Datasheet for ABIN3089551

# ATG5 Protein (AA 1-275) (Strep Tag)

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## Overview

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| Quantity: | 1 mg |
| Target: | ATG5 |
| Protein Characteristics: | AA 1-275 |
| Origin: | Human |
| Source: | Tobacco (Nicotiana tabacum) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This ATG5 protein is labelled with Strep Tag. |
| Application: | ELISA, Western Blotting (WB), SDS-PAGE (SDS) |

## Product Details

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| Sequence: | MTDDKDVLRD VWFGRIPTCF TLYQDEITER EAEPYYLLLP RVSYLTLVTD KVKKHFQKVM RQEDISEIWF EYEGTPLKWH YPIGLLFDLL ASSSALPWNI TVHFKSFPEK DLLHCPSKDA IEAHFMSCMK EADALKHKSQ VINEMQKKDH KQLWMGLQND RFDQFWAINR KLMEYPAEEN GFRYIPFRIY QTTTERPFIQ KLFRPVAADG QLHTLGDLLK EVCPSAIDPE DGEKKNQVMI HGIEPMLETP LQWLSEHLSY PDNFLHISII PQPTD<br>**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:<br>• Made in Germany - from design to production - by highly experienced protein experts.<br>• Protein expressed with ALiCE® and purified in one-step affinity chromatography<br>• 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 try to ensure that you receive soluble 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 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: | One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®). |
| Purity: | > 80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC). |

## Target Details

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| Target: | ATG5 |
| Alternative Name: | ATG5 (ATG5 Products) |
| Background: | Autophagy protein 5 (APG5-like) (Apoptosis-specific protein),FUNCTION: Involved in autophagic vesicle formation. Conjugation with ATG12, through a ubiquitin-like conjugating system |

## Target Details

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| | involving ATG7 as an E1-like activating enzyme and ATG10 as an E2-like conjugating enzyme, is essential for its function. The ATG12-ATG5 conjugate acts as an E3-like enzyme which is required for lipidation of ATG8 family proteins and their association to the vesicle membranes. Involved in mitochondrial quality control after oxidative damage, and in subsequent cellular longevity. Plays a critical role in multiple aspects of lymphocyte development and is essential for both B and T lymphocyte survival and proliferation. Required for optimal processing and presentation of antigens for MHC II. Involved in the maintenance of axon morphology and membrane structures, as well as in normal adipocyte differentiation. Promotes primary ciliogenesis through removal of OFD1 from centriolar satellites and degradation of IFT20 via the autophagic pathway. {ECO:0000250\|UniProtKB:Q99J83, ECO:0000269\|PubMed:12207896, ECO:0000269\|PubMed:20580051, ECO:0000269\|PubMed:22170153, ECO:0000269\|PubMed:26812546}., FUNCTION: May play an important role in the apoptotic process, possibly within the modified cytoskeleton. Its expression is a relatively late event in the apoptotic process, occurring downstream of caspase activity. Plays a crucial role in IFN-gamma-induced autophagic cell death by interacting with FADD. {ECO:0000269\|PubMed:15778222, ECO:0000269\|PubMed:7796880}., FUNCTION: (Microbial infection) May act as a proviral factor. In association with ATG12, negatively regulates the innate antiviral immune response by impairing the type I IFN production pathway upon vesicular stomatitis virus (VSV) infection (PubMed:17709747). Required for the translation of incoming hepatitis C virus (HCV) RNA and, thereby, for initiation of HCV replication, but not required once infection is established (PubMed:19666601). {ECO:0000269\|PubMed:17709747, ECO:0000269\|PubMed:19666601}. |
| Molecular Weight: | 32.4 kDa |
| UniProt: | Q9H1Y0 |
| Pathways: | Activation of Innate immune Response, Production of Molecular Mediator of Immune Response , Autophagy |

## 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: | 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 |

## Application Details

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| | modifications.<br>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

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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) |