

## Product datasheet for **AR09708PU-L**

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

#### Product data:

Product Type:	Recombinant Proteins
Description:	Adenylate kinase 1 / AK1 (1-194, His-tag) human recombinant protein, 0.5 mg
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	<u>MGSSHHHHHH SGLVPRGSH</u> MEEKLKKTKI IFVGGPGSG KGTQCEKIVQ KYGYTHLSTG DLLRSEVSSG SARGKKLSEI MEKGQLVPLE TVLDMLRDAM VAKVNTSKGF LIDGYPREVQ QGEEFERRIG QPTLLLYVDA GPETMTQRL KRGETSGRVD DNEETIKKRL ETTYKATEPV IAFYEKRGIV RKNVNAEGSVD SVFSQVCTHL DALK
Tag:	His-tag
Predicted MW:	23.7 kDa
Concentration:	lot specific
Purity:	>95%
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: 20 mM Tris-HCl Buffer (pH 7.5) containing 10% Glycerol
Bioactivity:	Specific: > 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.
Preparation:	Liquid purified protein
Applications:	Protocol: <b>Activity Assay</b> 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.
Protein Description:	Recombinant human AK1 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography.



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<b>Storage:</b>	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.
<b>Stability:</b>	Shelf life: one year from despatch.
<b>RefSeq:</b>	<a href="#">NP_000467</a>
<b>Locus ID:</b>	203
<b>UniProt ID:</b>	<a href="#">P00568</a> , <a href="#">Q6FGX9</a>
<b>Cytogenetics:</b>	9q34.11
<b>Synonyms:</b>	HTL-S-58j
<b>Summary:</b>	This gene encodes an adenylate kinase enzyme involved in energy metabolism and homeostasis of cellular adenine nucleotide ratios in different intracellular compartments. This gene is highly expressed in skeletal muscle, brain and erythrocytes. Certain mutations in this gene resulting in a functionally inadequate enzyme are associated with a rare genetic disorder causing nonspherocytic hemolytic anemia. Alternative splicing of this gene results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Dec 2015]
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Metabolic pathways, Purine metabolism

**Product images:**