Datasheet for ABIN3135611

PLK4 Protein (AA 1-925) (His tag)

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Overview

Quantity:	1 mg
Target:	PLK4
Protein Characteristics:	AA 1-925
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PLK4 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys)

Product Details

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. 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 Plk4 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 receival 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.

Product Details

Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	PLK4
Alternative Name:	Plk4 (PLK4 Products)
Target Type:	Phage Protein
Background:	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. {ECO:0000269|PubMed:17891141, ECO:0000269|PubMed:24240477}.
Molecular Weight:	104.7 kDa Including tag.
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 gurantee 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

Application Details

	options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
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