

CKMT1A Human

Description: CKMT1A Human Recombinant produced in E. coli is a single polypeptide chain containing 403 amino acids (40-417) and having a molecular mass of 45.0 kDa. CKMT1A is fused to a 25 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

Catalog #: CKPS-282

For research use only.

Synonyms: Creatine kinase mitochondrial 1A, creatine kinase mitochondrial 1 (ubiquitous), creatine kinase U-type mitochondrial, Acidic-type mitochondrial creatine kinase, Ubiquitous mitochondrial creatine kinase, CKMT1, U-MtCK, mia-CK, EC 2.7.3, EC 2.7.3.2.

Source: E.coli.

Physical Appearance: Sterile Filtered colorless solution.

Amino Acid Sequence: MGSSHHHHHH SSGLVPRGSH MGSHTASERR RLYPPSAEYP
DLRKHNNCMA SHLTPAVYAR LCDKTTPTGW TLDQCIQTGV DNPGRPFIKT VGMVAGDEET
YEVFADLFDP VIQERHNGYD PRMTKHTTDL DASKIRSGYF DERYVLSSRV RTGRSIRGLS
LPPACTRAER REVERVVVDA LSGLKGDLAG RYYRLSEMTE AEQQQLIDDH FLDPKPVSP
LTAAGMARDW PD

Purity: Greater than 95% as determined by SDS-PAGE.

Formulation:

The CKMT1A solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.15M NaCl and 10% glycerol.

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:

CKMT1A is in charge of the transfer of high energy phosphate from mitochondria to the cytosolic carrier, creatine. CKMT1A is a member of the creatine kinase isoenzyme family and exists as two isoenzymes, sarcomeric MtCK and ubiquitous MtCK, encoded by separate genes. Mitochondrial creatine kinase arises in two different oligomeric forms: dimers and octamers, unlike the exclusively dimeric cytosolic creatine kinase isoenzymes. Numerous malignant cancers with poor prognosis have displayed overexpression of ubiquitous mitochondrial creatine kinase which is linked to high energy turnover and inability to remove cancer cells through apoptosis.

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