Creatine Kinase (CKB) Recombinant Protein

PRODUCT OVERVIEW

Product Name	Creatine Kinase (CKB), Recombinant Protein
Full Product Name	Recombinant Creatine Kinase, Brain (CKB)
Product Gene Name	CKB recombinant protein
Host	Host: E Coli Source: Prokaryotic expression
Form/Format	Supplied as lyophilized form in PBS, pH7.4, containing 5% trehalose, 0.01% sarcosyl.
Purity/Purification	>95%
Preparation and Storage	Storage: Avoid repeated freeze/thaw cycles. Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Stability Test: The thermal stability is described by the loss rate of the targetprotein. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation andprecipitation were observed. The loss of this protein is less than 5% within the expiration date under appropriate storage condition.
Molecular Weight	50,421 Da
OMIM	123290
Supply Chain Verification	Manufactured in a lab with traceable raw materials. Bulk orders can typically be prepared to the customer's specifications, please inquire.
Accurate Molecular Mass (KD)	47kDa
Endotoxin	<1.0EU per 1ug (determined by the LAL method)
Organism Species	Mus musculus (Mouse)
Fragment	Lys11~Leu367
Usage	Reconstitute in sterile PBS, pH7.2-pH7.4.
ISO Certification	Manufactured in an ISO 9001:2015 and ISO 13485:2016 Certified Laboratory.
Applications Tested/Suitable for CKB recombinant protein	SDS-PAGE, Western Blot (WB), ELISA (EIA), Immunoprecipitation (IP)
Related Product Information for CKB recombinant protein	MBS2030015 is a recombinant protein targeting CKB. Also known as Recombinant Creatine Kinase, Brain (CKB). Host: E Coli Source: Prokaryotic expression.
Other Notes	Small volumes of CKB recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CKB. It may not necessarily be applicable to this product.

NCBI GI #	180590
NCBI GeneID	1159
NCBI Accession #	AAA98744.1

UniProt Secondary Accession #	Q0VAM3; Q32NF6; Q53FC4; B4DIT8; B7ZA09
UniProt Related Accession #	P12532
NCBI Official Full Name	creatine kinase
NCBI Official Synonym Full Names	creatine kinase, mitochondrial 1B
NCBI Official Symbol	CKMT1B
NCBI Official Synonym Symbols	CKMT; CKMT1; UMTCK
UniProt Protein Name	Creatine kinase U-type, mitochondrial
UniProt Synonym Protein Names	Acidic-type mitochondrial creatine kinase; Mia-CK; Ubiquitous mitochondrial creatine kinase; U-MtCK
Protein Family	Creatine kinase
UniProt Gene Name	CKMT1A
UniProt Synonym Gene Names	CKMT; Mia-CK; U-MtCK
UniProt Entry Name	KCRU_HUMAN
NCBI Protein Information	creatine kinase U-type, mitochondrial
NCBI Summary for CKB	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. [provided by RefSeq, Jul 2008]
UniProt Comments for CKB	CKMT1A: Reversibly catalyzes the transfer of phosphate between ATP and various phosphogens (e.g. creatine phosphate). Creatine kinase isoenzymes play a central role in energy transduction in tissues with large, fluctuating energy demands, such as skeletal muscle, heart, brain and spermatozoa. Belongs to the ATP:guanido phosphotransferase family. Exists as an octamer composed of four MTCK homodimers. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Mitochondrial; Kinase, other; Amino Acid Metabolism - arginine and proline; EC 2.7.3.2 Chromosomal Location of Human Ortholog: 15q15 Cellular Component: mitochondrion; mitochondrial inner membrane Molecular Function: creatine kinase activity; ATP binding Biological Process: creatine metabolic process; phosphorylation
Research Articles on CKB	**1.** LRRK2 can interact directly with uMtCK to block its entry into mitochondria and its subsequent processing.
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