Datasheet for ABIN3096346

# VPS35 Protein (AA 1-796) (Strep Tag)

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## Overview

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| Quantity: | 1 mg |
| Target: | VPS35 |
| Protein Characteristics: | AA 1-796 |
| Origin: | Human |
| Source: | Tobacco (Nicotiana tabacum) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This VPS35 protein is labelled with Strep Tag. |
| Application: | ELISA, Western Blotting (WB), SDS-PAGE (SDS) |

## Product Details

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| Sequence: | MPTTQQSPQD EQEKLLDEAI QAVKVQSFQM KRCLDKNKLM DALKHASNML GELRTSMLSP KSYYELYMAI SDELHYLEVY LTDEFAKGRK VADLYELVQY AGNIIPRLYL LITVGVVYVK SFPQSRKDIL KDLVEMCRGV QHPLRGLFLR NYLLQCTRNI LPDEGEPTDE ETTGDISDSM DFVLLNFAEM NKLWVRMQHQ GHSRDREKRE RERQELRILV GTNLVRLSQL EGVNVERYKQ IVLTGILEQV VNCRDALAQE YLMECIIQVF PDEFHLQTLN PFLRACAELH QNVNVKNIII ALIDRLALFA HREDGPGIPA DIKLFDIFSQ QVATVIQSRQ DMPSEDVVSL QVSLINLAMK CYPDRVDYVD KVLETTVEIF NKLNLEHIAT SSAVSKELTR LLKIPVDTYN NILTVLKLKH FHPLFEYFDY ESRKSMSCYV LSNVLDYNTE IVSQDQVDSI MNLVSTLIQD QPDQPVEDPD PEDFADEQSL VGRFIHLLRS EDPDQQYLIL NTARKHFGAG GNQRIRFTLP PLVFAAYQLA FRYKENSKVD DKWEKKCQKI FSFAHQTISA LIKAELAELP LRLFLQGALA AGEIGFENHE TVAYEFMSQA FSLYEDEISD SKAQLAAITL IIGTFERMKC FSEENHEPLR TQCALAASKL LKKPDQGRAV STCAHLFWSG RNTDKNGEEL HGGKRVMECL KKALKIANQC MDPSLQVQLF |

IEILNRYIYF YEKENDAVTI QVLNQLIQKI REDLPNLESS EETEQINKHF HNTLEHLRLR RESPESEGPI YEGLIL

**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.

## Product Details

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| Purification: | Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):<br>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.<br>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) |

## Target Details

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| Target: | VPS35 |
| Alternative Name: | VPS35 (VPS35 Products) |
| Background: | Vacuolar protein sorting-associated protein 35 (hVPS35) (Maternal-embryonic 3) (Vesicle protein sorting 35),FUNCTION: Acts as a component of the retromer cargo-selective complex (CSC). The CSC is believed to be the core functional component of retromer or respective retromer complex variants acting to prevent missorting of selected transmembrane cargo proteins into the lysosomal degradation pathway. The recruitment of the CSC to the endosomal membrane involves RAB7A and SNX3. The CSC seems to associate with the cytoplasmic domain of cargo proteins predominantly via VPS35, however, these interactions seem to be of low affinity and retromer SNX proteins may also contribute to cargo selectivity thus questioning the classical function of the CSC. The SNX-BAR retromer mediates retrograde transport of cargo proteins from endosomes to the trans-Golgi network (TGN) and is involved in endosome-to-plasma membrane transport for cargo protein recycling. The SNX3-retromer mediates the retrograde endosome-to-TGN transport of WLS distinct from the SNX-BAR retromer pathway (PubMed:30213940). The SNX27-retromer is believed to be involved in endosome-to-plasma membrane trafficking and recycling of a broad spectrum of cargo proteins. The CSC seems to act as recruitment hub for other proteins, such as the WASH complex and TBC1D5 (Probable). Required for retrograde transport of lysosomal enzyme receptor IGF2R and SLC11A2. Required to regulate transcytosis of the polymeric immunoglobulin receptor (pIgR-pIgA) (PubMed:15078903, PubMed:15247922, PubMed:20164305). Required for endosomal localization of WASHC2C (PubMed:22070227, PubMed:28892079). Mediates the association of the CSC with the WASH complex via WASHC2 (PubMed:22070227, PubMed:24980502, PubMed:24819384). Required for the endosomal localization of TBC1D5 (PubMed:20923837). |

## Target Details

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| | {ECO:0000269\|PubMed:15078903, ECO:0000269\|PubMed:15247922, ECO:0000269\|PubMed:20164305, ECO:0000269\|PubMed:20923837, ECO:0000269\|PubMed:22070227, ECO:0000269\|PubMed:23395371, ECO:0000269\|PubMed:24819384, ECO:0000269\|PubMed:24980502, ECO:0000269\|PubMed:28892079, ECO:0000269\|PubMed:30213940, ECO:0000303\|PubMed:21725319, ECO:0000303\|PubMed:22070227, ECO:0000303\|PubMed:22513087, ECO:0000303\|PubMed:23563491}., FUNCTION: (Microbial infection) The heterotrimeric retromer cargo-selective complex (CSC) mediates the exit of human papillomavirus from the early endosome and the delivery to the Golgi apparatus. {ECO:0000269\|PubMed:25693203, ECO:0000269\|PubMed:30122350}. |
| Molecular Weight: | 91.7 kDa |
| UniProt: | Q96QK1 |

## 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 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

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| Handling Advice: | Avoid repeated freeze-thaw cycles. |
| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |
| Expiry Date: | Unlimited (if stored properly) |

 