

TK1, 1-234aa, Human, His tag, E.coli

Cat.NO.: TP04228

3th Edition

Synonyms:Thymidine kinase, cytosolic, TK2

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 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.

Form:Liquid. 20mM Tris-HCl buffer (pH8.0) containing 20% glycerol, 0.1M NaCl, 1mM DTT

Molecular Weight:28.0 kDa (258aa) confirmed by MALDI-TOF

Sequences:

MGSSHHHHHSSGLVPRGSHMGSHMSCINLPTVLPGPSKTRGQIQVILGPMFSGKSTELMRRVRRFQIAQYKCL
VIKYAKDTRYSSSFCTHDRNTMEALPAALLRDVAQEALGVAVIGIDEGQFFPDIVEFCEAMANAGKTVIVAALDGTFO
RKPFGAILNLVPLAESVVKLTAVCMECFREAAYTKRLGTEKEVEVIGGADKYHSVCRLCYFKKASGQPAGPDNKEN
CPVPGKPGEA AARKLFAPQQILQCSPAN

Purity:> 95% by HPLC

Concentration:1 mg/ml (determined by Bradford assay)

Endotoxin Level:<1.0 EU per 1 ug of protein (determined by LAL method)

Storage:Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.