

Recombinant Human AARS Protein (Met1-Asn968), His-tagged

Cat. No. AARS-459H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human AARS Protein (NP_001596.2) (Met1-Asn968) was produced by Baculovirus-Insect Cells expression system. This protein was expressed with a polyhistidine tag at the N-terminus.

Species Human

Source Insect Cells

ProteinLength Met1-Asn968

Description Alanyl-tRNA synthetase (AARS) belongs to the family of ligases, specifically those forming carbon-oxygen bonds in aminoacyl-tRNA and related compounds. This enzyme participates in alanine and aspartate metabolism and aminoacyl-tRNA biosynthesis. Alanyl-tRNA synthetase (AlaRS) catalyzes synthesis of Ala-tRNA (Ala) and hydrolysis of mis-acylated Ser- and Gly-tRNA (Ala) at 2 different catalytic sites. Their role is not confined to catalyze the attachment of amino acids to transfer RNAs and thereby establish the rules of genetic code by virtue of matching the nucleotide triplet of anticodon with cognate amino acid. Under apoptotic conditions in cell culture, the full-length enzyme is secreted, and the two cytokine activities can be generated by leukocyte elastase, an extracellular protease. Secretion of this tRNA synthetase may contribute to apoptosis both by arresting translation and producing needed cytokines. This protein could be an attractive target of drugs against bacterial, fungal and parasitic infections.

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Predicted N Terminal	His
Form	Lyophilized from sterile 20 mM PB, 500 mM NaCl, pH 7.0, 20 % glycerol. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Molecular Mass	The recombinant human AARS consists of 987 amino acids and predicts a molecular mass of 109.2 kDa.
Endotoxin	< 1.0 EU per µg protein as determined by the LAL method.
Purity	> 85 % as determined by SDS-PAGE
Stability	Samples are stable for up to twelve months from date of receipt at -70 centigrade.
Storage	Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 mg/ml. Centrifuge the vial at 4°C before opening to recover the entire contents.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name [AARS alanyl-tRNA synthetase \[Homo sapiens \]](#)

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Official Symbol	AARS
Synonyms	AARS; cytoplasmic; alaRS; alanyl-tRNA synthetase, cytoplasmic; CMT2N;
Gene ID	16
mRNA Refseq	NM_001605
Protein Refseq	NP_001596
MIM	601065
UniProt ID	P49588

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