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AR50475PU-S Human Thymidine kinase 2 (TK2) (34-265, His-tag) - Purified

Alternate names: TK-2, Thymidine kinase 2 mitochondrial

Quantity: 50 µg

Concentration: 0.5mg/ml (determined by Bradford assay)

Background: 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.

Uniprot ID: O00142

NCBI: NP_004605.3

GeneID: 7084

Species: Human

Source: E. coli

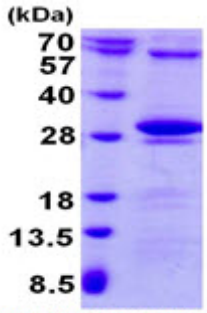
Format: **State:** Liquid purified protein
Purity: >85% by SDS - PAGE
Buffer System: 20 mM Tris-HCl buffer, pH8.0, 30% glycerol, 2mM DTT, 200mM NaCl

Description: Recombinant human TK2 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
AA Sequence:
MGSSHHHHHH SSGLVPRGSH MGSHMVQRRA WPPDKEQEKE KKSVICVEGN IASGKTTCLE FFSNATDVEV LTEPVSKWRN VRGHNPLGLM YHDASRWGLT LQTYVQLTML DRHTRPQVSS VRLMERSIHS ARYIFVENLY RSGKMPEVDY VVLSEWFDWI LRNMDVSVDL IVYLRTNPET CYQRLKKRCR EEEKVIPLEY LEAIHHLHEE WLIKGSLFPM AAPVLVIEAD HHMERMLELF EQNRDRILTP ENRKHCP
Molecular weight: 30.2 kDa (257aa), confirmed by MALDI-TOF

Storage: Store undiluted at 2-8°C for one week or (in aliquots) at -20°C to -80°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings: Saada A., et al. (2001) Nat. Genet. 29:342-344Kit S. (1985). Thymidine kinase. Microbiol. Sci. 2 (12): 369-75.

Pictures:



15% SDS-PAGE (3ug)