

Datasheet for ABIN3136264

PIK3CB Protein (AA 1-1064) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	PIK3CB
Protein Characteristics:	AA 1-1064
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PIK3CB protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Brand:	AliCE®
Sequence:	<p>MPPAMADNLD IWAVDSQIAS DGAISVDFLL PTGIYIQLEV PREATISYIK QMLWKQVHNY</p> <p>PMFNLLMDID SYMFACVNQT AVYEELEDET RRLCDVRPFL PVLKLVTRSC DPAEKLDISKI</p> <p>GVLIGKGLHE FDALKDPEVN EFRRKMRKFS EAKIQSLVGL SWIDWLKHTY PPEHEPSVLE</p> <p>NLEDKLYGGK LVVAVHFENS QDVFSFQVSP NLNPIKINEL AIQKRLTIRG KEDEASPCDY</p> <p>VLQVSGRVEY VFGDHPLIQF QYIRNCVMNR TLPHFILVEC CKIKKMYEQE MIAIEAAINR</p> <p>NSSNLPLPLP PKKTRVISHI WDNNNPFQIT LVKGNKLNTE ETVKVHVVRAG LFHGTTELLCK</p> <p>TVVSSEISGK NDHIWNEQLE FDINICDLPR MARLCFAVYA VLDKVKTKKS TKTINPSKYQ</p> <p>TIRKAGKVHY PVAWVNTMVF DFKGQLRSGD VILHSWSSFP DELEEMLNPM GTVQTNPYAE</p> <p>NATALHITFP ENKKQPCYYP PFDKIEKAA ELASGDSANV SSRGGKKFLA VLKEILDRDP</p> <p>LSQLCENEMD LIWTLRQDCR ENFPQSLPKL LLSIKWNKLE DVAQLQALLQ IWPKLPPREA</p> <p>LELLDFNYPD QYVREYAVGC LRQMSDEELS QYLLQLVQVL KYEPFLDCAL SRFLLERALD</p>

NRRIGQFLFW HLRSEVHTPA VSVQFGVILE AYCRGSVGHM KVLKQVEAL NKLKTLNSLI
KLNAVKLSRA KGKEAMHTCL KQSAYREALS DLQSPLNPCV ILSELYVEKC KYMDSKMKPL
WLVYSSRAFG EDSVGVIFKN GDDLRLQDMLT LQMLRLMDLL WKEAGLDLRM LPYGCLATGD
RSGLIEVVST SETIADIQLN SSNVAATAAF NKDALLNWLK EYNSGDDLDR AIEEFTLSCA
GYCVASYVLG IGDHSDNIM VKKTGQLFHI DFGHILGNFK SKFGIKRERV PFILTYDFIH
VIQQGKTGNT EKFRFRQCC EDAYLILRRH GNLFITLFAL MLTAGLPELT SVKDIQYLKD
SLALGKSEEE ALKQFKQKFD EALRESWTTK VNWMAHTVRK DYRS

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:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.

Product Details

- 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:	PIK3CB
Alternative Name:	Pik3cb (PIK3CB Products)
Background:	<p>Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit beta isoform (PI3-kinase subunit beta) (PI3K-beta) (PI3Kbeta) (PtdIns-3-kinase subunit beta) (EC 2.7.1.153) (Phosphatidylinositol 4,5-bisphosphate 3-kinase 110 kDa catalytic subunit beta) (PtdIns-3-kinase subunit p110-beta) (p110beta) (Serine/threonine protein kinase PIK3CB) (EC 2.7.11.1), FUNCTION: Phosphoinositide-3-kinase (PI3K) phosphorylates phosphatidylinositol (PI) derivatives at position 3 of the inositol ring to produce 3-phosphoinositides. Uses ATP and PtdIns(4,5)P2 (phosphatidylinositol 4,5-bisphosphate) to generate phosphatidylinositol 3,4,5-trisphosphate (PIP3) (By similarity). PIP3 plays a key role by recruiting PH domain-containing proteins to the membrane, including AKT1 and PDK1, activating signaling cascades involved in cell growth, survival, proliferation, motility and morphology. Involved in the activation of AKT1 upon stimulation by G-protein coupled receptors (GPCRs) ligands such as CXCL12, sphingosine 1-phosphate, and lysophosphatidic acid. May also act downstream receptor tyrosine kinases. Required in different signaling pathways for stable platelet adhesion and aggregation. Plays a role in platelet activation signaling triggered by GPCRs, alpha-IIb/beta-3 integrins (ITGA2B/ITGB3) and ITAM (immunoreceptor tyrosine-based activation motif)-bearing receptors such as GP6. Regulates the strength of adhesion of ITGA2B/ITGB3 activated receptors necessary for the cellular transmission of contractile forces. Required for platelet aggregation induced by F2 (thrombin) and thromboxane A2 (TXA2). Has a role in cell survival. May have a role in cell migration. Involved in the early stage of autophagosome formation. Modulates the intracellular level of PtdIns3P (phosphatidylinositol 3-phosphate) and activates PIK3C3 kinase activity. May act as a scaffold, independently of its lipid kinase activity to positively regulate autophagy. May have a role in insulin signaling as scaffolding protein in which the lipid kinase activity is not</p>

Target Details

required. May have a kinase-independent function in regulating cell proliferation and in clathrin-mediated endocytosis. Mediator of oncogenic signal in cell lines lacking PTEN. The lipid kinase activity is necessary for its role in oncogenic transformation. Required for the growth of ERBB2 and RAS driven tumors. Has also a protein kinase activity showing autophosphorylation.

{ECO:0000250|UniProtKB:P42338, ECO:0000269|PubMed:18544649, ECO:0000269|PubMed:18594509, ECO:0000269|PubMed:19515725, ECO:0000269|PubMed:19940148, ECO:0000269|PubMed:20065293, ECO:0000269|PubMed:21059846}.

Molecular Weight: 121.7 kDa

UniProt: [Q8BTI9](#)

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

Handling Advice: Avoid repeated freeze-thaw cycles.

Handling

Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months