

Datasheet for ABIN3094570

PLK2 Protein (AA 1-685) (Strep Tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	PLK2
Protein Characteristics:	AA 1-685
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PLK2 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MELLRTITYQ PAASTKMCEQ ALGKGCGADS KKKRPPQPPE ESQPPQSQAQ VPPAAPHHHH HHSHSGPEIS RIIVDPTTGK RYCRGKVLGK GGFAKCYEMT DLTNNKVYAA KIIPHSRVAK PHQREKIDKE IELHRILHHK HVVQFYHYFE DKENIYILLE YCSRRSMAHI LKARKVLTEP EVRYYLRLQIV SGLKYLHEQE ILHRDLKLG N FINEAMELK VGDFGLAARL EPLEHRRRTI CGTPNYLSPE VLNKQGHGCE SDIWALGCV M YTM LLGRPPF ETTNLKET YR CIREARYTMP SSLLAPAKHL IASMLSKNPE DRPSLDDIIR H DFFLQGFTP DRLSSSCCHT VPDFHLSSPA KNFFKKA AAA LFGGKKDKAR YIDTHNRVSK EDEDIYKLRH DLK KTSITQQ PSKHRTDEEL QPPTTTVARS GTPAVENKQQ IGD AIRMIVR GTLGSCSSSS ECLEDSTMGS VADTVARVLR GCLENMPEAD CIPKEQLSTS FQWVKWVDY SNKYGFGYQL SDHTVGVLFN NGAHMSLLPD KKT VHYAEL GQCSVFPATD APEQFISQVT VLKYFSHYME ENLMDGGDLP SVTDIRRPRL YLLQWLKSDK ALMMLFNDGT FQVNFYHDHT KIIIC SQNEE YLLTYINEDR ISTTFRLTTL LMSGCSSELK NRMEYALNML LQRCN
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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:

- 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®):

Product Details

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: PLK2

Alternative Name: PLK2 ([PLK2 Products](#))

Background: Serine/threonine-protein kinase PLK2 (EC 2.7.11.21) (Polo-like kinase 2) (PLK-2) (hPlk2) (Serine/threonine-protein kinase SNK) (hSNK) (Serum-inducible kinase),FUNCTION: Tumor suppressor serine/threonine-protein kinase involved in synaptic plasticity, centriole duplication and G1/S phase transition. Polo-like kinases act by binding and phosphorylating proteins that are already phosphorylated on a specific motif recognized by the POLO box domains. Phosphorylates CENPJ, NPM1, RAPGEF2, RASGRF1, SNCA, SIPA1L1 and SYNGAP1. Plays a key role in synaptic plasticity and memory by regulating the Ras and Rap protein signaling: required for overactivity-dependent spine remodeling by phosphorylating the Ras activator RASGRF1 and the Rap inhibitor SIPA1L1 leading to their degradation by the proteasome. Conversely, phosphorylates the Rap activator RAPGEF2 and the Ras inhibitor SYNGAP1, promoting their activity. Also regulates synaptic plasticity independently of kinase activity, via its interaction with NSF that disrupts the interaction between NSF and the GRIA2 subunit of AMPARs, leading to a rapid rundown of AMPAR-mediated current that occludes long term depression. Required for procentriole formation and centriole duplication by phosphorylating CENPJ and NPM1, respectively. Its induction by p53/TP53 suggests that it may participate in the mitotic checkpoint following stress. {ECO:0000269|PubMed:15242618, ECO:0000269|PubMed:19001868, ECO:0000269|PubMed:20352051, ECO:0000269|PubMed:20531387}.

Molecular Weight: 78.2 kDa

UniProt: [Q9NYY3](#)

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.
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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 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!</p>
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Restrictions:	For Research Use only
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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)



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