# Recombinant Human Creatine kinase U-type, mitochondrial (CKMT1A)

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| **Product Code** | CSB-MP005460HU |
| **Storage** | Store at -20°C, for extended storage, conserve at -20°C or -80°C. |
| **Uniprot No.** | P12532 |
| **Product Type** | Recombinant Protein |
| **Immunogen Species** | Homo sapiens (Human) |
| **Purity** | >85% (SDS-PAGE) |
| **Sequence** | A SERRRLYPPS AEYPDLRKHN NCMASHLTPA VYARLCDKTT PTGWTLDQCI QTGVDNPGHP FIKTVGMVAG DEETYEVFAD LFDPVIQERH NGYDPRTMKH TTDLDASKIR SGYFDERYVL SSRVRTGRSI RGLSLPPACT RAERREVERV VVDALSGLKG DLAGRYYRLS EMTEAEQQQL IDDHFLFDKP VSPLLTAAGM ARDWPDARGI WHNNEKSFLI WVNEEDHTRV ISMEKGGNMK RVFERFCRGL KEVERLIQER GWEFMWNERL GYILTCPSNL GTGLRAGVHI KLPLLSKDSR FPKILENLRL QKRGTGGVDT AATGGVFDIS NLDRLGKSEV ELVQLVIDGV NYLIDCERRL ERGQDIRIPT PVIHTKH |
| **Source** | Mammalian cell |
| **Target Names** | CKMT1A |
| **Protein Names** | Recommended name: Creatine kinase U-type, mitochondrial EC= 2.7.3.2 Alternative name(s): Acidic-type mitochondrial creatine kinase Short name= Mia-CK Ubiquitous mitochondrial creatine kinase Short name= U-MtCK |
| **Expression Region** | 40-417 |
| **Notes** | Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week. |
| **Tag Info** | Tag type will be determined during the manufacturing process. |
| **Protein Length** | Full Length of Mature Protein |
| **Target Details** | 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. Ubiquitous mitochondrial creatine kinase has 80% homology with the coding exons of sarcomeric mitochondrial creatine kinase. Two genes located near each other on chromosome 15 have been identified which encode identical mitochondrial creatine kinase proteins. |
| **Reconstitution** | We recommend that this vial be briefly centrifuged prior to opening to bring the |

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| | contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference. |
| **Shelf Life** | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.<br>Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C. |