

Datasheet for ABIN3137626
PDPK1 Protein (AA 1-559) (His tag)[Go to Product page](#)

1 Image

Overview

Quantity:	1 mg
Target:	PDPK1
Protein Characteristics:	AA 1-559
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PDPK1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	MARTTSQLYD AVPIQSSVL CSCPSPSMVR SQTEPGSSPG IPSGVSRQGS TMDGTTAEAR PSTNPLQQHP AQLPPQPRKK RPEDFKFGKI LGEFSFSTVV LARELATSRE YAIKILEKRH IIKENKVPYV TRERDVMSRL DHPFFVKLYF TFQDDEKLYF GLSYAKNGEL LKYIRKIGSF DETCTRFYTA EIVSALEYLH GKGIIHRDLK PENILLNEDM HIQITDFGTA KVLSPESKQA RANSFVGTAQ YVSPELLTEK SACKSSDLWA LGCIYQLVA GLPPFRAGNE YLIFQKIIKL EYHFPEKFFP KARDLVEKLL VLDATKRLGC EEMEGYGPLK AHPFFETITW ENLHQQTTPPK LTAYLPAMSE DEDCYGNYD NLLSQFGFMQ VSSSSSSHSL STVETSLPQR SGSNIEQYIH DLDTNSFELD LQFSEDEKRL LLEKQAGGNP WHQFVENNLI LKMGPVDKRK GLFARRRQLL LTEGPHLYYV DPVNKVLKGE IPWSQELRPE AKNFKTFFVH TPNRTYYLMD PSGNAHKWCR KIQEVWRQQY QSNPDAAVQ 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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Product Details

- Characteristics:
- Made in Germany - from design to production - by highly experienced protein experts.
 - Mouse Pdk1 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.

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:	PDPK1
Alternative Name:	Pdpk1 (PDPK1 Products)
Background:	<p>Serine/threonine kinase which acts as a master kinase, phosphorylating and activating a subgroup of the AGC family of protein kinases. Its targets include: protein kinase B (PKB/AKT1, PKB/AKT2, PKB/AKT3), p70 ribosomal protein S6 kinase (RPS6KB1), p90 ribosomal protein S6 kinase (RPS6KA1, RPS6KA2 and RPS6KA3), cyclic AMP-dependent protein kinase (PRKACA), protein kinase C (PRKCD and PRKCZ), serum and glucocorticoid-inducible kinase (SGK1, SGK2 and SGK3), p21-activated kinase-1 (PAK1), protein kinase PKN (PKN1 and PKN2). Plays a central role in the transduction of signals from insulin by providing the activating phosphorylation to PKB/AKT1, thus propagating the signal to downstream targets controlling cell proliferation and survival, as well as glucose and amino acid uptake and storage. Negatively regulates the TGF-beta-induced signaling by: modulating the association of SMAD3 and SMAD7 with TGF-beta receptor, phosphorylating SMAD2, SMAD3, SMAD4 and SMAD7, preventing the nuclear translocation of SMAD3 and SMAD4 and the translocation of SMAD7 from the nucleus to the cytoplasm in response to TGF-beta. Activates PPARG transcriptional activity and promotes adipocyte differentiation. Activates the NF-kappa-B pathway via phosphorylation of IKKB. The tyrosine phosphorylated form is crucial for the regulation of focal adhesions by angiotensin II. Controls proliferation, survival, and growth of developing pancreatic cells. Participates in the regulation of Ca(2+) entry and Ca(2+)-activated K(+) channels of mast cells. Essential for the motility of vascular endothelial cells (ECs) and is involved in the regulation of their chemotaxis. Plays a critical role in cardiac homeostasis by serving as a dual effector for cell survival and beta-adrenergic response. Plays an important role during thymocyte development by regulating the expression of key nutrient receptors on the surface of pre-T cells and mediating Notch-induced cell growth and proliferative responses. Provides negative feedback inhibition to toll-like receptor-mediated NF-kappa-B activation in macrophages.</p> <p>{ECO:0000269 PubMed:10792047, ECO:0000269 PubMed:16150867, ECO:0000269 PubMed:17371830, ECO:0000269 PubMed:17599070, ECO:0000269 PubMed:19429709, ECO:0000269 PubMed:19635472, ECO:0000269 PubMed:20584979, ECO:0000269 PubMed:21063107}.</p>
Molecular Weight:	64.7 kDa Including tag.
UniProt:	Q9Z2A0
Pathways:	PI3K-Akt Signaling , TCR Signaling , Fc-epsilon Receptor Signaling Pathway , EGFR Signaling Pathway , Neurotrophin Signaling Pathway , Regulation of Leukocyte Mediated Immunity , Positive Regulation of Immune Effector Process , Cell-Cell Junction Organization , Regulation of

Target Details

Cell Size, Skeletal Muscle Fiber Development, CXCR4-mediated Signaling Events, Signaling Events mediated by VEGFR1 and VEGFR2, VEGFR1 Specific Signals

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