Datasheet for ABIN7317096

PLK1 Protein (His tag)

1 Image

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Overview

Quantity:	50 µg
Target:	PLK1
Origin:	Human
Source:	Baculovirus infected Insect Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This PLK1 protein is labelled with His tag.

Product Details

Purpose:	Recombinant Human PLK1/PLK-1 Protein (His Tag)(Active)
Sequence:	Met 1-Ser 603
Characteristics:	A DNA sequence encoding the human PLK1 (NP_005021.2) (Met 1-Ser 603) was expressed, with a polyhistidine tag at the N-terminus.
Purity:	> 90 % as determined by reducing SDS-PAGE.
Endotoxin Level:	< 1.0 EU per µg as determined by the LAL method.
Biological Activity Comment:	The specific activity was determined to be 5 nmol/min/mg using casein as substrate.

Target Details

Target:	PLK1
Alternative Name:	PLK1/PLK-1 (PLK1 Products)

Target Details

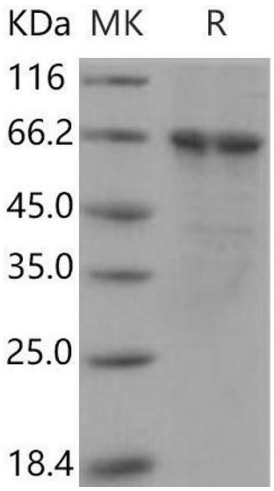
Background:	Background: Serine / threonine-protein kinase PLK1 / PLK-1, also known as polo-like kinase 1 (PLK-1) or serine / threonine-protein kinase 13 (STPK13), Polo-like kinases (PLKs), is a family of four serine / threonine protein kinases that are critical regulators of cell cycle progression, mitosis, cytokinesis, and the DNA damage response. PLK1 / PLK-1 is ubiquitously expressed. The mRNA and protein expression of PLK1 / PLK-1, -2 and -4 are coordinately regulated during cell cycle progression, but PLK3 levels are independent of the other three family members. PLK1 / PLK-1 is the most well characterized member of this family and strongly promotes the progression of cells through mitosis. During the various stages of mitosis PLK1 / PLK-1 localizes to the centrosomes, kinetochores and central spindle. PLKs are dysregulated in a variety of human cancers. PLK1 / PLK-1 overexpression correlates with cellular proliferation and poor prognosis. Serine / threonine-protein kinase that performs several important functions throughout M phase of the cell cycle, including the regulation of centrosome maturation and spindle assembly, the removal of cohesins from chromosome arms, the inactivation of APC / C inhibitors, and the regulation of mitotic exit and cytokinesis. It is required for recovery after DNA damage checkpoint and entry into mitosis. PLK1 / PLK-1 is required for kinetochore localization of BUB1B, spindle pole localization of isoform 3 of SGOL1 and plays a role in regulating its centriole cohesion function. PLK1 / PLK-1 Phosphorylates BORA, and thereby promotes the degradation of BORA. PLK1 / PLK-1 also contributes to the regulation of AURKA function and phosphorylates SGOL1. Synonym: PLK,STPK13
Molecular Weight:	70.5 kDa
NCBI Accession:	NP_005021
Pathways:	Cell Division Cycle, M Phase

Application Details

Restrictions:	For Research Use only

Handling

Format:	Frozen, Liquid
Buffer:	Supplied as sterile 50 mM Tris, 100 mM NaCl, pH 7.4, 0.5 mM EDTA, 0.5 mM EGTA, 0.5 mM PMSF, 25 % glycerol
Storage:	-20 °C
Storage Comment:	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.



Western Blotting

Image 1.