

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

Catalog Number: PKSM040300

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

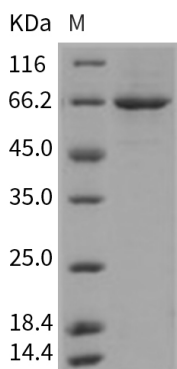
Description

| | |
|----------------------|---|
| Species | Mouse |
| Source | Baculovirus-Insect Cells-derived Mouse PLK1/PLK-1 protein Met 1-Ser 603, with an N-terminal His |
| Calculated MW | 70.6 kDa |
| Observed MW | 65 kDa |
| Accession | Q07832 |
| Bio-activity | The specific activity was determined to be 3 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 20mM Tris, 500mM NaCl, pH 7.4, 10% glycerol |

Data



> 90 % as determined by reducing SDS-PAGE.

Background

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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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