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## Product Data Sheet

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Product Name: TK1 Human  
 Cat. No.: GP22641  
 Batch No.: 1

### Product Data

Purity	>98%	Source	E.coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Thymidine kinase 1 soluble; thymidine kinase cytosolic; TK2; EC 2.7.1.21.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGSMSHCINL PTVLPGSPSK TRGQIQVILG PMFSGKSTEL MRRVRRFQIA QYKCLVIKYA KDTRYSSSFC THDRNTMEAL PACLLRDVAQ EALGVAVIGI DEGQFFPDIV EFCEAMANAG KTVIVAALDG TFQRKPFQAI LNLVPLAESV VKLTAVCMCEC FREAAYTKRL GTEKEVEVIG GADKYHSVCR LCYFKKASGQ PAGPDNKENC PVPGKPGGEAV AARKLFAPQQ ILQCSPAN.		
Formulation	The TK1 solution (1mg/1ml) contains 20mM Tris-HCl buffer (pH 8.0), 100mM NaCl, 1mM DTT and 20% glycerol.		

### 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.

### 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

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

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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.

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