



Recombinant Protein Technical Manual  
Recombinant Human PDK/PDZ binding kinase/TOPK  
Protein (His Tag)  
RPES3240

#### Product Data:

**Product SKU:** RPES3240

**Size:** 20µg

**Species:** Human

**Expression host:** Baculovirus-Insect Cells

**Uniprot:** NP\_060962.2

#### Protein Information:

**Molecular Mass:** 37 kDa

**AP Molecular Mass:** 37 kDa

**Tag:** C-His

**Bio-activity:**

**Purity:** > 80 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

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

**Application:**

**Synonyms:** CT84;HEL164;Nori-3;SPK;TOPK

## Immunogen Information:

**Sequence:** Met 1-Val 322

## Background:

PDZ binding kinase (PBK), also known as TOPK (T-LAK cell-originated protein kinase), is a serine/threonine kinase related to the dual specific mitogen-activated protein kinase kinase (MAPKK) family, and has all the characteristic protein kinase subdomains and a C-terminal PDZ-binding T/SXV motif. PBK is expressed in the testis restrictedly expressed in outer cell layer of seminiferous tubules, as well as placenta. PBK may be enrolled in the activation of lymphoid cells and support testicular functions, with a suggested role in the process of spermatogenesis. This mitotic kinase phosphorylates MAP kinase p38 and seems to be active in mitosis. When phosphorylated, PBK forms a protein-protein interaction with tumor suppressor p53 (TP53), leading to TP53 destabilization and attenuation of G2/M checkpoint during doxorubicin-induced DNA damage. The expression level of PBK is thus upregulated in a variety of neoplasms including hematological malignancies.