

## PLK1

### Polo-Like Kinase 1

human, recombinant, baculovirus

Cat. No.	Amount
PR-876	5 $\mu$ g

For *in vitro* use only  
Quality guaranteed for 12 months  
Store at -80°C

#### Avoid freeze / thaw cycles

#### Form

Liquid. Supplied in 20 mM Tris-HCl pH 8.0, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT and 20% glycerol.

#### Activity

1  $\mu$ g of PLK1 is sufficient to phosphorylate 1  $\mu$ g of heat-inactivated nuclear or cytoplasmic extract at 30 °C for 30 min.

#### Molecular Weight

66 kDa

#### Purity

> 95% by SDS-PAGE

#### Description

The human polo-like kinase (PLK) gene encodes a 603-amino acid polypeptide. By Northern blot analysis, they showed PLK1 was not expressed in any adult human tissues except placenta. PLK1 localizes to the mitotic spindle, suggesting that it is involved in regulating mitotic spindle function. It has been observed that PLK1 transcripts are present at high levels in tumors of various origins and may be involved in the promotion or progression of cancers. It has been proposed as a diagnostic marker for several tumors. Data supports the notion that disruption of PLK1 function could be an important application in cancer therapy.

The PLK1 was expressed in Baculovirus system and purified by an affinity column in combination with FPLC chromatography. The purified recombinant protein is greater than 95% homogeneous and contains no detectable protease, DNase and RNase activity.

#### Selected References:

- Liu *et al.* (2003) Polo-like kinase (Plk)1 depletion induces apoptosis in cancer cells. *Proc. Nat. Acad. Sci.* **100**:5789.  
Smith *et al.* (1997) Malignant transformation of mammalian cells initiated by constitutive expression of the polo-like kinase. *Biochem. Biophys. Res. Commun.* **234**:397.  
Hamanaka *et al.* (1994) Cloning and characterization of human and murine homologues of the Drosophila polo serine-threonine kinase. *Cell Growth Differ.* **5**:249.