

Datasheet for ABIN3094640

## Phospholipase C beta 1 Protein (AA 1-1216) (Strep Tag)



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### 1 Image

#### Overview

Quantity:	1 mg
Target:	Phospholipase C beta 1 (PLCB1)
Protein Characteristics:	AA 1-1216
Origin:	Human
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This Phospholipase C beta 1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

#### Product Details

Sequence:	<p>MAGAQPGVHA LQLKPVCVSD SLKKGTKFVK WDDDSTIVTP IILRTDPQGF FFYWTDQNKE          TELLDSLVLK DARCGRHAHA PKDKLRELL DVGNIQRLEQ RMITVVYGPD LVNISHLNLV          AFQEEVAKEW TNEVFLATN LLAQNMRSRD FLEKAYTKLK LQVTPEGRIP LKNIYRLFSA          DRKRVETALE ACSLPSSRND SIPQEDFTPE VYRVFLNNLC PRPEIDNIFS EFGAKSKPYL          TVDQMMDFIN LKQRDPRLE ILYPPLKQEQ VQVLEIKYEP NNSLARKGQI SVDGFMRYLS          GEENGVVSPK KLDLNEEDMSQ PLSHYFINSS HNTYLTAGQL AGNSSVEMYR QVLLSGRCRCV          ELDCWKGRTA EEEPVITHGF TMTTEISFKE VIEAIAECAK KTSPFPILLS FENHVDSPKQ          QAKMAEYCRL IFGDALLMEP LEKYPLESGV PLPSPMDLKY KILVKNKKKS HKSSEGSQK          KLSEQASNTY SDSSSMFEPSPGAGEADTE SDDDDDDDDDC KKSSMDEGTA GSEAMATEEM          SNLVNYIQPV KFESFEISK RNKSFEMSSF VETKGLEQLT KSPVEFVEYN KMQLSRIYPK          GTRVDSSNYM PQLFWNAGCQ MVALNFQTM LAMQINMGMY EYNGKSGYRL KPEFMRRPDK          HFDPFTEGIV DGIVANTLSV KIISGQFLSD KKVGTVEVD MFGLPVDTRR KAFKTKTSQG</p>
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NAVNPVWEEE PIVFKKVLP TLACLRIAVY EEGGKFIGHR ILPVQAIRPG YHYICLRNER  
NQPLTLPVAVF VYIEVKDYVP DTYADVIEAL SNPIRYVNLM EQRAKQLAAL TLEDEEEVKK  
EADPGETPSE APSEARTTPA ENGVNHTTTL TPKPPSQALH SQPAPGSVKA PAKTEDLIQS  
VLTEVEAQT EELKQKSFV KLQKKHYKEM KDLVKRHHKK TDLIKEHTT KYNEIQNDYL  
RRRAALEKSA KKDSKKKSEP SSPDHGSSTI EQDLAALDAE MTQKLIDLKD KQQQQLNLR  
QEQYSEKYQ KREHIKLLIQ KLTDVAEECQ NNQLKKLKEI CEKEKELKK KMDKKRQEKI  
TEAKSKDKSQ MEEKTEMIR SYIQEVVQYI KRLEEAQSKR QEKLVKHKHE IRQQILDEKP  
KLQVELEQY QDKFKRLPLE ILEFVQEAMK GKISEDNSHG SAPLSLSSDP GKVNHKTPSS  
EELGGDIPGK EFDTPL

**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 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!

## Product Details

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### 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.

### 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:

Phospholipase C beta 1 (PLCB1)

### Alternative Name:

PLCB1 ([PLCB1 Products](#))

### Background:

1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase beta-1 (EC 3.1.4.11) (PLC-154) (Phosphoinositide phospholipase C-beta-1) (Phospholipase C-I) (PLC-I) (Phospholipase C-beta-1) (PLC-beta-1),FUNCTION: Catalyzes the hydrolysis of 1-phosphatidylinositol 4,5-bisphosphate into diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3) and mediates intracellular signaling downstream of G protein-coupled receptors (PubMed:9188725). Regulates the function of the endothelial barrier. {ECO:0000250|UniProtKB:Q9Z1B3, ECO:0000269|PubMed:9188725}.

### Molecular Weight:

138.6 kDa

### UniProt:

[Q9NQ66](#)

### Pathways:

[WNT Signaling](#), [AMPK Signaling](#), [Thyroid Hormone Synthesis](#), [Inositol Metabolic Process](#), [Regulation of Muscle Cell Differentiation](#), [Regulation of G-Protein Coupled Receptor Protein Signaling](#), [Proton Transport](#), [Skeletal Muscle Fiber Development](#), [CXCR4-mediated Signaling](#)

## Target Details

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[Events, G-protein mediated Events](#)

## 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)



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