Datasheet for ABIN3093497

PKC epsilon Protein (AA 1-737) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	PKC epsilon (PRKCE)
Protein Characteristics:	AA 1-737
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PKC epsilon protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MVVFNGLLKI KICEAVSLKP TAWSLRHAVG PRPQTFLLDP YIALNVDDSR IGQTATKQKT NSPAWHDEFV TDVCNGRKIE LAVFHDAPIG YDDFVANCTI QFEELLQNGS RHFEDWIDLE PEGRVYVIID LSGSSGEAPK DNEERVFRER MRPRKRQGAV RRRVHQVNGH KFMATYLRQP TYCSHCRDFI WGVIGKQGYQ CQVCTCVVHK RCHELIITKC AGLKKQETPD QVGSQRFSVN MPHKFGIHNY KVPTFCDHCG SLLWGLLRQG LQCKVCKMNV HRRCETNVAP NCGVDARGIA KVLADLGVTP DKITNSGQRR KKLIAGAESP QPASGSSPSE EDRSKSAPTS PCDQEIKELE NNIRKALSFD NRGEEHRAAS SPDGQLMSPG ENGEVRQGQA KRLGLDEFNF IKVLGKGSFG KVMLAELKGK DEVYAVKVLK KDVILQDDDV DCTMTEKRIL ALARKHPYLT QLYCCFQTKD RLFFVMEYVN GGDLMFQIQR SRKFDEPRSR FYAAEVTSAL MFLHQHGVIY RDLKLDNILL DAEGHCKLAD FGMCKEGILN GVTTTTFCGT PDYIAPEILQ ELEYGPSVDW WALGVLMYEM MAGQPPFEAD NEDDLFESIL HDDVLYPVWL SKEAVSILKA FMTKNPHKRL GCVASQNGED AIKQHPFFKE IDWVLLEQKK IKPPFKPRIK TKRDVNNFDQ DFTREEPVLT LVDEAIVKQI

	NQEEFKGFSY FGEDLMP **Sequence without tag. The proposed Strep-Tag is based on experience s 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.**
Characteristics:	Key Benefits: • Made in Germany - from design to production - by highly experienced protein experts. • Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification. • These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed). • 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. Expression System: • ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. • During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein! Concentration: • 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. • We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.
Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System

Product Details

	(ALiCE®): 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. 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:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	PKC epsilon (PRKCE)
Alternative Name:	PRKCE (PRKCE Products)
Background:	Protein kinase C epsilon type (EC 2.7.11.13) (nPKC-epsilon),FUNCTION: Calcium-independent, phospholipid- and diacylglycerol (DAG)-dependent serine/threonine-protein kinase that plays essential roles in the regulation of multiple cellular processes linked to cytoskeletal proteins, such as cell adhesion, motility, migration and cell cycle, functions in neuron growth and ion channel regulation, and is involved in immune response, cancer cell invasion and regulation of apoptosis. Mediates cell adhesion to the extracellular matrix via integrin-dependent signaling, by mediating angiotensin-2-induced activation of integrin beta-1 (ITGB1) in cardiac fibroblasts. Phosphorylates MARCKS, which phosphorylates and activates PTK2/FAK, leading to the spread of cardiomyocytes. Involved in the control of the directional transport of ITGB1 in mesenchymal cells by phosphorylating vimentin (VIM), an intermediate filament (IF) protein. In epithelial cells, associates with and phosphorylates keratin-8 (KRT8), which induces targeting of desmoplakin at desmosomes and regulates cell-cell contact. Phosphorylates IQGAP1, which binds to CDC42, mediating epithelial cell-cell detachment prior to migration. In HeLa cells, contributes to hepatocyte growth factor (HGF)-induced cell migration, and in human corneal epithelial cells, plays a critical role in wound healing after activation by HGF. During cytokinesis, forms a complex with YWHAB, which is crucial for daughter cell separation, and facilitates abscission by a mechanism which may implicate the regulation of RHOA. In cardiac myocytes, regulates myofilament function and excitation coupling at the Z-lines, where it is indirectly associated with F-actin via interaction with COPB1. During endothelin-induced cardiomyocyte hypertrophy, mediates activation of PTK2/FAK, which is critical for cardiomyocyte survival and regulation of sarcomere length. Plays a role in the pathogenesis of dilated cardiomyopathy via persistent

Target Details

	phosphorylation of troponin I (TNNI3). Involved in nerve growth factor (NFG)-induced neurite outgrowth and neuron morphological change independently of its kinase activity, by inhibition of RHOA pathway, activation of CDC42 and cytoskeletal rearrangement. May be involved in presynaptic facilitation by mediating phorbol ester-induced synaptic potentiation. Phosphorylates gamma-aminobutyric acid receptor subunit gamma-2 (GABRG2), which reduces the response of GABA receptors to ethanol and benzodiazepines and may mediate acute tolerance to the intoxicating effects of ethanol. Upon PMA treatment, phosphorylates the capsaicin- and heat-activated cation channel TRPV1, which is required for bradykinin-induced sensitization of the heat response in nociceptive neurons. Is able to form a complex with PDLIM5 and N-type calcium channel, and may enhance channel activities and potentiates fast synaptic transmission by phosphorylating the pore-forming alpha subunit CACNA1B (CaV2.2). In prostate cancer cells, interacts with and phosphorylates STAT3, which increases DNA-binding and transcriptional activity of STAT3 and seems to be essential for prostate cancer cell invasion. Downstream of TLR4, plays an important role in the lipopolysaccharide (LPS)-induced immune response by phosphorylating and activating TICAM2/TRAM, which in turn activates the transcription factor IRF3 and subsequent cytokines production. In differentiating erythroid progenitors, is regulated by EPO and controls the protection against the TNFSF10/TRAIL-mediated apoptosis, via BCL2. May be involved in the regulation of the insulin-induced phosphorylation and activation of AKT1. Phosphorylates NLRP5/MATER and may thereby modulate AKT pathway activation in cumulus cells (PubMed:19542546). {ECO:0000269|PubMed:11884385, ECO:0000269|PubMed:1374067, ECO:0000269|PubMed:15355962, ECO:0000269|PubMed:16757566, ECO:0000269|PubMed:17603037, ECO:0000269|PubMed:17875639, ECO:0000269|PubMed:17875724, ECO:0000269|PubMed:19542546}.
Molecular Weight:	83.7 kDa
UniProt:	Q02156
Pathways:	TCR Signaling, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Positive Regulation of Peptide Hormone Secretion, Activation of Innate immune Response, Cellular Response to Molecule of Bacterial Origin, Regulation of Actin Filament Polymerization, Myometrial Relaxation and Contraction, Regulation of Carbohydrate Metabolic Process, Interaction of EGFR with phospholipase C-gamma, Thromboxane A2 Receptor Signaling

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies

Application Details

	as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
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