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**Product Data Sheet**


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Product Name: CKMT1A Human  
 Cat. No.: GP22468  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	E.coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
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.		
Amino Acid Sequence	MGSSHHHHHH SSGLVPRGSH MGSMMASERR RLYPPSAEYP DLRKHNNCMA SHLTPAVYAR LCDKTTPTGW TLDQCIQTGV DNP GHPFIKT VGMVAGDEET YEVFADLFDV VIQERHNGYD PRTMKHTTDL DASKIRSGYF DERYVLSSRV RTGRSIRGLS LPPACTRAER REVERVVVDA LSGLKGDLAG RYYRLSEMTE AEQQQLIDDH FLFDKPV SPL LTAAGMARDW PDARGIWHNN EKSFLIWWNE EDHTRVISME KGGNMKRVFE RFCRGLKEVE RLIQERGW EF MWNERLGYIL TCPSNLGTGL RAGVHIKLP L LSKDSRFPKI LENLRLQKRG TGGVDTAATG GVFDISNLDR LGKSEVELVQ LVIDGVNYLI DCERRLERGQ DIRIPTVVIH TKH		
Formulation	The CKMT1A solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.15M NaCl and 10% glycerol.		

**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.

**Stability**

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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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.

### Background

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.

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