Creative Enzymes®

Native Bovine Creatine Phosphokinase

Cat. No. NATE-0136

Lot. No. (See product label)

Introduction

Description Creatine kinase plays a key role in the energy metabolism of cells with intermittently high and fluctuating energy requirements. Examples of such cells include cardiac or skeletal muscle cells and neural tissues of brain and retina. The enzyme catalyzes the reversible transfer of the phosphoryl group from phosphorylcreatine to ADP, in order to generate ATP.1 The molecular mass of the protein is found to be approximately 80 kDa Da. It is made up of 2 subunits, each having a molecular weight of 40 kDa ± 2000. The lighter subunit is present in larger amounts.

Applications Creatine phosphokinase from bovine heart has been used to investigate whether endothelial cell growth is stimulated by ischemic hearts. Creatine phosphokinase from bovine heart has also been used to evaluate the effect of high but nontoxic dietary intake of copper and selenium on metabolism in calves. The product has been used for tATPase assay of myofibrillar protein isolated from rabbit. This assay evaluated the kinetic influence of bound creatine kinase (CK) on Ca2+-activated myosin ATPase. The product has also been used for the enzymatic hydrolysis of protein samples during tryptophan estimation by pyrolysis gas chromatography.

Synonyms EC 2.7.3.2; ATP:creatine phosphotransferase; CK; CPK; MM-CK; MB-CK; BB-CK; creatine phosphokinase; creatine phosphotransferase; phosphocreatine kinase; adenosine triphosphate-creatine transphosphorylase; Mi-CK; CK-BB; CK-MM; CK-MB; CKMiMi; MiMi-CK; 9001-15-4

Product Information

Species Bovine

Source Bovine heart

Form salt-free, lyophilized powder.

EC Number EC 2.7.3.2

CAS No. 9001-15-4

Activity > 30 units/mg protein

Unit Definition One unit will transfer 1.0 µmole of phosphate from phosphocreatine to ADP per min at pH 7.4 at 30°C.

Storage and Shipping Information

Storage −20°C