

## CKMT2 Human

**Description:**CKMT2 Human Recombinant produced in E. coli is a single polypeptide chain containing 405 amino acids (40-419) and having a molecular mass of 46.1 kDa. CKMT2 is fused to a 25 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

Catalog #:CKPS-283

**Synonyms:**Creatine kinase mitochondrial 2 (sarcomeric), Basic-type mitochondrial creatine kinase, Sarcomeric mitochondrial creatine kinase, creatine kinase S-type, mitochondrial, SMTCK, Mib-CK, EC 2.7.3.2.

For research use only.

**Source:**E.coli.

**Physical Appearance:**Sterile Filtered colorless solution.

**Amino Acid Sequence:**MGSSHHHHHH SSGLVPRGSH MGSHEVREQ PRLFPPSADY  
PDLRKHNNCM AECLTPAIYA KLRNKVTPNG YTLDDQCIQTG VDNPGHPFIK TVGMVAGDEE  
SYEVFADLFD PVIKLRHNGY DPRVMKHTTD LDASKITQQG FDEHYVLSSR VRTGRSIRGL  
SLPPACTRAE RREVENVAIT ALEGLKGDLA GRYYKLSEMT EQDQQLIDD HFLFDKPVSP  
LLTCAGMARD WP

**Purity:**Greater than 90% as determined by SDS-PAGE.

### Formulation:

The CKMT2 solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.1M NaCl, 1mM DTT 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:

Creatine Kinase, Mitochondrial 2 (CKMT2) is a member of the ATP:guanido phosphotransferase family. CKMT2 is responsible for the transfer of high energy phosphate from mitochondria to the cytosolic carrier, creatine. CKMT2 reversibly catalyzes the transfer of phosphate between ATP and various phosphogens (e.g. creatine phosphate). Creatine kinase isoenzymes have a principal role in energy transduction in tissues with large, variable energy demands, such as skeletal muscle, heart, brain and spermatozoa. Mitochondrial creatine kinase occurs in 2 different oligomeric forms: dimers and octamers, contrary to the exclusively dimeric cytosolic creatine kinase isoenzymes. The CKMT2 gene contains sequences homologous to a number of motifs which are shared among some nuclear genes encoding mitochondrial proteins and therefore may be crucial for the coordinated activation of these genes during mitochondrial biogenesis.

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