

TK2, 34-265aa Human, His tag, E.coli

Cat.NO.: TP04229

3th Edition

Synonyms:thymidine kinase 2, mitochondrial, MTDPS2, MTTK

Description:TK2, also known as thymidine kinase 2 mitochondrial, belongs to the DCK-DGK family. Thymidine kinase is an enzyme, a phosphotransferase (a kinase): 2-deoxythymidine kinase, ATP-thymidine 5-phosphotransferase, It can be found in most living cells. It is present in two forms in mammalian cells, TK1 and TK2. Certain viruses also have genetic information for expression of viral thymidine kinases. 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. Defects in TK2 are a cause of mitochondrial DNA depletion syndrome type 2 (MTDPS2). A disorder characterized primarily by childhood onset of muscle weakness associated with depletion of mtDNA in skeletal muscle. Recombinant human TK2 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.

Form:Liquid. In 20 mM Tris-HCl buffer, pH8.0, 30% glycerol, 2mM DTT, 200mM NaCl

Molecular Weight:30.2kDa (257aa), confirmed by MALDI-TOF

Sequences:

MGSSHHHHHSSGLVPRGSHMGSHMVQRRRAWPPDKEQEKEKKSVCVEGNIASGKTTCLEFFSNATDVEVLTEP
VSKWRNVRGHNPLGLMYHDASRWGLTLQTYVQLTMLDRHTRPQVSSVRLMERSIHSARYIFVENLYRSGKMPEV
DYVVLSEWFDWILRNMDVSVDLIVYLRTNPETCYQRLKKRCREEEEKVIPLEYLEAIHHLHEEWLIKGS LFPMAAPVLV
IEADHHMERMLELFEQNRDRILTPENRKHCP

Purity:> 95% by HPLC

Concentration:0.5mg/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.