

Adenylate Kinase 1 Protein, Human, Recombinant (His)

General Information

Synonyms:	HTL-S-58j;adenylate kinase 1
Protein Construction:	A DNA sequence encoding the human AK1 (AAH01116.1) (Met 1-Lys 194) was expressed, with a polyhistide tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	AAH01116.1
Molecular Weight:	23.5 kDa (predicted); 25 kDa (reducing conditions)

QC Testing

Biological Activity:	Kinase activity untested
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Supplied as sterile PBS, 10% glycerol, pH 7.5.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

The adenylate kinase (AK) isoforms network plays an important role in the intracellular energy transfer processes, the maintenance of energy homeostasis, and it is a major player in AMP metabolic signaling circuits in some highly-differentiated cells. Three other biomarkers (AK1, CLIC1, and SOD1) were significantly increased in both adenoma and early colorectal cancer patient plasma samples and in plasma from colorectal cancer mouse models at preclinical stages compared with controls. Which can contribute to the detection of early-stage colorectal cancer and adenomas.

Reference

Lu Q,et al.(1996) Adenylate kinase complements nucleoside diphosphate kinase deficiency in nucleotide metabolism. Proc Natl Acad Sci. 93 (12): 5720-5.

Dzeja P,et al.(2009) Adenylate kinase and AMP signaling networks: Metabolic monitoring, signal communication and body energy sensing. Int J Mol Sci. 10 (4): 1729-72.

Lagresle-Peyrou C,et al.(2008) Human adenylate kinase 2 deficiency causes a profound hematopoietic defect associated with sensorineural deafness. Nature Genetics. 41: 106 - 11.

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