

Recombinant human Thymidine Kinase 1 protein

Catalog Number: ATGP1610

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-234aa

UniProt No.

P04183

NCBI Accession No.

NP_003249.3

Alternative Names

Thymidine kinase cytosolic, Thymidine kinase, cytosolic, TK2

PRODUCT SPECIFICATION

Molecular Weight

28 kDa (258aa) confirmed by MALDI-TOF

Concentration

1mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 20% glycerol, 0.1M NaCl, 1mM DTT

Purity

> 90% by SDS-PAGE

Tag

His-Tag

Application

SDS-PAGE

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

TK1, also known as thymidine kinase, is an enzyme, a phosphotransferase (a kinase) : 2'-deoxythymidine kinase, ATP-thymidine 5'-phosphotransferase. It is present in two forms in mammalian cells, TK1 and TK2. Thymidine kinases have a key function in the synthesis of DNA and thereby in cell division, as they are part of the unique reaction chain to introduce deoxythymidine into the DNA. Deoxythymidine is present in the body fluids as a result of degradation of DNA from food and from dead cells. Thymidine kinase is required for the action of many antiviral drugs. It is used to select hybridoma cell lines in production of monoclonal antibodies. In clinical

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chemistry it is used as a proliferation marker in the diagnosis, control of treatment and follow-up of malignant disease, mainly of hematological malignancies. Recombinant human TK1 protein, fused to His-tag at N-terminus, was expressed in *E. coli* and purified by using conventional chromatography.

Amino acid Sequence

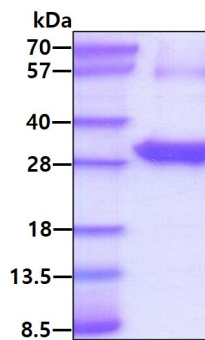
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KDTRYSSSFC THDRNTMEAL PACLLRDVAQ EALGVAVIGI DEGQFFPDIV EFCEAMANAG KTVIVAALDG TFQRKPFGAI
LNLVPLAESV VKLTAVCMCEC FREAAAYTKRL GTEKEVEVIG GADKYHSVCR LCYFKKASGQ PAGPDNKENC PVPGKPGEAV
AARKLFAPQQ ILQCSPAN

General References

Chang Z.F., et al. (1998) *J. Biol. Chem.* 273:12095-12100
Kreidberg J.A., et al. (1986) *Mol. Cell. Biol.* 6:2903-2909

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.