

Datasheet for ABIN3137255

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



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Overview

Quantity:	250 µg
Target:	PIK3 gamma (PIK3CG)
Protein Characteristics:	AA 1-1102
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
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

Brand:	AliCE®
Sequence:	<p>MELENYEQPV VLREDNLRRR RRMKPRSAAG SLSSMELIPI EFVLPTSQRI SKTPETALLH</p> <p>VAGHGNVEQM KAQVWLRALE TSVAAEFYHR LGPDQFLLLY QKKGQWYEIY DRYQVVQTLD</p> <p>CLHYWKLMMHK SPGQIHVVQR HVPSEETLAF QKQLTSLIGY DVTDISNVHD DELEFTRRRL</p> <p>VTPRMAEVAG RDAKLYAMHP WVTSKPLPDY LSKKIANNCI FIVIHGRTTS QTIKVSADDT</p> <p>PGTILQSFFT KMAKKKSLMN ISESQSEQDF VLRVCGRDEY LVGETPLKNF QWVRQCLKNG</p> <p>DEIHLVLDTP PDPALDEVK EEWPLVDDCT GVTGYHEQLT IHGKDHESVF TVSLWDCDRK</p> <p>FRVKIRGIDI PVLPRNTDLT VFVEANIQHG QQVLCQRRTS PKPFAEEVLW NVWLEFGIKI</p> <p>KDLPKGALLN LQIYCKTPS LSSKASAETP GSESKGKAQL LYYVNLILLID HRFLLRHGDY</p> <p>VLHMQISGK AEEQGSFNAD KLTSATNPKD ENSMSISILL DNYCHPIALP KHRPTDPEG</p> <p>DRVRAEMPNQ LRKQLEAIIA TDPLNPLTAE DKELLWHFRY ESLKHPKAYP KLFSSVKWGQ</p> <p>QEIVAKTYQL LARREIWDQS ALDVGLTMQL LDCNFSDEV RAIQVQKLES LEDDDVLHYL</p>

LQLVQAVKFE PYHDSALARF LLKRGLRNKR IGHFLFWFLR SEIAQSRHYQ QRFVILEAY
LRGCGTAMLQ DFTQQVHVIE MLQKVTIDIK SLSAEKYDVS SQVISQLKQK LESLQNSNLP
ESFRVPYDPG LKAGTLVIEK CKVMASKKKP LWLEFKCADP TVLSNETIGI IFKHGDDLRLQ
DMLILQILRI MESIWETESL DLCLLPYGC I STGDKIGMIE IVKDATTIAQ IQQSTVGNTG
AFKDEVLNHW LKEKCPIEEK FQAAVERFVY SCAGYCVATF VLGIGDRHND NIMISGTNL
FHIDFGHILG NYKSFLGINK ERVPFVLTPD FLFVMGSSGK KTSPHFQKFQ DVCVRLAYLAL
RHHTNLLIIL FSMMLMTGMP QLTSKEDIEY IRDALTVGKS EEDAKKYFLD QIEVCRDKGW
TVQFNWFLHL VLGKQGEKH 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 in one-step affinity chromatography
- 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 try to ensure that you receive soluble 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 against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification: One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).

Purity: > 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

Grade: custom-made

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) 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

Target Details

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. Contribute 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 (By similarity). {ECO:0000250|UniProtKB:P48736, ECO:0000269|PubMed:10669416, ECO:0000269|PubMed:10669418, ECO:0000269|PubMed:11054537, ECO:0000269|PubMed:12297047, ECO:0000269|PubMed:15294162, ECO:0000269|PubMed:15318168, ECO:0000269|PubMed:16116162, ECO:0000269|PubMed:16127437, ECO:0000269|PubMed:17673465, ECO:0000269|PubMed:19297623, ECO:0000269|PubMed:21474070, ECO:0000269|PubMed:31554793}.

Molecular Weight:	126.4 kDa
UniProt:	Q9JHG7
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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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</p>

Application Details

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.
Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months