

Recombinant Human Adenylate Kinase 3-like 1, His-tagged

Cat. No. AK3L1-102H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human AK3, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques (259 aa, 29.3 kDa).
Species	Human
Source	E.coli
Description	Adenylate kinase (AK; adenosine triphosphate-adenosine monophosphate [ATP-AMP] phospho-transferase, EC 2.7.4.3) is a ubiquitous monomeric enzyme involved energy metabolism of prokaryotic and eukaryotic cells. Five isozymes of adenylate kinase have been identified in vertebrates. AK1 is present in the cytosol of skeletal muscle, brain, and erythrocyte, while AK2 is localized in the intermembrane space of mitochondria of liver, kidney, spleen and heart. AK3, called GTP: AMP phosphotransferase, exists in the mitochondrial matrix of liver and heart. These isozymes contribute to homeostasis of the adenine nucleotide composition in the cell.
Formulation	Liquid. In 20 mM Tris-HCl buffer (pH 8.0) containing 2 mM DTT, 20% glycerol.
Molecular Weight	29.3 kDa (259 aa).
Purity	> 90% by SDS – PAGE.
Concentration	1 mg/ml (determined by Bradford assay).
Sequence	MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSMASK LLRAVILGPP

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GSGKGTVSQR IAQNFGQLQHL SSGHFLRENI KASTEVGEMA KQYIEKSLLV
 PDHVITRLMM SELENRRGQH WLLDGFPRTL GQAEALDKIC EVDLVISLNI
 PFETLKDRLS RRWIHPPSGR VYNLDFNPPH VHGIDDTVGE PLVQQEDDKP
 EAVAARLRQY KDVAKPVIEL YKSRGVLHQF SGTETNKIWP YVYTLFSNKI
 TPIQSKEAY

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.

GENE INFORMATION
Gene Name

[AK3L1](#)

Synonyms

AK3L1; adenylate kinase 3-like 1; AK3L1 adenylate kinase 3-like 1; AK3; AK4; MGC166959; EC 2.7.4.3; OTTHUMP00000010594; ATP-AMP transphosphorylase; GTP:AMP phosphotransferase; Adenylate kinase 3-like; adenylate kinase 3; mitochondrial adenylate kinase-3; nucleoside-triphosphate-adenylate kinase.

Gene ID

[205](#)

mRNA Refseq

[NM_001005353.1](#)

Protein Refseq

[NP_001005353.1](#)

MIM

[103030](#)

UniProt ID

[P27144](#)

**Chromosome
Location**

1p31.3

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Pathway	Purine metabolism
Function	ATP binding; GTP binding; adenylate kinase activity; nucleotide binding; transferase activity
PDBrendering based on 2ar7. Available structures: 2ar7, 2bbw.	