Datasheet for ABIN3094570

PLK2 Protein (AA 1-685) (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	PLK2
Protein Characteristics:	AA 1-685
Origin:	Human
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 PAASTKMCEQ ALGKGCGADS KKKRPPQPPE ESQPPQSQAQ VPPAAPHHHH HHSHSGPEIS RIIVDPTTGK RYCRGKVLGK GGFAKCYEMT DLTNNKVYAA KIIPHSRVAK PHQREKIDKE IELHRILHHK HVVQFYHYFE DKENIYILLE YCSRRSMAHI LKARKVLTEP EVRYYLRQIV SGLKYLHEQE ILHRDLKLGN FFINEAMELK VGDFGLAARL EPLEHRRRTI CGTPNYLSPE VLNKQGHGCE SDIWALGCVM YTMLLGRPPF ETTNLKETYR CIREARYTMP SSLLAPAKHL IASMLSKNPE DRPSLDDIIR HDFFLQGFTP DRLSSSCCHT VPDFHLSSPA KNFFKKAAAA LFGGKKDKAR YIDTHNRVSK EDEDIYKLRH DLKKTSITQQ PSKHRTDEEL QPPTTTVARS GTPAVENKQQ IGDAIRMIVR GTLGSCSSSS ECLEDSTMGS VADTVARVLR GCLENMPEAD CIPKEQLSTS FQWVTKWVDY SNKYGFGYQL SDHTVGVLFN NGAHMSLLPD KKTVHYYAEL GQCSVFPATD APEQFISQVT VLKYFSHYME ENLMDGGDLP SVTDIRRPRL YLLQWLKSDK ALMMLFNDGT FQVNFYHDHT KIIICSQNEE YLLTYINEDR ISTTFRLTTL LMSGCSSELK NRMEYALNML LQRCN

Product Details

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

Target Details

Target:	PLK2
Alternative Name:	PLK2 (PLK2 Products)
Background:	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 are that 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:	79.2 kDa Including tag.
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 gurantee though.
Comment:	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

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

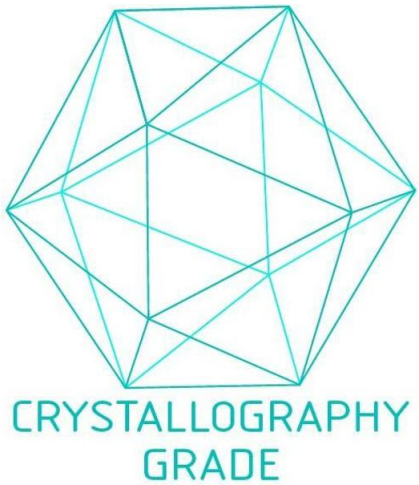

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process