

Datasheet for ABIN3134604

PKC gamma Protein (AA 1-697) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	PKC gamma (PRKCG)
Protein Characteristics:	AA 1-697
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PKC gamma protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence: MAGLGPGGGD SEGGPRPLFC RKGALRQKVV HEVKSHKFTA RFFKQPTFCS HCTDFIWGIG
 KQGLQCQVCS FVVHRRCHEF VTFECPGAGK GPQTDDPRNK HKFRLHSYSS PTFCDHCGSL
 LYGLVHQGMK CSCCEMNVHR RCVRSVPSLC GVDHTERRGR LQLEIRAPTS DEIHITVGEA
 RNLIPMDPNG LSDPYVKLKL IPDPRNLTKQ KTKTKVATLN PVWNETFVFN LKPGDVERRL
 SVEVWDWDRT SRNDFMGAMS FGVSELLKAP VDGWYKLLNQ EEEGYYNVPV ADADNCSSLQ
 KFEACNYPLE LYERVRMGPS SSIPIPSPS PTDSKRCFFG ASPGRLHISD FSFLMVLGKG
 SFGKVMLAER RGSDELYAIK ILKKDVIVQD DDVDCTLVEK RVLALGGRGP GGRPHFLTQL
 HSTFQTPDRL YFVMEYVTGG DLMYHIQQLG KFKEPHAAFY AAEIAIGLFF LHNQGIYRD
 LKLDNVMLDA EGHKITDFG MCKENVFPGS TTRTFCGTPD YIAPEIIAYQ PYGKSVDWWS
 FGVLLYEMLA GQPPFDGEDE EELFQAIMEQ TVTYPKSLSR EAVAICKGFL TKHPGKRLGS
 GPDGPTIRA HGFFRWIDWE RLERLEIAPP FRPRPCGRSG ENFDKFFTRA APALTPPDRL
 VLASIDQADF QGFTYVNPFD VHPDARSPTS PVPVPVM

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 Prkcg 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.
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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 gamma (PRKCG)

Alternative Name: Prkcg ([PRKCG Products](#))

Background: Calcium-activated, phospholipid- and diacylglycerol (DAG)-dependent serine/threonine-protein kinase that plays diverse roles in neuronal cells and eye tissues, such as regulation of the neuronal receptors GRIA4/GLUR4 and GRIN1/NMDAR1, modulation of receptors and neuronal functions related to sensitivity to opiates, pain and alcohol, mediation of synaptic function and cell survival after ischemia, and inhibition of gap junction activity after oxidative stress. Binds and phosphorylates GRIA4/GLUR4 glutamate receptor and regulates its function by increasing plasma membrane-associated GRIA4 expression. In primary cerebellar neurons treated with the agonist 3,5-dihydroxyphenylglycine, functions downstream of the metabotropic glutamate receptor GRM5/MGLUR5 and phosphorylates GRIN1/NMDAR1 receptor which plays a key role in synaptic plasticity, synaptogenesis, excitotoxicity, memory acquisition and learning. May be involved in the regulation of hippocampal long-term potentiation (LTP), but may be not necessary for the process of synaptic plasticity. May be involved in desensitization of mu-type opioid receptor-mediated G-protein activation in the spinal cord, and may be critical for the development and/or maintenance of morphine-induced reinforcing effects in the limbic forebrain. May modulate the functionality of mu-type-opioid receptors by participating in a signaling pathway which leads to the phosphorylation and degradation of opioid receptors. May also contribute to chronic morphine-induced changes in nociceptive processing. Plays a role in neuropathic pain mechanisms and contributes to the maintenance of the allodynia pain produced by peripheral inflammation. Plays an important role in initial sensitivity and tolerance to ethanol, by mediating the behavioral effects of ethanol as well as the effects of this drug on the GABA(A) receptors. During and after cerebral ischemia modulate neurotransmission and cell survival in synaptic membranes, and is involved in insulin-induced inhibition of necrosis, an important mechanism for minimizing ischemic injury. Required for the elimination of multiple climbing fibers during innervation of Purkinje cells in developing cerebellum. Is activated in lens epithelial cells upon hydrogen peroxide treatment, and phosphorylates connexin-43 (GJA1/CX43), resulting in disassembly of GJA1 gap junction plaques and inhibition of gap junction activity which could provide a protective effect against oxidative stress. Phosphorylates p53/TP53 and promotes p53/TP53-dependent apoptosis in response to DNA damage. Involved in the phase resetting of the cerebral cortex circadian clock during temporally restricted feeding. Stabilizes the core clock component ARNTL/BMAL1 by interfering with its ubiquitination, thus suppressing its degradation, resulting in phase resetting of the cerebral cortex clock (PubMed:23185022). {ECO:0000269|PubMed:11246146, ECO:0000269|PubMed:11278552, ECO:0000269|PubMed:11356858,

Target Details

ECO:0000269|PubMed:11731061, ECO:0000269|PubMed:17904530,
ECO:0000269|PubMed:23185022, ECO:0000269|PubMed:8269509,
ECO:0000269|PubMed:9323205}.

Molecular Weight: 79.3 kDa Including tag.

UniProt: [P63318](#)

Pathways: [WNT Signaling](#), [EGFR Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [Thyroid Hormone Synthesis](#), [Myometrial Relaxation and Contraction](#), [G-protein mediated Events](#), [Positive Regulation of Response to DNA Damage Stimulus](#), [Interaction of EGFR with phospholipase C-gamma](#), [Thromboxane A2 Receptor Signaling](#), [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)



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