Datasheet for ABIN7554996

PLK4 Protein (AA 1-970) (His tag)

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Overview

Quantity:	1 mg
Target:	PLK4
Protein Characteristics:	AA 1-970
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PLK4 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant PLK4 Protein expressed in mammalian cells.
Sequence:	MATCIGEKIE DFKVGNLLGK GSFAGVYRAE SIHTGLEVAI KMIDKKAMYK AGMVQRVQNE VKIHCQLKHP SILELYNYFE DSNYVYLVLE MCHNGEMNRY LKNRVKPFSE NEARHFMHQI ITGMLYLHSH GILHRDLTLS NLLLTRNMNI KIADFGLATQ LKMPHEKHYT LCGTPNYISP EIATRSAHGL ESDVWSLGCM FYTLLIGRPP FDTDTVKNTL NKVVLADYEM PSFLSIEAKD LIHQLLRRNP ADRLSLSSVL DHPFMSRNSS TKSKDLGTVE DSIDSGHATI STAITASSST SISGSLFDKR RLLIGQPLPN KMTVFPKNKS STDFSSSGDG NSFYTQWGNQ ETSNSGRGRV IQDAEERPHS RYLRRAYSSD RSGTSNSQSQ AKTYTMERCH SAEMLSVSKR SGGGENEERY SPTDNNANIF NFFKEKTSSS SGSFERPDNN QALSNHLCPG KTPFPFADPT PQTETVQQWF GNLQINAHLR KTTEYDSISP NRDFQGHPDL QKDTSKNAWT DTKVKKNSDA SDNAHSVKQQ NTMKYMTALH SKPEIIQQEC VFGSDPLSEQ SKTRGMEPPW GYQNRTLRSI TSPLVAHRLK PIRQKTKKAV VSILDSEEVC VELVKEYASQ EYVKEVLQIS SDGNTITIYY PNGGRGFPLA DRPPSPTDNI SRYSFDNLPE KYWRKYQYAS RFVQLVRSKS PKITYFTRYA KCILMENSPG

Product Details

	ADFEVWFYDG VKIHKTEDFI QVIEKTGKSY TLKSESEVNS LKEEIKMYMD HANEGHRICL ALESIISEEE RKTRSAPFFP IIIGRKPGST SSPKALSPPP SVDSNYPTRE RASFNRMVMH SAASPTQAPI LNPSMVTNEG LGLTTTASGT DISSNSLKDC LPKSAQLLKS VFVKNVGWAT QLTSGAVWVQ FNDGSQLVVQ AGVSSISYTS PNGQTTRYGE NEKLPDYIKQ KLQCLSSILL MFSNPTPNFH **Sequence without tag. The proposed Purification-Tag is based on experiences 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.**
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, 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:

Target Details

	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. 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. Phosphorylates CDC25C and CHEK2. Required for the recruitment of STIL to the centriole and for STIL-mediated centriole amplification (PubMed:22020124). Phosphorylates CEP131 at 'Ser-78' and PCM1 at 'Ser-372' which is essential for proper organization and integrity of centriolar satellites (PubMed:30804208). {ECO:0000269|PubMed:16244668, ECO:0000269|PubMed:16326102, ECO:0000269|PubMed:17681131, ECO:0000269|PubMed:18239451, ECO:0000269|PubMed:19164942, ECO:0000269|PubMed:21725316, ECO:0000269|PubMed:22020124, ECO:0000269|PubMed:27796307, ECO:0000269|PubMed:30804208}.
Molecular Weight:	109.0 kDa
UniProt:	O00444
Pathways:	M Phase

Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.

Handling

Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months