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Recombinant Human Creatine Kinase, Muscle (CKM)

Catalog No.	Size	Species	Protein Accession No.
230-00038	10, 50, 100 µg	Human	P06732

Synonyms

Creatine kinase, muscle; creatine kinase-M; creatine kinase M chain; CKMM; creatine kinase M-type.

Description

Creatine Kinase, Muscle (CKM) is a cytoplasmic enzyme reversibly catalyzing the transfer of phosphate between ATP and various phosphogens (e.g. creatine phosphate). CKM protein belongs to ATP: guanido phosphotransferase protein family. It only presents in skeletal and cardiac muscle tissues at high levels. CKM involves in energy transduction and is an important serum marker for myocardial infarction.

Source

Recombinant protein, purified from *E. coli*.

Preparation

The gene encoding the full length of human CKM protein was cloned and expressed in *Escherichia coli*. The recombinant CKM protein was purified by proprietary chromatographic techniques.

Predicted Molecular Mass

~ 45 kDa.

Purity

>95%, determined by SDS-PAGE and stained with Coomassie blue (See image on the right).



Formulation & Reconstitution

- Fine white powder, lyophilized.

- Recombinant CKM was lyophilized from a 0.2 µm filtered solution of 40 mM Tris-HCl (pH 8.2) and 50 mM NaCl with a protein concentration of 1.1 mg/mL.

- It is recommended to briefly spin the vial prior to opening, bring the contents to the bottom, and reconstitute the lyophilized product with sterile 18 MΩ-cm deionized water or your desired buffer, but avoiding the neutral pH buffer since the approximate isoelectric point (pI) of CKM is 7.1.

Stability & Storage

- Lyophilized product is stable at room temperature for 3 weeks, it is recommended to be stored desiccated below -20°C in a manual defrost freezer.
- Upon reconstituted, the protein should be stored at 4°C for one week. For long term storage, it is recommended to add a carrier protein (0.1% HSA or BSA) and store at -20 or -80°C. **Please avoid repeated freeze-thaw cycles.**

References

- Perryman M.B., et al. (1986) Isolation and sequence analysis of a full-length cDNA for human M creatine kinase. *Biochem. Biophys. Res. Commun.* 140:981-989.
- Trask R.V., et al. (1988) Developmental regulation and tissue-specific expression of the human muscle creatine kinase gene. *J. Biol. Chem.* 263:17142-17149.
- Johnson JE, et al. (1989) Muscle creatine kinase sequence elements regulating skeletal and cardiac muscle expression in transgenic mice. *Mol Cell Biol.* 9(8):3393-9.
- Hamburg R.J., et al. (1990) Muscle creatine kinase isoenzyme expression in adult human brain. *J. Biol. Chem.* 265:6403-6409.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**