2](#)

## 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

## Handling

---

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