

## TK1 Human

**Description:** TK1 Human Recombinant produced in E. coli is a single polypeptide chain containing 258 amino acids (1-234) and having a molecular mass of 28.0 kDa. TK1 is fused to a 24 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

**Catalog #:** PKPS-043

For research use only.

**Synonyms:** Thymidine kinase 1 soluble, thymidine kinase cytosolic, TK2, EC 2.7.1.21.

**Source:** E.coli.

**Physical Appearance:** Sterile Filtered colorless solution.

**Amino Acid Sequence:** MGSSHHHHH SSGLVPRGSH MGSHMSCINL PTVLPGSPSK  
TRGQIQVILG PMFSGKSTEL MRRVRRFQIA QYKCLVIKYA KDTRYSSSFC THDRNTMEAL  
PACLLRDVAQ EALGVAVIGI DEGQFFPDIV EFCEAMANAG KTVIVAALDG TFQRKPFQAI  
LNLVPLAESV VKLTAVCMCEC FREAAATKRL GTEKEVEVIG GADKYHSVCR LCYFKKASGQ  
PAGPDNKENC PV

**Purity:** Greater than 90% as determined by SDS-PAGE.

### Formulation:

The TK1 solution (1mg/1ml) contains 20mM Tris-HCl buffer (pH 8.0), 100mM NaCl, 1mM DTT and 20% glycerol.

### 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.

### Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### Introduction:

Thymidine Kinase 1 (TK1) is a phosphotransferase (a kinase): 2'-deoxythymidine kinase, ATP-thymidine 5'-phosphotransferase. TK1 is present in 2 forms in mammalian cells, TK1 and TK2. Thymidine kinases hold a main function in the synthesis of DNA and thus in cell division, as they are part of the distinctive reaction chain to introduce deoxythymidine (present in the body fluids as a result of degradation of DNA from food and from dead cells) into the DNA. Thymidine kinase is necessary for the action of many antiviral drugs. Thymidine kinase is used to select hybridoma cell lines in production of monoclonal antibodies.

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