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Datasheet for ABIN3092720  
**GAPVD1 Protein (AA 1-1478) (Strep Tag)**

### Overview

Quantity:	1 mg
Target:	GAPVD1
Protein Characteristics:	AA 1-1478
Origin:	Human
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This GAPVD1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

### Product Details

Sequence: MVKLDIHTLA HHLKQERLYV NSEKQLIQLR NADVLKTAEK LYRTAWIAKQ QRINLDRLLI  
TSAEASPAEC CQHAKILED T QFVDGYKQLG FQETAYGEFL SRLRENPRLI ASSLVAGEKL  
NQENTQSVIY TVFTSLYGNC IMQEDES YLL QVLRYLIEFE LKESDNPRRL LRRGTCAFSI  
LFKLFSEGLF SAKLFLTATL HEPIMQLLVE DEDHLETDPN KLIERFSPSQ QEKLFGEKGS  
DRFRQKVQEM VESNEAKLVA LVNKFIFYLK QNTYCFPHSL RWIVSQMYKT LSCVDRLEVG  
EVRAMCTDLL LACFICPAVV NPEQYGIISD APINEVARFN LMQVGRLLQQ LAMTGSEEGD  
PRTKSSLGKF DKSCVAAFLD VVIGGRAVET PPLSSVNLE GLSRTVVYIT YSQLITLVNF  
MKSVMMSGDQL REDRMALDNL LANLPPAKPG KSSSLEMTPY NTPQLSPATT PANKKNRPLI  
ATRSRRTNM LMDLHMDHEG SSQETIQEVQ PEEVLVISLG TGPQLTPGMM SENEVLNMQL  
SDGGQGDVPV DENKLHGKPD KTLRFSLCSD NLEGISEGPS NRSNSVSSLD LEGESVSELG  
AGPSGSNGVE ALQLEHEQA TTQDNLDDKL RKFEIRDMMG LTDDRDISET VSETWSTDVL  
GSDFDPNIDE DRLQEIAGAA AENMLGSLLC LPGSGSVLLD PCTGSTISET TSEAWSVEVL

PSDSEAPDLK QEERLQELES CSGLGSTSDD TDVREVSSRP STPGLSVVSG ISATSEDIPN  
KIEDLRSECS SDFGGKDSVT SPDMDIEITHG AHQLTSPPSQ SESLLAMFDP LSSHGASAV  
VRPKVHYARP SHPPDPPIIL EGAVGGNEAR LPNFGSHVLT PAEMEAQKQR HSYPERLVRS  
RSSDIVSSVR RPSMSPSWNR RPGNEERELP PAAAIGATSL VAAPHSSSSS PSKDSSRGET  
EERKDSDEK SDRNRPWWRK RFVSAMPKAP IPFRKKEKQE KDKDDLGPDR FSTLTDDPSP  
RLSAQAQVAE DILDKYRNAI KRTSPSDGAM ANYESTGDNH DRDLSSKLLY HSDKEVMGDG  
ESAHDSPRDE ALQNISADDL PDSASQAAHP QDSAFSYRDA KKKLRLALCS ADSVAFPVLT  
HSTRNGLPDH TDPEDNEIVC FLKVQIAEAI NLQDKNLMAQ LQETMRCVCR FDNRTCRKLL  
ASIAEDYRKR APYIAYLTRC RQGLQTTQAH LERLLQRVLR DKEVANRYFT TVCVRLLES  
KEKKIREFIQ DFQKLTAAAD KTAQVEDFLQ FLYGAMAQDV IWQNASEEQL QDAQLAIRS  
VMNRIFKLAF YPNQDGDILR DQVLHEHIQR LSKVVTANHR ALQIPEVYLR EAPWPSAQSE  
IRTISAYKTP RDKVQCILRM CSTIMNLLSL ANEDSVPGAD DFVPVLVFLV IANPPCLLS  
TVQYISSFYA SCLSGEESYW WMQFTA AVEF IKTIDDRK

**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.**

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### 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

## Product Details

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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®): <ol style="list-style-type: none"><li>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.</li><li>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.</li></ol>
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

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Target:	GAPVD1
Alternative Name:	GAPVD1 ( <a href="#">GAPVD1 Products</a> )
Background:	GTPase-activating protein and VPS9 domain-containing protein 1 (GAPex-5) (Rab5-activating protein 6),FUNCTION: Acts both as a GTPase-activating protein (GAP) and a guanine nucleotide exchange factor (GEF), and participates in various processes such as endocytosis, insulin receptor internalization or LC2A4/GLUT4 trafficking. Acts as a GEF for the Ras-related protein RAB31 by exchanging bound GDP for free GTP, leading to regulate LC2A4/GLUT4 trafficking. In the absence of insulin, it maintains RAB31 in an active state and promotes a futile cycle between LC2A4/GLUT4 storage vesicles and early endosomes, retaining LC2A4/GLUT4 inside the cells. Upon insulin stimulation, it is translocated to the plasma membrane, releasing

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## Target Details

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LC2A4/GLUT4 from intracellular storage vesicles. Also involved in EGFR trafficking and degradation, possibly by promoting EGFR ubiquitination and subsequent degradation by the proteasome. Has GEF activity for Rab5 and GAP activity for Ras.  
{ECO:0000269|PubMed:16410077}.

Molecular Weight: 165.0 kDa

UniProt: [Q14C86](#)

## 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.

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)