
Product Data Sheet

Product Name: PBK Human
 Cat. No.: GP22574
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Lymphokine-activated killer T-cell-originated protein kinase; Cancer/testis antigen 84; CT84; MAPKK-like protein kinase; Nori-3; PDZ-binding kinase; Spermatogenesis-related protein kinase; SPK; T-LAK cell-originated protein kinase; PBK; TOPK.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGSHEGISEN FKTPSKLSEK KKSVCSTPT INIPASPFMQ KLGFGTGVNV YLMKRSPRGL SHSPWAVKKI NPICNDHYRS VYQKRLMDEA KILKSLHHPN IVGYRAFTEA NDGSLCLAME YGGEKSLNDL IEERYKASQD PFPAAILKV ALNMARGLYK LHQEKLLHG DIKSSNVVIK GDFETIKICD VGVSLPLDEN MVTVDPEACY IGTEPWKPK EAVEENGVID KADIFAFGLT LWEMMTLSIP HINLSNDDDD EDKTFDESDF DDEAYYAALG TRPPINMEEL DESYQKVIEL FSVCTNEDPK DRPSAAHIVE ALETDV.		
Formulation	PBK protein solution (1mg/ml) containing 20mM Tris-HCl buffer (pH 8.0), 1mM DTT, 10% glycerol and 0.1M NaCl.		

Introduction

Lymphokine-activated killer T-cell-originated protein kinase (PBK) is a serine/threonine kinase related to the dual specific mitogen-activated protein kinase (MAPKK) family. PBK is abundant in placenta (is also found in the testis' outer cell layer of seminiferous tubules) and absent from adult brain tissue. PBK is involved in the activation of lymphoid cells and supports testicular functions, with a possible role in the process of spermatogenesis. Mitotic phosphorylation is required for PBK's catalytic activity. Once phosphorylated, PBK forms a complex with TP53, leading to TP53 destabilization and weakening of G2/M checkpoint during some kind of DNA damage. PBK is active only during mitosis. In addition, a PDZ domain in the tumor suppressor protein Dlg can coordinate with the T/SXV motif of PBK. PBK also phosphorylates MAP kinase p38, and

Caution: Product has not been fully validated for medical applications. For research use only.

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may have a role in the activation of lymphoid cells.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

PBK Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 346 amino acids (1-322 a.a) and having a molecular mass of 38.6kDa (Molecular weight on SDS-PAGE will appear higher). PBK is fused to a 24 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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