Datasheet for ABIN3135611

PLK4 Protein (AA 1-925) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	PLK4
Protein Characteristics:	AA 1-925
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PLK4 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Brand:	AliCE®
Sequence:	MAACIGERIE DFKVGNLLGK GSFAGVYRAE SIHTGLEVAI KMIDKKAMYK AGMVQRVQNE VKIHCQLKHP SVLELYNYFE DNNYVYLVLE MCHNGEMNRY LKNRMKPFSE REARHFMHQI ITGMLYLHSH GILHRDLTLS NILLTRNMNI KIADFGLATQ LNMPHEKHYT LCGTPNYISP EIATRSAHGL ESDIWSLGCM FYTLLIGRPP FDTDTVKNTL NKVVLADYEM PAFLSREAQD LIHQLLRRNP ADRLSLSSVL DHPFMSRNPS PKSKDVGTVE DSMDSGHATL STTITASSGT SLSGSLLDRR LLVGQPLPNK ITVFQKNKNS SDFSSGDGSN FCTQWGNPEQ EANSRGRGRV IEDAEERPHS RYLRRAHSSD RASPSNQSRA KTYSVERCHS VEMLSKPRRS LDENQHSSNH HCLGKTPFPF ADQTPQMEMV QQWFGNLQMN AHLGETNEHH TVSPNRDFQD YPDLQDTLRN AWTDTRASKN ADTSANVHAV KQLSAMKYMS AHHHKPEVMP QEPGLHPHSE QSKNRSMEST LGYQKPTLRS ITSPLIAHRL KPIRQKTKKA VVSILDSEEV CVELLRECAS EGYVKEVLQI SSDGTMITVY YPNDGRGFPL ADRPPLPTDN ISRYSFDNLP EKYWRKYQYA SRFIQLVRSK

TPKITYFTRY AKCILMENSP GADFEVWFYD GAKIHKTENL IHIIEKTGIS YNLKNENEVT SLKEEVKVYM DHANEGHRIC LSLESVISEE EKRSRGSSFF PIIVGRKPGN TSSPKALSAP PVDPSCCKGE QASASRLSVN SAAFPTQSPG LSPSTVTVEG LGHTATATGT GVSSSLPKSA QLLKSVFVKN VGWATQLTSG AVWVQFNDGS QLVVQAGVSS ISYTSPDGQT TRYGENEKLP EYIKQKLQCL SSILLMFSNP TPNFQ

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.

Product Details

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:	PLK4
Alternative Name:	Plk4 (PLK4 Products)
Target Type:	Phage Protein
Background:	Serine/threonine-protein kinase PLK4 (EC 2.7.11.21) (Polo-like kinase 4) (PLK-4) (Serine/threonine-protein kinase 18) (Serine/threonine-protein kinase Sak),FUNCTION: Serine/threonine-protein kinase that plays a central role in centriole duplication. Able to trigger procentriole formation on the surface of the parental centriole cylinder, leading to the recruitment of centriole biogenesis proteins such as SASS6, CENPJ/CPAP, CCP110, CEP135 and gamma-tubulin. When overexpressed, it is able to induce centrosome amplification through the simultaneous generation of multiple procentrioles adjoining each parental centriole during S phase. Phosphorylates 'Ser-151' of FBXW5 during the G1/S transition, leading to inhibit FBXW5 ability to ubiquitinate SASS6. Its central role in centriole replication suggests a possible role in tumorigenesis, centrosome aberrations being frequently observed in tumors. Phosphorylates CDC25C and CHEK2. Also involved in deuterosome-mediated centriole amplification in multiciliated that can generate more than 100 centrioles. Also involved in trophoblast differentiation by phosphorylating HAND1, leading to disrupt the interaction between HAND1 and MDFIC and activate HAND1. Required for the recruitment of STIL to the centriole and for STIL-mediated centriole amplification (By similarity). Phosphorylates CEP131 at 'Ser-78' and PCM1 at 'Ser-372' which is essential for proper organization and integrity of centriolar satellites (By similarity). {ECO:0000250|UniProtKB:O00444, ECO:0000269|PubMed:17891141, ECO:0000269|PubMed:24240477}.
Molecular Weight:	103.7 kDa
UniProt:	Q64702
Pathways:	M Phase

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