

Datasheet for ABIN3075147
UBA5 Protein (AA 1-404) (Strep Tag)[Go to Product page](#)

1 Image

Overview

Quantity:	1 mg
Target:	UBA5
Protein Characteristics:	AA 1-404
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This UBA5 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	<p>MAESVERLQQ RVQELERELA QERSLQVPRS GDGGGGRVRI EKMSSEVVDS NPYSRLMALK RMGIVSDYEK IRTFAVAIVG VGGVGSVTAE MLTRCGIGKL LLFDYDKVEL ANMNRLFFQP HQAGLSKVQA AEHTLRNINP DVLFEVHNYN ITTVENFQHF MDRISNGGLE EGKPVDLVLS CVDNFEARMT INTACNELGQ TWMESGVSEN AVSGHIQLII PGESACFACA PPLVVAANID EKTLKREGVC AASLPTTMGV VAGILVQNVL KLLNFGTVS FYLGYNAMQD FFPTMSMKPN PQCDDRNCRK QEEYKKKVA ALPKQEVIQE EEEIHEDNE WGIELVSEVS EEELKNFSGP VPDLPEGITV AYTIKKQED SVTELTVEDS GESLEDLMAK MKNM</p> <p>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.</p>
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.

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.

Product Details

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:	UBA5
Alternative Name:	UBA5 (UBA5 Products)
Background:	<p>Ubiquitin-like modifier-activating enzyme 5 (Ubiquitin-activating enzyme 5) (ThiFP1) (UFM1-activating enzyme) (Ubiquitin-activating enzyme E1 domain-containing protein 1),FUNCTION: E1-like enzyme which specifically catalyzes the first step in ufmylation (PubMed:15071506, PubMed:18442052, PubMed:25219498, PubMed:20368332, PubMed:27653677, PubMed:26929408, PubMed:27545674, PubMed:30412706, PubMed:27545681). Activates UFM1 by first adenylating its C-terminal glycine residue with ATP, and thereafter linking this residue to the side chain of a cysteine residue in E1, yielding a UFM1-E1 thioester and free AMP (PubMed:20368332, PubMed:27653677, PubMed:26929408, PubMed:30412706). Activates UFM1 via a trans-binding mechanism, in which UFM1 interacts with distinct sites in both subunits of the UBA5 homodimer (PubMed:27653677). Trans-binding also promotes stabilization of the UBA5 homodimer, and enhances ATP-binding (PubMed:29295865). Transfer of UFM1 from UBA5 to the E2-like enzyme UFC1 also takes place using a trans mechanism (PubMed:27653677). Ufmylation is involved in reticulophagy (also called ER-phagy) induced in response to endoplasmic reticulum stress (PubMed:32160526). Ufmylation is essential for erythroid differentiation of both megakaryocytes and erythrocytes (By similarity).</p> <p>{ECO:0000250 UniProtKB:Q8VE47, ECO:0000269 PubMed:15071506, ECO:0000269 PubMed:18442052, ECO:0000269 PubMed:20368332, ECO:0000269 PubMed:25219498, ECO:0000269 PubMed:26929408, ECO:0000269 PubMed:27545674, ECO:0000269 PubMed:27545681, ECO:0000269 PubMed:27653677, ECO:0000269 PubMed:29295865, ECO:0000269 PubMed:30412706, ECO:0000269 PubMed:32160526}.</p>
Molecular Weight:	44.9 kDa
UniProt:	Q9GZZ9

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies
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Application Details

as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment:

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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)



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