Datasheet for ABIN3094659

PIK3 gamma Protein (AA 1-1102) (Strep Tag)

1 Image

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Overview

Quantity:	1 mg
Target:	PIK3 gamma (PIK3CG)
Protein Characteristics:	AA 1-1102
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PIK3 gamma protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence:	MELENYKQPV VLREDNCRRR RRMKPRSAAA SLSSMELIPI EFVLPTSQRK CKSPETALLH VAGHGNVEQM KAQVWLRALE TSVAADFYHR LGPHHFLLLY QKKGQWYEIY DKYQVVQTLD CLRYWKATHR SPGQIHLVQR HPPSEESQAF QRQLTALIGY DVTDVSNVHD DELEFTRRGL VTPRMAEVAS RDPKLYAMHP WVTSKPLPEY LWKKIANNCI FIVIHRSTTS QTIKVSPDDT PGAILQSFFT KMAKKKSLMD IPESQSEQDF VLRVCGRDEY LVGETPIKNF QWVRHCLKNG EEIHVVLDTP PDPALDEVRK EEWPLVDDCT GVTGYHEQLT IHGKDHESVF TVSLWDCDRK FRVKIRGIDI PVLPRNTDLT VFVEANIQHG QQVLCQRRTS PKPFTEEVLW NVWLEFSIKI KDLPKGALLN LQIYCGKAPA LSSKASAESP SSESKGKVQL LYYVNLLLID HRFLLRRGEY VLHMWQISGK GEDQGSFNAD KLTSATNPDK ENSMSISILL DNYCHPIALP KHQPTPDPEG DRVRAEMPNQ LRKQLEAIIA TDPLNPLTAE DKELLWHFRY ESLKHPKAYP KLFSSVKWGQ QEIVAKTYQL LARREVWDQS ALDVGLTMQL LDCNFSDENV RAIAVQKLES LEDDDVLHYL LQLVQAVKFE PYHDSALARF LLKRGLRNKR IGHFLFWFLR SEIAQSRHYQ QRFAVILEAY

LRGCGTAMLH DFTQQVQVIE MLQKVTLDIK SLSAEKYDVS SQVISQLKQK LENLQNSQLP ESFRVPYDPG LKAGALAIEK CKVMASKKKP LWLEFKCADP TALSNETIGI IFKHGDDLRQ DMLILQILRI MESIWETESL DLCLLPYGCI STGDKIGMIE IVKDATTIAK IQQSTVGNTG AFKDEVLNHW LKEKSPTEEK FQAAVERFVY SCAGYCVATF VLGIGDRHND NIMITETGNL FHIDFGHILG NYKSFLGINK ERVPFVLTPD FLFVMGTSGK KTSPHFQKFQ DICVKAYLAL RHHTNLLIIL FSMMLMTGMP QLTSKEDIEY IRDALTVGKN EEDAKKYFLD QIEVCRDKGW TVQFNWFLHL VLGIKQGEKH SA

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:

Product Details

- 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 (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:	PIK3 gamma (PIK3CG)
Alternative Name:	PIK3CG (PIK3CG Products)
Background:	Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit gamma isoform (PI3-kinase subunit gamma) (PI3K-gamma) (PI3Kgamma) (PtdIns-3-kinase subunit gamma) (EC 2.7.1.137) (EC 2.7.1.153) (EC 2.7.1.154) (Phosphatidylinositol 4,5-bisphosphate 3-kinase 110 kDa catalytic subunit gamma) (PtdIns-3-kinase subunit p110-gamma) (p110gamma) (Phosphoinositide-3-kinase catalytic gamma polypeptide) (Serine/threonine protein kinase PIK3CG) (EC 2.7.11.1) (p120-PI3K),FUNCTION: Phosphoinositide-3-kinase (PI3K) that phosphorylates PtdIns(4,5)P2 (Phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP3). PIP3 plays a key role by recruiting PH domain-containing proteins to the membrane, including AKT1 and PDPK1, activating signaling cascades involved in cell growth, survival, proliferation, motility and morphology. Links G-protein coupled receptor activation to PIP3 production. Involved in immune, inflammatory and allergic responses. Modulates leukocyte chemotaxis to inflammatory sites and in response to chemoattractant agents. May control leukocyte polarization and migration by regulating the spatial accumulation of PIP3 and by regulating the organization of F-actin formation and integrin-based adhesion at the leading edge. Controls motility of dendritic cells. Together with PIK3CD is involved in natural killer (NK)

Target Details

	cell development and migration towards the sites of inflammation. Participates in T-lymphocyte migration. Regulates T-lymphocyte proliferation, activation, and cytokine production. Together with PIK3CD participates in T-lymphocyte development. Required for B-lymphocyte development and signaling. Together with PIK3CD participates in neutrophil respiratory burst. Together with PIK3CD is involved in neutrophil chemotaxis and extravasation. Together with PIK3CB promotes platelet aggregation and thrombosis. Regulates alpha-IIb/beta-3 integrins (ITGA2B/ ITGB3) adhesive function in platelets downstream of P2Y12 through a lipid kinase activity-independent mechanism. May have also a lipid kinase activity-dependent function in platelet aggregation. Involved in endothelial progenitor cell migration. Negative regulator of cardiac contractility. Modulates cardiac contractility by anchoring protein kinase A (PKA) and PDE3B activation, reducing cAMP levels. Regulates cardiac contractility also by promoting beta-adrenergic receptor internalization by binding to GRK2 and by non-muscle tropomyosin phosphorylation. Also has serine/threonine protein kinase activity: both lipid and protein kinase activities are required for beta-adrenergic receptor endocytosis. May also have a scaffolding role in modulating cardiac contractility. Contributes to cardiac hypertrophy under pathological stress. Through simultaneous binding of PDE3B to RAPGEF3 and PIK3R6 is assembled in a signaling complex in which the PI3K gamma complex is activated by RAPGEF3 and which is involved in angiogenesis. {ECO:0000269|PubMed:11277933, ECO:0000269|PubMed:12163475, ECO:0000269|PubMed:15135396, ECO:0000269|PubMed:15294162, ECO:0000269|PubMed:16094730, ECO:0000269|PubMed:16123124, ECO:0000269|PubMed:21393242, ECO:0000269|PubMed:31554793, ECO:0000269|PubMed:33054089, ECO:0000269|PubMed:7624799}.
Molecular Weight:	126.5 kDa
UniProt:	P48736
Pathways:	PI3K-Akt Signaling, RTK Signaling, AMPK Signaling, TLR Signaling, Inositol Metabolic Process, Hepatitis C, 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:	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

Application Details

	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)

Images

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