

Recombinant mouse AK1 protein

Catalog Number: ATGP3700

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-210aa

UniProt No.

Q9R0Y5

NCBI Accession No.

NP_067490.1

Alternative Names

Adenylate kinase isoenzyme 1, Adenylate kinase 1, ATP-AMP transphosphorylase 1, ATP:AMP phosphotransferase, Adenylate monophosphate kinase 1, Myokinase,

PRODUCT SPECIFICATION

Molecular Weight

25.5 kDa (233aa) confirmed by MALDI-TOF

Concentration

0.5mg/ml (determined by absorbance at 280nm)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol, 1mM DTT

Purity

> 90% by SDS-PAGE

Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity

Specific activity is > 150unit/mg. One unit will convert 2.0 umoles of ADP to ATP + AMP per minute at pH 7.5 at 37C.

Tag

His-Tag

Application

SDS-PAGE, Enzyme Activity

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

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BACKGROUND

Description

Ak1, also known as Adenylate kinase isoenzyme 1 isoform 1, is an enzyme involved in regulating the adenine nucleotide composition within a cell by catalyzing the reversible transfer of the terminal phosphate group between ATP and AMP. This protein is found in the cytosol of skeletal muscle, brain and erythrocytes. It is a small ubiquitous enzyme which is essential for maintenance and cell growth. Defects in Ak1 are the cause of a form of hemolytic anemia. Recombinant mouse Ak1 protein, fused to His-tag at N-terminus, was expressed in *E. coli* and purified by using conventional chromatography techniques.

Amino acid Sequence

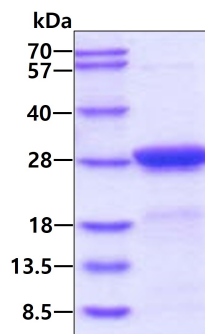
<MGSSHHHHHH SGLVPRGSH MGS>MGCCVSS EPQEEGGRKT GEKLKKAKII FVVGPGSGK GTQCEKIVQK
YGYTHLSTGD LLRAEVSSGS ERGKLSAIM EKGELVPLDT VLDMLRDAML AKVDSSNGFL IDGYPREVKQ GEEFEQKIGQ
PTLLLYVDAG AETMTQRLLK RGETSGRVDD NEETIKRLE TYYNATEPVI SFYDKRGIVR KVNAEGTVDT VFSEVCTYLD SLK

General References

Dzeja PP., et al. (2007) *J Biol Chem.* 282(43):31366-72.
Ravera S., et al., (2015) *Curr Eye Res.* 32(3):249-57.

DATA

SDS-PAGE



3 μ g by SDS-PAGE under reducing condition and visualized by coomassie blue stain.