



Recombinant Protein Technical Manual

Recombinant Human PLK1/PLK Protein (His Tag)(Active)
RPES1752

Product Data:

Product SKU: RPES1752

Size: 20µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: NP_005021.2

Protein Information:

Molecular Mass: 70.5 kDa

AP Molecular Mass: 66 kDa

Tag: N-His

Bio-activity: The specific activity was determined to be 5 nmol/min/mg using casein as substrate.

Purity: > 90 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg 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 50mM Tris, 100mM NaCl, pH 7.4, 0.5mM EDTA, 0.5mM EGTA, 0.5mM PMSF, 25% glycerol

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: PLK;STPK13

Immunogen Information:

Sequence: Met 1-Ser 603

Background:

Serine / threonine-protein kinase PLK1 / PLK, also known as polo-like kinase 1 (PLK) 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 is ubiquitously expressed. The mRNA and protein expression of PLK1 / PLK, -2 and -4 are coordinately regulated during cell cycle progression, but PLK3 levels are independent of the other three family members. PLK1 / PLK 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 localizes to the centrosomes, kinetochores and central spindle. PLKs are dysregulated in a variety of human cancers. PLK1 / PLK 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 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 Phosphorylates BORA, and thereby promotes the degradation of BORA. PLK1 / PLK also contributes to the regulation of AURKA function and phosphorylates SGOL1.