

Datasheet for ABIN3094658

**PIK3CD Protein (AA 1-1044) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	PIK3CD
Protein Characteristics:	AA 1-1044
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PIK3CD protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

## Product Details

Sequence:	MPPGVDCPME FWTKEENQSV VVDFLLPTGV YLNFPVSRNA NLSTIKQLLW HRAQYEPLFH MLSGPEAYVF TCINQTAEQQ ELEDEQRRLC DVQPFLPVLR LVAREGDRVK KLINSQISLL IGKGLHEFDS LCDPEVNDFR AKMCQFCEE AARRQQLGWE AWLQYSFPLQ LEPSAQTWGP GTLRLPNRAL LVNVKFEGSE ESFTFQVSTK DVPLALMACA LRKKATVFRQ PLVEQPEDYT LQVNGRHEYL YGSYPLCQFQ YICSLHSG LTPH LTMVHSS SILAMRDEQS NPAPQVQKPR AKPPPIPAKK PSSVSLWSLE QPFRIELIQG SKVNADERMK LVVQAGLFHG NEMLCQTVSS SEVSVCSEPV WKQRLEFDIN ICDLPRMARL CFALYAVIEK AKKARSTKKK SKKADCPIAW ANLMLFDYKD QLKTGERCLY MWPSVPDEKG ELLNPTGTVR SNPNTDSAAA LLICLPEVAP HPVYYPALEK ILELGRHSEC VHVTEEEQLQ LREILERRGS GELYEHEKDL VWKLRHEVQE HFPEALARLL LVTKWNKHED VAQM LYLCS WP ELPVLSAL ELLDFSFPDC HVG SFAIKSL RKLTDDEL FQ YLLQLVQVLK YESYLDCELT KFL LDRALAN RKIGHFLFWH LRSEMHVPSV ALRFG LILEA YCRGSTHHMK VLMKQGEALS KLKALNDFVK LSSQKTPKPQ TKELMHLCMR
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QEAYLEALSH LQSPDPSTL LAEVCVEQCT FMDSKMKPLW IMYSNEEAGS GGSVGIIIFKN  
GDDLQDMLT LQMIQLMDVL WKQEGDLDRM TPYGCLPTGD RTGLIEVVLR SDTIANIQLN  
KSNMAATAAF NKDALLNWLK SKNPGEALDR AIEEFTLSA GYCVATYVLG IGDRHSDNIM  
IRESGQLFHI DFGHFLGNFK TKFGINRERV PFILTYDFVH VIQQGKTNS EKFERFRGYC  
ERAYTILRRH GLLFLHLFAL MRAAGLPELS CSKDIQYLKD SLALGKTEEE ALKHFRVKFN  
EALRESWGTK VNWLAHNVSK DNRQ

**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!

#### Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.

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- 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

Target:	PIK3CD
Alternative Name:	PIK3CD ( <a href="#">PIK3CD Products</a> )
Background:	Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit delta isoform (PI3-kinase subunit delta) (PI3K-delta) (PI3Kdelta) (PtdIns-3-kinase subunit delta) (EC 2.7.1.137) (EC 2.7.1.153) (Phosphatidylinositol 4,5-bisphosphate 3-kinase 110 kDa catalytic subunit delta) (PtdIns-3-kinase subunit p110-delta) (p110delta),FUNCTION: Phosphoinositide-3-kinase (PI3K) phosphorylates phosphatidylinositol (PI) and its phosphorylated derivatives at position 3 of the inositol ring to produce 3-phosphoinositides (PubMed:9235916). Uses ATP and PtdIns(4,5)P2 (phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP3) (PubMed:15135396). PIP3 plays a key role by recruiting PH domain-containing proteins to the membrane, including AKT1 and PDPK1, activating signaling cascades involved in cell growth, survival, proliferation, motility and morphology. Mediates immune responses. Plays a role in B-cell development, proliferation, migration, and function. Required for B-cell receptor (BCR) signaling. Mediates B-cell proliferation response to anti-IgM, anti-CD40 and IL4 stimulation. Promotes cytokine production in response to TLR4 and TLR9. Required for antibody class switch mediated by TLR9. Involved in the antigen presentation function of B-cells. Involved in B-cell chemotaxis in response to CXCL13 and sphingosine 1-phosphate (S1P). Required for proliferation, signaling and cytokine production of naive, effector and memory T-

## Target Details

cells. Required for T-cell receptor (TCR) signaling. Mediates TCR signaling events at the immune synapse. Activation by TCR leads to antigen-dependent memory T-cell migration and retention to antigenic tissues. Together with PIK3CG participates in T-cell development. Contributes to T-helper cell expansion and differentiation. Required for T-cell migration mediated by homing receptors SELL/CD62L, CCR7 and S1PR1 and antigen dependent recruitment of T-cells. Together with PIK3CG is involved in natural killer (NK) cell development and migration towards the sites of inflammation. Participates in NK cell receptor activation. Plays a role in NK cell maturation and cytokine production. Together with PIK3CG is involved in neutrophil chemotaxis and extravasation. Together with PIK3CG participates in neutrophil respiratory burst. Plays important roles in mast-cell development and mast cell mediated allergic response. Involved in stem cell factor (SCF)-mediated proliferation, adhesion and migration. Required for allergen-IgE-induced degranulation and cytokine release. The lipid kinase activity is required for its biological function. Isoform 2 may be involved in stabilizing total RAS levels, resulting in increased ERK phosphorylation and increased PI3K activity. {ECO:0000269|PubMed:15135396, ECO:0000269|PubMed:20081091, ECO:0000269|PubMed:22020336, ECO:0000269|PubMed:9235916}.

Molecular Weight: 119.5 kDa

UniProt: [O00329](#)

Pathways: [BCR Signaling](#), [Warburg Effect](#)

## Application Details

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.

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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!

## Application Details

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)

## Images



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