
Product Data Sheet

Product Name: AK1 Human
 Cat. No.: GP22411
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Adenylate kinase isoenzyme 1; AK 1; ATP-AMP transphosphorylase 1; Myokinase; AK1.		
Amino Acid Sequence	MGSSHHHHHH SSGLVPRGSH MEEKLKKTKI IFVVGPGSG KGTQCEKIVQ KYGYTHLSTG DLLRSEVSSG SARGKKLSEI MEKGQLVPLE TVLDMLRDAM VAKVNTSKGF LIDGYPREVQ QGEEFERRIG QPTLLLYVDA GPETMTQRLL KRGETSGRVD DNEETIKKRL ETYYKATEPV IAFYEKRGIV RKVNAEGSVD SVFSQVCTHL DALK.		
Formulation	The AK1 protein solution (1mg/ml) contains 20mM Tris-HCl pH-7.5 and 10% glycerol.		

Introduction

AK1 is a small ubiquitous enzyme which is essential for maintenance and cell growth. It is involved in the regulation of adenine nucleotide composition within a cell by catalyzing the reversible transfer of the terminal phosphate group between ATP and AMP. The AK1 protein is found in the cytosol of skeletal muscle, brain and erythrocytes. Defects in the AK1 gene are the cause of a form of hemolytic anemia.

Biological Activity

Specific activity: > 600 units/mg. One unit will convert 2.0 umoles of ADP to ATP + AMP per minute at pH 7.5 at 25°C.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Caution: Product has not been fully validated for medical applications. For research use only.

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Background

AK1 Human Recombinant fused with a 20 amino acid His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 214 amino acids (1-194 a.a.) and having a molecular mass of 23.7kDa. The AK1 is purified by proprietary chromatographic techniques.

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