

Alanyl-tRNA synthetase Protein, Human (sf9, His)

Cat. No.:	HY-P75517
Synonyms:	Alanine--tRNA ligase, cytoplasmic; AlaRS; AARS1; AARS
Species:	Human
Source:	Sf9 insect cells
Accession:	P49588 (M1-N968)
Gene ID:	16
Molecular Weight:	Approximately 109.2 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μ m filtered solution of 20 mM PB, 500 mM NaCl, pH 7.0, 20% Glycerol. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Alanyl-tRNA synthetase, a key player in protein synthesis, orchestrates the attachment of alanine to tRNA(Ala) through a meticulous two-step process. Initially, alanine undergoes activation by ATP, leading to the formation of Ala-AMP. Subsequently, this activated alanine is diligently transferred to the acceptor end of tRNA(Ala). Beyond its primary aminoacylation function, Alanyl-tRNA synthetase exhibits a remarkable editing domain, allowing it to rectify incorrectly charged tRNA(Ala). This dual functionality underscores the critical role of Alanyl-tRNA synthetase in maintaining the accuracy and fidelity of the translation process, emphasizing its significance in cellular protein synthesis.
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Caution: Product has not been fully validated for medical applications. For research use only.

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