

Datasheet for ABIN3134029

PIK3CA Protein (AA 1-1068) (His tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	PIK3CA
Protein Characteristics:	AA 1-1068
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PIK3CA protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	MPPRPSSGEL WGIHLMPPRI LVECLLPNGM IVTLECLREA TLVTIKHELF REARKYPLHQ LLQDETSYIF VSVTQEAERE EFFDETRRLC DLRLFQPFLK VIEPVGNGREE KILNREIGFV IGMPVCEFDK VKDPEVQDFR RNILNVCKEA VDLRDLNSPH SRAMYVYPPN VESSPELPKH IYNKLDKGQI IVVIWVIVSP NNDKQKYTLK INHDCVPEQV IAEAIRKKTR SMLLSSEQLK LCVLEYQGKY ILKVCGCDEY FLEKYPLSQY KYIRSCIMLG RMPNLMLMAK ESLYSQLPID SFTMPYSYRR ISTATPYMNG ETSTKSLWVI NSALRIKILC ATYVNVNIRD IDKIYVRTGI YHGGEPLCDN VNTQRVPCSN PRWNEWLNVD IYIPDLPRAA RLCLSICSVK GRKGAKKEHC PLAWGNINLF DYTDTLVSGK MALNLWPVPH GLEDLLNPIG VTGSNPKNKET PCLELEFDWF SSVVKFPDMS VIEEHANWSV SREAGFSYSH TGLSNRLARD NELRENDKEQ LRALCTRDPL SEITEQEKDF LWSHRHYCVT IPEILPKLLL SVKWNRSRDEV AQMYCLVKDW PPIKPEQAME LLDCNYPDPM VRSFAVRCLE KYLTDDKLSQ YLIQLVQVLK YEQYLDNLLV RFLKKALTN QRIGHFFFWH LKSEMHNKTV SQRFGLLLES YCRACGMYLK HLNQRQVEAME KLINLTDILK
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QEKKDETQKV QMKFLVEQMR QPDFMDALQG FLSPLNPAHQ LGNLRLEECR IMSSAKRPLW
LNWENPDIMS ELLFQNNIEI FKNGDDLQD MLTLQIIRIM ENIWQNNQGLD LRMLPYGCLS
IGDCVGLIEV VRNSHTIMQI QCKGGLKGAL QFNSHTLHQW LKDKNKGEIY DAAIDLFTRS
CAGYCVATFI LGIGDRHNSN IMVKDDGQLF HIDFGHFLDH KKKKFGYKRE RVPFVLTQDF
LIVISKGAQE YTKTREFERF QEMCYKAYLA IRQHANLFIN LFSMMLGSGM PELQSFDDIA
YIRKTLALDK TEQEALYFT QQMNDAAHHGG WTTKMDWIFH TIKQHALN

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

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Pik3ca 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.

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:	PIK3CA
Alternative Name:	Pik3ca (PIK3CA Products)
Background:	<p>Phosphoinositide-3-kinase (PI3K) that phosphorylates PtdIns (Phosphatidylinositol), PtdIns4P (Phosphatidylinositol 4-phosphate) and PtdIns(4,5)P2 (Phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP3). PIP3 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. Participates in cellular signaling in response to various growth factors. Involved in the activation of AKT1 upon stimulation by receptor tyrosine kinases ligands such as EGF, insulin, IGF1, VEGFA and PDGF. Involved in signaling via insulin-receptor substrate (IRS) proteins. Essential in endothelial cell migration during vascular development through VEGFA signaling, possibly by regulating RhoA activity. Required for lymphatic vasculature development, possibly by binding to RAS and by activation by EGF and FGF2, but not by PDGF. Regulates invadopodia formation through the PDK1-AKT1 pathway. Participates in cardiomyogenesis in embryonic stem cells through a AKT1 pathway. Participates in vasculogenesis in embryonic stem cells through PDK1 and protein kinase C pathway. Also has serine-protein kinase activity: phosphorylates PIK3R1 (p85alpha regulatory subunit), EIF4EBP1 and HRAS. Plays a role in the positive regulation of phagocytosis and pinocytosis (PubMed:19604150). {ECO:0000269 PubMed:16625210, ECO:0000269 PubMed:16647110, ECO:0000269 PubMed:17060635, ECO:0000269 PubMed:17540175, ECO:0000269 PubMed:18449193, ECO:0000269 PubMed:19604150, ECO:0000269 PubMed:21540297}.</p>
Molecular Weight:	125.4 kDa Including tag.
UniProt:	P42337
Pathways:	PI3K-Akt Signaling , RTK Signaling , TCR Signaling , AMPK Signaling , Interferon-gamma Pathway , TLR Signaling , Fc-epsilon Receptor Signaling Pathway , EGFR Signaling Pathway , Neurotrophin Signaling Pathway , Inositol Metabolic Process , Hepatitis C , CXCR4-mediated Signaling Events , Signaling Events mediated by VEGFR1 and VEGFR2 , Signaling of Hepatocyte Growth Factor

Target Details

Receptor, VEGFR1 Specific Signals, VEGF Signaling

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:	Protein has not been tested for activity yet. 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)

Images



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