

## DARS Protein, Human (His)

Cat. No.:	HY-P75309
Synonyms:	Aspartate--tRNA ligase, cytoplasmic; AspRS; DARS1; PIG40
Species:	Human
Source:	E. coli
Accession:	P14868 (M1-P501)
Gene ID:	1615
Molecular Weight:	Approximately 47 kDa

### PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution
Formulation	Supplied as a 0.2 µm filtered solution of 50 mM Tris, 100 mM NaCl, 10% Glycerol, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

### DESCRIPTION

#### Background

Adenylate Kinase 1 (AK1) protein plays a pivotal role in cellular energy homeostasis by catalyzing the reversible transfer of the terminal phosphate group between ATP and AMP. Additionally, it exhibits nucleoside diphosphate kinase activity, enabling the production of various nucleoside triphosphates, including ATP, CTP, GTP, UTP, dATP, dCTP, dGTP, and dTTP, from their corresponding diphosphate substrates, using either ATP or GTP as a phosphate donor. Furthermore, AK1, though at a very low rate, participates in the synthesis of thiamine triphosphate (ThTP) from thiamine diphosphate (ThDP) and ADP, showcasing its multifaceted enzymatic activities in nucleotide metabolism.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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