

## Adenylate kinase 2, 1- 239 aa

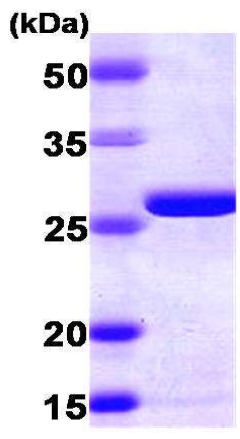
Human, His-tagged, Recombinant, *E.coli*

Cat. No. IBADK0901

**Synonyms:** AK2, ADK2

**NCBI Accession No.:** NP\_001616

**Description:** Adenylate kinase (AK; adenosine triphosphate-adenosine monophosphate [ATP-AMP] phosphotransferase, EC 2.7.4.3) is a ubiquitous monomeric enzyme involved energy metabolism of prokaryotic and eukaryotic cells. Three isozymes (AK1, AK2 and AK3) are characterized in vertebrates. Expression of these isozymes is tissue-specific and developmentally regulated. AK2 is localized in the mitochondrial intermembrane space and may play a role in apoptosis. Recombinant human AK2 protein, fused to His-tag at N-terminus, was expressed in *E.coli* and purified by using conventional chromatography techniques.

<p><b>Form:</b> Liquid. In 20 mM Tris-HCl buffer (pH 7.5) containing 5 mM DTT, 20% glycerol</p> <p><b>Molecular Weight:</b> 28.6 kDa (259 aa), confirmed by MALDI-TOF</p> <p><b>Purity:</b> &gt; 95% by SDS - PAGE</p> <p><b>Concentration:</b> 1 mg/ml (determined by Bradford assay)</p> <p><b>Endotoxin Level:</b> &lt; 1.0 EU per 1 µg of protein (determined by LAL method)</p> <p><b>Biological Activity:</b> Specific activity: &gt; 1.5 units/ml.</p> <p>One unit will convert 2.0 umoles of ADP to ATP + AMP per minute at pH 7.5 at 25C.</p>	 <p>(kDa)</p> <p>50</p> <p>35</p> <p>25</p> <p>20</p> <p>15</p> <p>15% SDS-PAGE (3ug)</p>
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### Sequences of amino acids:

MGSSHHHHHH SSGLVPRGSH MAPSVPAEPEY PKGIRAVL LGPPGAGKGT QAPRLAENFC VCHLATGDML RAMVASGSEL GKCLKATMDA  
GKLVSDMENVV ELIEKNLETP LCKNGFLLDG FPRTVRQAEM LDDLMEKRKE KLDSVIEFSI PDSLLIRRIT GRLIHPKSGR SYHEEFNPPK  
EPMKDDITGE PLIRRSSDNE KALKIRLQAY HTQTPLIEY YRKRGIHSAI DASQTPDVVF ASILAAFSKA TCKDLVMFI

### Activity Assay

1. Prepare a 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 50ul of recombinant Adenylate kinase isoenzyme 2 protein with various concentrations (0.5ug, 1ug) and read

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# Product information

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the increase in A340nm for 5 minutes.

## General references:

Kohler C., *et al.* (1999). *FEBS Lett.* **447**(1):10-2

Lee Y., *et al.* (1998). *J Biol Chem.* **123**(1):47-54

**Storage:** Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C.  
Avoid repeated freezing and thawing cycles.

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