

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

Catalog No. PKSM040300

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

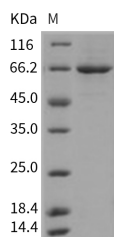
### Description

|                                    |   |
|------------------------------------|---|
| <b>Synonyms</b>                    | Plk;STPK13  |
| <b>Species</b>                     | Mouse   |
| <b>Expression Host</b>             | Baculovirus-Insect Cells  |
| <b>Sequence</b>                    | Met 1-Ser 603   |
| <b>Accession</b>                   | Q07832  |
| <b>Calculated Molecular Weight</b> | 70.6 kDa  |
| <b>Observed molecular weight</b>   | 65 kDa  |
| <b>Tag</b>                         | N-His   |
| <b>Bioactivity</b>                 | The specific activity was determined to be 3 nmol/min/mg using casein as substrate. |

### Properties

|                       |   |
|-----------------------|---|
| <b>Purity</b>         | > 90 % as determined by reducing SDS-PAGE.  |
| <b>Endotoxin</b>      | < 1.0 EU per µg of the protein as determined by the LAL method.   |
| <b>Storage</b>        | Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.  |
| <b>Shipping</b>       | 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. |
| <b>Formulation</b>    | Supplied as sterile solution of 20mM Tris, 500mM NaCl, pH 7.4, 10% glycerol   |
| <b>Reconstitution</b> | Not Applicable  |

### 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

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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.