

Recombinant Human Alanyl-tRNA Synthetase 1

Catalog # FL104

Product Specifications

Appearance	Sterile filtered White lyophilized (freeze-dried) powder.
Purity	> 96% by SDS-PAGE or HPLC.
Expression System	Expressed in E. coli.
Species	Human
Tag	Tag free.
Formulation	A 0.2 µm filtered concentrated solution in 20 mM PB, with 150 mM NaCl, 50% (v/v) Glycerol, pH 7.4.
Reconstitution	Before use this product, please read the direction below carefully. This vial must be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.
Accession #	P49588 Met1-Asn968 with a C-terminal flag tag
Amino acid sequence	MDSTLTASEIRQRFIDFFKRNEHTYVHSSATIPLDDPTLLFANAGMNQFKPIFLNTIDPSHPMAKLSRAANTQKCI RAGGKHN DLDDVGKDVYHHTFFEMLGSWSF GDYFKELACKMALELLTQEFGIPIERLYVTYFGGDEAAGLEADLECKQIWQNLGLDDT KILPGNMKDNFWE MGDTPGPCPCSEIHYDRIGGRDAAHLVNQDDPNVLEIWNLFVIQYNREADGILKPLPKSIDTGMGLE RLVSVLQNKMSNYD TDLFV P YFEAIQKGTGARPYTGKVGAEADADGIDMAYRVLADHARTITVALADGGRPDNTGRGYVLR RILRRAVRYAHEKLNASRGFFATLVDVVVQSLGDAFPELKKDPMVKDIINEEEVQFLKTL SRGRRILDRKIQSLGDSKTIPG DTAWLLYD TYGFPVDLTGLIAEEKGLVVDMDGFEEERKLAQLKSQGGAGGEDLIMLDIYAIEELRARGLEVTD DDPKYNY HLDSSGSYVFENTVATVMALRREKMFVEEVSTGQECGVVLDKTCFYAEQGGQIYDEGYLVKVD DSSSEDKTEFTVKNAQVR GGYVLHIGTIYGD LKVG DQVWLFIDEPRRRPIMSNHTATHILNFALRSVLGEADQKGS LVAPDRLRFDF TAKGAMSTQQIKK AEEIANEMIEAAKAVYTQDCPLAAAKAIQGLRAVFDETY PDPVRVVSIGVPSSELLDDPSGPAGSLTSVEFCGGTHLRNSSHA GAFVIVTEEAIK GIRRIVAVTGAEAQKALRKAESLKKCLSVMEAKVKAQTAPNKDVQREIADLGEALATAVIPQWQDELRE TLKSLKKVMDDLD RASKADVQKRVLEKTKQFIDSNPNQPLVILEMESGASAKALNEALKLFKMHSPT SAMLFTVDNEAGK ITCLCQVPQNAANRGLKASEWVQVQVSGLMDGKGGGKDVS AQATGKNV GCLQEALQLAT SFAQLRLGDVKNGGGS DYKD DDK
Molecular weight	Approximately 107.94 kDa, a single chain containing 979 amino acids.
Synonyms	AARS, PL-12
Stability & Storage	Shipped on wet ice. For long term storage, the product should be stored ≤ -20°C. Please avoid repeated freeze-thaw cycles after reconstitution. 36 months from date of receipt, -20 to -70°C as supplied. 1 month, 2 to 8°C under sterile conditions after reconstitution. 3 months, -20 to -70°C under sterile conditions after reconstitution.
Precautions	Recombinant Human Alanyl-tRNA Synthetase 1 is for research use only and not for use in diagnostic or therapeutic procedures.

Background

The human alanyl-tRNA synthetase (AARS) belongs to a family of tRNA synthetases, of the class II enzymes. Class II tRNA synthetases evolved early in evolution and are highly conserved. This is reflected by the fact that 498 of the 968-residue polypeptides human AARS shares 41% identity with the E. coli protein. tRNA synthetases are the enzymes that interpret the RNA code and attach specific amino acids to the tRNAs that contain the cognate trinucleotide anticodons. They consist of a catalytic domain which interacts with the amino acid acceptor-T ψ C helix of the tRNA, and a second domain which interacts with the rest of the tRNA structure. Recombinant Human AARS1 is a 107.94kDa protein globular protein containing 979 amino acid with a C-terminal flag tag.

