

Datasheet for ABIN3094658

## PIK3CD Protein (AA 1-1044) (His tag)



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### 1 Image

#### Overview

Quantity:	1 mg
Target:	PIK3CD
Protein Characteristics:	AA 1-1044
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PIK3CD protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

#### Product Details

Sequence:	<p>MPPGVDCPME FWTKEENQSV VVDFLLPTGV YLNFPVSRNA NLSTIKQLLW HRAQYEPLFH</p> <p>MLSGPEAYVF TCINQTAEQQ ELEDEQRRLC DVQPFLPVLR LVAREGDRVK KLINSQISLL</p> <p>IGKGLHEFDS LCDPEVNDFR AKMCQFCEE AARRQQLGWE AWLQYSFPLQ LEPSAQTWGP</p> <p>GTLRLPNRAL LVNVKFEGSE ESFTFQVSTK DVPLALMACA LRKKATVFRQ PLVEQPEDYT</p> <p>LQVNGRHEYL YGSYPLCQFQ YICSLHSG LTPHLMVHSS SILAMRDEQS NPAPQVQKPR</p> <p>AKPPPIPAKK PSSVSLWSLE QPFRIELIQG SKVNADERMK LVVQAGLFHG NEMLCQTVSS</p> <p>SEVSVCSEPV WKQRLEFDIN ICDLPRMARL CFALYAVIEK AKKARSTKKK SKKADCPIAW</p> <p>ANLMLFDYKD QLKTGERCLY MWPSVPDEKG ELLNPTGTVR SNPNTDSAAA LLICLPEVAP</p> <p>HPVYYPALEK ILELGRHSEC VHVTEEEQLQ LREILERRGS GELYEHEKDL VWKLRHEVQE</p> <p>HFPEALARLL LVTWKWNKED VAQMLYLLCS WPELPVLSAL ELLDFSFPDC HVGSAFAKSL</p> <p>RKLTDDELQ YLLQLVQVLK YESYLDCELT KFLLDALAN RKIGHFLFWH LRSEMHVPSV</p> <p>ALRFGILEA YCRGSTHHMK VLMKQGEALS KLKALNDFVK LSSQKTPKPQ TKELMHLCMR</p>
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QEAYLEALSH LQSPDPSTL LAEVCVEQCT FMDSKMKPLW IMYSNEEAGS GGSVGIIFFKN  
GDDLQRQDMLT LQMIQLMDVL WKQEGLDLRM TPYGCLPTGD RTGLIEVVLR SDTIANIQLN  
KSNMAATAAF NKDALLNWLK SKNPGEALDR AIEEFTLSA GYCVATYVLG IGDRHSDNIM  
IRESGQLFHI DFGHFLGNFK TKFGINRERV PFILTYDFVH VIQQGKTNNS EKFERFRGYC  
ERAYTILRRH GLLFLHLFAL MRAAGLPELS CSKDIQYLKD SLALGKTEEE ALKHFRVKFN  
EALRESWKTK VNWLAHNVSK DNRQ

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

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### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human PIK3CD Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. 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 baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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.

## Product Details

Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

## Target Details

Target:	PIK3CD
Alternative Name:	PIK3CD ( <a href="#">PIK3CD Products</a> )
Background:	<p>Phosphoinositide-3-kinase (PI3K) that phosphorylates PtdIns(4,5)P<sub>2</sub> (Phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP<sub>3</sub>). PIP<sub>3</sub> plays a key role by recruiting PH domain-containing proteins to the membrane, including AKT1 and PDK1, 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-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. Have 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. Have 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:20081091, ECO:0000269 PubMed:22020336}.</p>

## Target Details

Molecular Weight:	120.4 kDa Including tag.
UniProt:	<a href="#">O00329</a>
Pathways:	<a href="#">BCR Signaling</a> , <a href="#">Warburg Effect</a>

## 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.
Comment:	In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

## Handling

Format:	Liquid
Buffer:	100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
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