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AR50414PU-S Human CKMT (40-417, His-tag) - Purified

Alternate names: Acidic-type mitochondrial creatine kinase, CKMT1A, CKMT1B, Creatine kinase U, Mia-CK, U-MtCK, ubiquitous mitochondrial Creatine kinase

Quantity: 0.1 mg

Concentration: 1 mg/ml (determined by Bradford assay)

Background: Mitochondrial creatine (MtCK) kinase is responsible for the transfer of high energy phosphate from mitochondria to the cytosolic carrier, creatine. It belongs to the creatine kinase isoenzyme family. It exists as two isoenzymes, sarcomeric MtCK and ubiquitous MtCK, encoded by separate genes. Mitochondrial creatine kinase occurs in two different oligomeric forms: dimers and octamers, in contrast to the exclusively dimeric cytosolic creatine kinase isoenzymes. Many malignant cancers with poor prognosis have shown overexpression of ubiquitous mitochondrial creatine kinase; this may be related to high energy turnover and failure to eliminate cancer cells via apoptosis.

Uniprot ID: P12532

NCBI: NP_001015001

GeneID: 1159

Species: Human

Source: E. coli

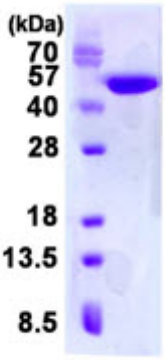
Format:
State: Liquid purified protein
Purity: >95% by SDS - PAGE
Buffer System: 20 mM Tris-HCl buffer (pH 8.0) containing 0.15M NaCl, 10% glycerol

Description: Recombinant human CKMT1A protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
AA Sequence:
MGSSHHHHHH SSGLVPRGSH MGSHMASERR RLYPPSAEYP DLRKHNNCMA SHLTPAVYAR
LCDKTTPTGW TLDQCIQTGV DNPGHPFIKT VGMVAGDEET YEVFADLFDP VIQERHNGYD
PRTMKHTTDL DASKIRSGYF DERYVLSSRV RTGRSIRGLS LPPACTRAER REVERVVVDA
LSGLKGDLAG RYYRLSEMTE AEQQQLIDDH FLFDKPVSPL LTAAGMARDW PDARGIWHNN
EKSFLIWVNE EDHTRVISME KGGNMKRVFE RFCRGLKEVE RLIQERGWEF MWNERLGYIL
TCPSNLGTGL RAGVHIKLPL LSKDSRFPKI LENLRLQKRG TGGVDTAATG GVFDISNLDR
LGKSEVELVQ LVIDGVNYLI DCERRLERGQ DIRIPTPVIH TKH
Molecular weight: 45 kDa (403aa) 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: Stachowiak O., et al. (1998). Mol. Cell. Biochem. 184 (1-2): 141-51.

Pictures:



15% SDS-PAGE (3ug)