

TK2 Human

Description: TK2 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 257 amino acids (34-265 a.a) and having a molecular mass of 30.2kDa. TK2 is fused to a 25 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

Catalog #:PKPS-048

For research use only.

Synonyms: Thymidine kinase 2 mitochondrial, Mt-TK, TK2, MTTK, MTDPS2.

Source: E.coli.

Physical Appearance: Sterile Filtered colorless solution.

Amino Acid Sequence: MGSSHHHHHH SSGLVPRGSH MGSHMVQRRR WPPDKEQEKE
KKSVICVEGN IASGKTTCL FFSNATDVEV LTPVSKWRN VRGHNPLGLM YHDASRWGLT
LQTYVQLTML DRHTRPQVSS VRLMERSIHS ARYIFVENLY RSGKMPEVDY VVLSEWFDWI
LRNMDVSVDL IVYLRTNPET CYQRLKKRCR EEEKVIPLEY LEAIHHLHEE WLIKGSFLPM
AAPVLVIEAD HH

Purity: Greater than 85% as determined by SDS-PAGE.

Formulation:

TK2 protein solution (0.5mg/ml) containing 20mM Tris-HCl buffer, pH8.0, 30% glycerol, 2mM DTT and 200mM NaCl.

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.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

Introduction:

Thymidine kinase 2 mitochondrial (TK2) is a member of the DCK/DGK family. TK2 is an enzyme, a phosphotransferase (a kinase): 2'-deoxythymidine kinase, ATP-thymidine 5'-phosphotransferase. Thymidine kinase is found in most living cells. Thymidine kinase is present in 2 forms in mammalian cells, TK1 and TK2. Thymidine kinases have a central function in the synthesis of DNA and thus in cell division, since they are part of the exceptional reaction chain to introduce deoxythymidine into the DNA. TK2 is a deoxyribonucleoside kinase which specifically phosphorylates thymidine, deoxycytidine, and deoxyuridine. TK2 localizes to the mitochondria and is essential for mitochondrial DNA synthesis. TK2 gene defects are a cause of mitochondrial DNA depletion syndrome type 2 (MTDPS2).

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