Datasheet for ABIN3135239

PLD6 Protein (AA 1-221) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	PLD6
Protein Characteristics:	AA 1-221
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PLD6 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MGRSSWRLVF AAGAGLALAL EALPWLMRWL LAGRRPRREV LFFPSQVTCT EALLQAPGLP PGPSGCPCSL PHSESSLSRL LRALLAARSS LELCLFAFSS PQLGRAVQLL HQRGVRVRVI TDCDYMALNG SQIGLLRKAG IQVRHDQDLG YMHHKFAIVD KKVLITGSLN WTTQAIQNNR ENVLIMEDTE YVRLFLEEFE RIWEEFDPTK YSFFPQKHRG H **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.
- 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:	PLD6
Alternative Name:	Pld6 (PLD6 Products)
Background:	Mitochondrial cardiolipin hydrolase (EC 3.1.4.-) (Choline phosphatase 6) (Mitochondrial

phospholipase) (MitoPLD) (Phosphatidylcholine-hydrolyzing phospholipase D6) (Phospholipase D6) (PLD6) (Protein zucchini homolog) (mZuc),FUNCTION: Presents phospholipase and nuclease activities, depending on the different physiological conditions. Interaction with Mitoguardin (MIGA1 or MIGA2) affects the dimer conformation, facilitating the lipase activity over the nuclease activity. Plays a key role in mitochondrial fusion and fission via its phospholipase activity. In its phospholipase role, it uses the mitochondrial lipid cardiolipin as substrate to generate phosphatidate (PA or 1,2-diacyl-sn-glycero-3-phosphate), a second messenger signaling lipid. Production of PA facilitates Mitofusin-mediated fusion, whereas the cleavage of PA by the Lipin family of phosphatases produces diacylgycerol (DAG) which promotes mitochondrial fission. Both Lipin and DAG regulate mitochondrial dynamics and membrane fusion/fission, important processes for adapting mitochondrial metabolism to changes in cell physiology. Mitochondrial fusion enables cells to cope with the increased nucleotide demand during DNA synthesis (By similarity). Mitochondrial function and dynamics are closely associated with biological processes such as cell growth, proliferation, and differentiation (PubMed:21397848). Mediator of MYC activity, promotes mitochondrial fusion and activates AMPK which in turn inhibits YAP/TAZ, thereby inducing cell growth and proliferation (PubMed:26678338). The endonuclease activity plays a critical role in PIWI-interacting RNA (piRNA) biogenesis during spermatogenesis (PubMed:21397847, PubMed:21397848). Implicated in spermatogenesis and sperm fertility in testicular germ cells, its single strand-specific nuclease activity is critical for the biogenesis/maturation of PIWI-interacting RNA (piRNA) (PubMed:21397847, PubMed:23064230, PubMed:23064227). MOV10L1 selectively binds to piRNA precursors and funnels them to the endonuclease that catalyzes the first cleavage step of piRNA processing to generate piRNA intermediate fragments that are subsequently loaded to Piwi proteins (PubMed:25762440). Cleaves either DNA or RNA substrates with similar affinity, producing a 5' phosphate end, in this way it participates in the processing of primary piRNA transcripts. piRNAs provide essential protection against the activity of mobile genetic elements. piRNA-mediated transposon silencing is thus critical for maintaining genome stability, in particular in germline cells when transposons are mobilized as a consequence of wide-spread genomic demethylation (PubMed:23064230, PubMed:23064227). PA may act as signaling molecule in the recognition/transport of the precursor RNAs of primary piRNAs (PubMed:21397847). Interacts with tesmin in testes, suggesting a role in spermatogenesis via association with its interacting partner (PubMed:33783608). {ECO:0000250|UniProtKB:Q8N2A8, ECO:0000269|PubMed:21397847, ECO:0000269|PubMed:21397848, ECO:0000269|PubMed:23064227, ECO:0000269|PubMed:23064230, ECO:0000269|PubMed:25762440, ECO:0000269|PubMed:26678338, ECO:0000269|PubMed:33783608}.

Target Details

Molecular Weight:	25.0 kDa
UniProt:	Q5SWZ9
Pathways:	Ribonucleoprotein Complex Subunit Organization

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