

Datasheet for ABIN3134460
PLK2 Protein (AA 1-682) (His tag)[Go to Product page](#)

1 Image

Overview

Quantity:	1 mg
Target:	PLK2
Protein Characteristics:	AA 1-682
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PLK2 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys)

Product Details

Sequence:	MELLRTITYQ PAAGTKMCEQ ALGKACGGDS KKKRPQQPSE DGQPQAQVTP AAPHHHHHHS HSGPEISRII VDPTTGKRYC RGKVLGKGGF AKCYEMTDLT NNKVYAAKII PHSRVAKPHQ REKIDKEIEL HRLHHKHVV QFYHYFEDKE NIYILLEYCS RRSMAHILKA RKVLTEPEVR YYLRQIVSGL KYLHEQEILH RDLKLGNIFFI NEAMELKVGD FGLAARLEPL EHRRRTICGT PNYLSPEVLN KQGHGCESDI WALGCVMYTM LLGRPPFETT NLKETYRCIR EARYTMPSSL LAPAKHLIAS MLSKNPEDRP SLDDIIRHDF FLQGFTPDLR SSSCCHTPVD FHLSSPAKNF FKKAAAALFG GKDKKARYND THNKVSKEDY DIYKLRHDLK KVSITQQPSK HRADEEPQPP PTTVARSGTS AVENKQQIGD AIRMIVRGTL GSCSSSSECL EDSTMGSVAD TVARVLRGCL ENMPEADCIP KEQLSTSFQW VTKWVDYSNK YGFGYQLSDH TVGVLFNNGA HMSLLPDKKT VHYAELGQC SVFPATDAPE QFISQVTVLK YFSHYMEENL MDGGDLPSVT DIRRPRLYLL QWLKSDKALM MLFNDGTFQV NFYHDHTKII ICNQSEYLL TYINEDRIST TFRLTTLLMS GCSLELKNRM EYALNMLLQR CN
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Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Plk2 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility:

0.22 µm filtered

Endotoxin Level:

Protein is endotoxin free.

Grade:

Crystallography grade

Target Details

Target:	PLK2
Alternative Name:	Plk2 (PLK2 Products)
Background:	<p>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:12651910, ECO:0000269 PubMed:12897130, ECO:0000269 PubMed:19004816, ECO:0000269 PubMed:21382555}.</p>
Molecular Weight:	78.8 kDa Including tag.
UniProt:	P53351

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:	Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
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Handling

Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images



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