Datasheet for ABIN7563579

PKC theta Protein (AA 1-707) (His tag)

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Overview

Quantity:	1 mg
Target:	PKC theta (PRKCQ)
Protein Characteristics:	AA 1-707
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PKC theta protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant Prkcq Protein expressed in mammalian cells.
Sequence:	MSPFLRIGLS NFDCGTCQAC QGEAVNPYCA VLVKEYVESE NGQMYIQKKP TMYPPWDSTF DAHINKGRVM QIIVKGKNVD LISETTVELY SLAERCRKNN GRTEIWLELK PQGRMLMNAR YFLEMSDTKD MSEFENEGFF ALHQRRGAIK QAKVHHVKCH EFTATFFPQP TFCSVCHEFV WGLNKQGYQC RQCNAAIHKK CIDKVIAKCT GSAINSRETM FHKERFKIDM PHRFKVYNYK SPTFCEHCGT LLWGLARQGL KCDACGMNVH HRCQTKVANL CGINQKLMAE ALAMIESTQQ ARSLRDSEHI FREGPVEIGL PCSTKNETRP PCVPTPGKRE PQGISWDSPL DGSNKSAGPP EPEVSMRRTS LQLKLKIDDF ILHKMLGKGS FGKVFLAEFK RTNQFFAIKA LKKDVVLMDD DVECTMVEKR VLSLAWEHPF LTHMFCTFQT KENLFFVMEY LNGGDLMYHI QSCHKFDLSR ATFYAAEVIL GLQFLHSKGI VYRDLKLDNI LLDRDGHIKI ADFGMCKENM LGDAKTNTFC GTPDYIAPEI LLGQKYNHSV DWWSFGVLVY EMLIGQSPFH GQDEEELFHS IRMDNPFYPR WLEREAKDLL VKLFVREPEK RLGVRGDIRQ HPLFREINWE ELERKEIDPP FRPKVKSPYD CSNFDKEFLS EKPRLSFADR ALINSMDQNM FSNFSFINPG METLICS **Sequence without tag.**

Product Details

	The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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 try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	PKC theta (PRKCQ)
Alternative Name:	Prkcq (PRKCQ Products)
Background:	Protein kinase C theta type (EC 2.7.11.13) (nPKC-theta),FUNCTION: Calcium-independent, phospholipid- and diacylglycerol (DAG)-dependent serine/threonine-protein kinase that mediates non-redundant functions in T-cell receptor (TCR) signaling, including T-cells activation, proliferation, differentiation and survival, by mediating activation of multiple transcription factors such as NF-kappa-B, JUN, NFATC1 and NFATC2. In TCR-CD3/CD28-co-stimulated T-cells, is required for the activation of NF-kappa-B and JUN, which in turn are essential for IL2 production, and participates in the calcium-dependent NFATC1 and NFATC2 transactivation. Mediates the activation of the canonical NF-kappa-B pathway (NFKB1) by

	direct phosphorylation of CARD11 on several serine residues, inducing CARD11 association with lipid rafts and recruitment of the BCL10-MALT1 complex, which then activates IKK complex, resulting in nuclear translocation and activation of NFKB1. May also play an indirect role in activation of the non-canonical NF-kappa-B (NFKB2) pathway. In the signaling pathway leading to JUN activation, acts by phosphorylating the mediator STK39/SPAK and may not act through MAP kinases signaling. Plays a critical role in TCR/CD28-induced NFATC1 and NFATC2 transactivation by participating in the regulation of reduced inositol 1,4,5-trisphosphate generation and intracellular calcium mobilization. After costimulation of T-cells through CD28 can phosphorylate CBLB and is required for the ubiquitination and subsequent degradation of CBLB, which is a prerequisite for the activation of TCR. During T-cells differentiation, plays an important role in the development of T-helper 2 (Th2) cells following immune and inflammatory responses, and, in the development of inflammatory autoimmune diseases, is necessary for the activation of IL17-producing Th17 cells. May play a minor role in Th1 response. Upon TCR stimulation, mediates T-cell protective survival signal by phosphorylating BAD, thus protecting T-cells from BAD-induced apoptosis, and by up-regulating BCL-X(L)/BCL2L1 levels through NF-kappa-B and JUN pathways. In platelets, regulates signal transduction downstream of the ITGA2B, CD36/GP4, F2R/PAR1 and F2RL3/PAR4 receptors, playing a positive role in 'outside-in' signaling and granule secretion signal transduction. May relay signals from the activated ITGA2B receptor by regulating the uncoupling of WASP and WIPF1, thereby permitting the regulation of actin filament nucleation and branching activity of the Arp2/3 complex. May mediate inhibitory effects of free fatty acids on insulin signaling by phosphorylating IRS1, which in turn blocks IRS1 tyrosine phosphorylation and downstream activation of the PI3K/AKT pathway. Phosphorylates MSN (moesin) in the presence of phosphatidylglycerol or phosphatidylinositol. Phosphorylates PDPK1 at 'Ser-504' and 'Ser-532' and negatively regulates its ability to phosphorylate PKB/AKT1. Phosphorylates CCDC88A/GIV and inhibits its guanine nucleotide exchange factor activity (By similarity). {ECO:0000250|UniProtKB:Q04759, ECO:0000269|PubMed:10746729, ECO:0000269|PubMed:12782715, ECO:0000269|PubMed:1508194, ECO:0000269|PubMed:15263025, ECO:0000269|PubMed:16493044, ECO:0000269|PubMed:19047061}.
Molecular Weight:	81.6 kDa
UniProt:	Q02111
Pathways:	TCR Signaling, Fc-epsilon Receptor Signaling Pathway, Myometrial Relaxation and Contraction, Regulation of G-Protein Coupled Receptor Protein Signaling, Thromboxane A2 Receptor Signaling

Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition 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:	12 months