

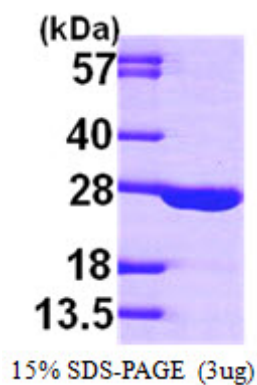
AR09708PU-N

Human Adenylate kinase 1 / AK1 (1-194, His-tag) - Purified

Alternate names:	ATP-AMP transphosphorylase 1, Myokinase
Quantity:	0.1 mg
Concentration:	1.0 mg/ml (determined by Bradford assay)
Background:	AK1 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.
Uniprot ID:	P00568
NCBI:	NP_000467
GeneID:	203
Species:	Human
Source:	E. coli
Format:	State: Liquid purified protein Purity: >95% Buffer System: 20 mM Tris-HCl Buffer (pH 7.5) containing 10% Glycerol
Description:	Recombinant human AK1 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography. AA Sequence: MGSSHHHHH SSGLVPRGSH MEEKLKKTKI IFVVGPGSG KGTQCEKIVQ KYGYTHLSTG DLLRSEVSSG SARGKKLSEI MEKGQLVPLE TVLDMLRDAM VAKVNTSKGF LIDGYPREVQ QGEEFERRIG QPTLLLYVDA GPETMTQRLI KRGETSGRVD DNEETIKKRL ETYYKATEPV IAFYEKRGIV RKNVAEGSVD SVFSQVCTHL DALK Specific Activity: > 6.0 units/ml. One unit will convert 2.0 umoles of ADP to ATP + AMP per minute at pH 7.5 at 25°C. Molecular weight: 23.7 kDa (214aa) confirmed by MALDI-TOF
Storage:	Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer. Avoid repeated freezing and thawing. Shelf life: one year from despatch.
General Readings:	Terzic A., et al. (2007) J Biol Chem. 282(43):31366-72. Morelli A., et al (2007) Curr Eye Res. 32(3):249-57.
Protocols:	Activity Assay 1. Prepare 1.4 ml assay buffer (Assay buffer: 58 mM glycylglycine, 2.0 mM adenosine 5'-diphosphate, 2.3 mM beta-nicotinamide adenine dinucleotide phosphate, 10 mM magnesium chloride, 10 mM glucose, 2 unit hexokinase, 1 unit glucose-6-phosphate dehydrogenase, 0.003% (w/v) BSA, pH 7.5) - G-6-PDH/Hex (sigma, Cat.No. H-8629) 2. Add 50 ul of recombinant AK1 protein with various concentrations (0.5ug, 1ug) and

read the increase in A340nm for 5 minutes.

Pictures:



Recombinant human AK1, 1-194aa, His-tagged

