

Datasheet for ABIN3134796

**PKC zeta Protein (AA 1-592) (His tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	PKC zeta (PRKCZ)
Protein Characteristics:	AA 1-592
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PKC zeta protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

## Product Details

Sequence: MPSRTDPKMD RSGGRVRLKA HYGGDILITS VDAMTTFKDL CEEVRDMCGL HQQHPLTLKW  
VDSEGDPTCV SSQMELEEAF RLVCQGRDEV LIIHVFPSP EQPGMPCPGE DKSIIYRRGAR  
RWRKLYRANG HLFQAKRFNR GAYCGQCSEI IWGLSRQGYR CINCKLLVHK RCHVLVPLTC  
RRHMDSVMPS QEPPVDDKND GVDLPSEETD GIAYISSSRK HDNIKDDSED LKPVIDGVDG  
IKISQGLGLQ DFDLIRVIGR GSYAKVLLVR LKKNDQIYAM KVVKKELVHD DEDIDWVQTE  
KHVFEQASSN PFLVGLHSCF QTTSRLFLVI EYVNGGDLMF HMQRQRKLPE EHARFYAAEI  
CIALNFLHER GIIYRDLKLD NVLLDADGHI KLTDYGMCKE GLGPGDTTST FCGTPNYIAP  
EILRGEEYGF SVDWWALGVL MFEMMAGRSP FDIITDNPDM NTEDYLFQVI LEKPIRIPRF  
LSVKASHVLK GFLNKDPKER LGCRPQTGFS DIKSHAFFRS IDWDLLEKKQ TLPFPQPQIT  
DDYGLDNFDT QFTSEPVQLT PDDEDVIKRI DQSEFEGFEY INPLLLSAEE SV

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

## Product Details

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- Characteristics:
- Made in Germany - from design to production - by highly experienced protein experts.
  - Mouse Prkcz 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:	PKC zeta (PRKCZ)
Alternative Name:	Prkcz ( <a href="#">PRKCZ Products</a> )
Background:	<p>Calcium- and diacylglycerol-independent serine/threonine-protein kinase that functions in phosphatidylinositol 3-kinase (PI3K) pathway and mitogen-activated protein (MAP) kinase cascade, and is involved in NF-kappa-B activation, mitogenic signaling, cell proliferation, cell polarity, inflammatory response and maintenance of long-term potentiation (LTP). Upon lipopolysaccharide (LPS) treatment in macrophages, or following mitogenic stimuli, functions downstream of PI3K to activate MAP2K1/MEK1-MAPK1/ERK2 signaling cascade independently of RAF1 activation. Required for insulin-dependent activation of AKT3, but may function as an adapter rather than a direct activator. Upon insulin treatment may act as a downstream effector of PI3K and contribute to the activation of translocation of the glucose transporter SLC2A4/GLUT4 and subsequent glucose transport in adipocytes. In EGF-induced cells, binds and activates MAP2K5/MEK5-MAPK7/ERK5 independently of its kinase activity and can activate JUN promoter through MEF2C. Through binding with SQSTM1/p62, functions in interleukin-1 signaling and activation of NF-kappa-B with the specific adapters RIPK1 and TRAF6. Participates in TNF-dependent transactivation of NF-kappa-B by phosphorylating and activating IKBKB kinase, which in turn leads to the degradation of NF-kappa-B inhibitors. In migrating astrocytes, forms a cytoplasmic complex with PARD6A and is recruited by CDC42 to function in the establishment of cell polarity along with the microtubule motor and dynein. In association with FEZ1, stimulates neuronal differentiation in PC12 cells. In the inflammatory response, is required for the T-helper 2 (Th2) differentiation process, including interleukin production, efficient activation of JAK1 and the subsequent phosphorylation and nuclear translocation of STAT6. May be involved in development of allergic airway inflammation (asthma), a process dependent on Th2 immune response. In the NF-kappa-B-mediated inflammatory response, can relieve SETD6-dependent repression of NF-kappa-B target genes by phosphorylating the RELA subunit at 'Ser-311'. Necessary and sufficient for LTP maintenance in hippocampal CA1 pyramidal cells. In vein endothelial cells treated with the oxidant peroxynitrite, phosphorylates STK11 leading to nuclear export of STK11, subsequent inhibition of PI3K/Akt signaling, and increased apoptosis. Phosphorylates VAMP2 in vitro (By similarity). {ECO:0000250 UniProtKB:Q05513, ECO:0000269 PubMed:15987782, ECO:0000269 PubMed:21131967}.</p>
Molecular Weight:	68.6 kDa Including tag.
UniProt:	<a href="#">Q02956</a>
Pathways:	<a href="#">NF-kappaB Signaling</a> , <a href="#">RTK Signaling</a> , <a href="#">Myometrial Relaxation and Contraction</a> , <a href="#">Regulation of</a>

## Target Details

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[Leukocyte Mediated Immunity](#), [Positive Regulation of Immune Effector Process](#), [Synaptic Membrane](#), [Production of Molecular Mediator of Immune Response](#), [CXCR4-mediated Signaling Events](#), [Thromboxane A2 Receptor Signaling](#)

## 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:	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

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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