Recombinant Human PLK1/PLK-1 Protein (His Tag)

Catalog Number: PKSH030399

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

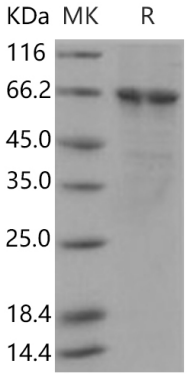
Description

Species	Human
Source	Baculovirus-Insect Cells-derived Human PLK1/PLK-1 protein Met 1-Ser 603, with an N-terminal His
Calculated MW	70.5 kDa
Observed MW	66 kDa
Accession	NP_005021.2
Bio-activity	The specific activity was determined to be 5 nmol/min/mg using casein as substrate.

Properties

Purity	> 90 % as determined by reducing SDS-PAGE.
Concentration	Subject to label value.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
Shipping	This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < - 20°C.
Formulation	Supplied as sterile solution of 50mM Tris, 100mM NaCl, pH 7.4, 0.5mM EDTA, 0.5mM EGTA, 0.5mM PMSF, 25% glycerol

Data



> 90 % as determined by reducing SDS-PAGE.

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. 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.

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