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Datasheet for ABIN3132487  
**CD74 Protein (AA 1-279) (Strep Tag)**

### Overview

Quantity:	1 mg
Target:	CD74
Protein Characteristics:	AA 1-279
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CD74 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

### Product Details

Sequence: MDDQRDLISN HEQLPILGNR PREPERCSRGR ALYTGVSVLV ALLLAGQATT AYFLYQQQGR  
LDKLTITSQN LQLESRLMKL PKSAKPVSQM RMATPLLMPR MSMDNMLLGP VKNVTKYGNM  
TQDHVMHLLT RSGPLEYPQL KGTFPENLKH LKNSMDGVNW KIFESWMKQW LLFEMSKNSL  
EEKKPTAPP KVLTKCQEEV SHIPAVYPGA FRPKCDENGN YLPLQCHGST GYCWCVFPNG  
TEVPHTKSRG RHNCSEPLDM EDLSSGLGVT RQELGQVTL

**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 specific reference buffer.
- We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

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#### 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.

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#### Purity:

≥ 80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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#### Endotoxin Level:

Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

## Target Details

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Target:	CD74
Alternative Name:	Cd74 ( <a href="#">CD74 Products</a> )
Background:	<p>H-2 class II histocompatibility antigen gamma chain (Ia antigen-associated invariant chain) (Ii) (Ii chain) (MHC class II-associated invariant chain) (CD antigen CD74) [Cleaved into: Class-II-associated invariant chain peptide (CLIP)],FUNCTION: Plays a critical role in MHC class II antigen processing by stabilizing peptide-free class II alpha/beta heterodimers in a complex soon after their synthesis and directing transport of the complex from the endoplasmic reticulum to compartments where peptide loading of class II takes place. Enhance also the stimulation of T-cell responses through interaction with CD44.</p> <p>{ECO:0000269 PubMed:8343954, ECO:0000269 PubMed:8977190}., FUNCTION: [Isoform Long]: Stabilizes the conformation of mature CTSL by binding to its active site and serving as a chaperone to help maintain a pool of mature enzyme in endocytic compartments and extracellular space of antigen-presenting cells (APCs). {ECO:0000269 PubMed:11483509, ECO:0000269 PubMed:12417635}., FUNCTION: [Class-II-associated invariant chain peptide]: Binds to the peptide-binding site of MHC class II alpha/beta heterodimers forming an alpha-beta-CLIP complex, thereby preventing the loading of antigenic peptides to the MHC class II complex until its release by HLA-DM in the endosome. {ECO:0000250 UniProtKB:P04233}.</p>
Molecular Weight:	31.6 kDa
UniProt:	<a href="#">P04441</a>
Pathways:	<a href="#">Positive Regulation of Immune Effector Process</a> , <a href="#">Production of Molecular Mediator of Immune Response</a> , <a href="#">Negative Regulation of intrinsic apoptotic Signaling</a> , <a href="#">Cancer Immune Checkpoints</a>

## 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.
Comment:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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</p>

## Application Details

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Restrictions: For Research Use only

## Handling

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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)