



## Human Alanyl-tRNA Synthetase (PL-12)

<b>Origin:</b>	Recombinant	<b>Cat. No.:</b>	41490
<b>Tag:</b>	N-terminal 6xHis	<b>Size:</b>	0.1 mg
<b>Source:</b>	<i>Spodoptera frugiperda</i> Sf9	<b>Purity:</b>	>85%
<b>Other Names:</b>	AARS	<b>Species:</b>	Human

### Description

Expressed in insect Sf9 cells with total 992 AA. Mw: 109.8 KDa (calculated). N-terminal 6xHis-tag and TEV cleavage site, 25 extra AA (highlighted).

**Recombinant antigen for research use or manufacturing only.**

### Introduction to the Molecule

During mRNA translation at ribosomes, specific amino-acyl-tRNA synthetases are required for the covalently attachment between tRNAs and different amino acids. Alanyl -tRNA synthetase (AARS, PL-12) is specific for the amino acid alanine. PL-12 is recognized by PL-12 autoantibodies which is present in a subset of patients with polymyositis and dermatomyositis.

### Immunological Function

As an autoantigen, PL-12 binds with IgG-type human auto-antibodies.

### Amino Acid Sequence

**MSYYHHHHHDYDIPTTENLYFQGA**DSTLTASEIRQRFIDFFKRNEHTYVHSSATIPLDDPT  
LLFANAGMNQFKPIFLNTIDPSHPMAKLSRAANTQKCIRAGGKHNDLDDVGKDVYHHTFFEML  
GSWSFGDYFKELACKMALELLTQEFGIPIERLYVTYFVGDEAAGLEADLECKQIWQNLGLDDTK  
ILPGNMKDNFWEMGDTGPCGPCSEIHYDRIGGRDAAHLVNQDDPNVLEIWNLVFIQYNREAD  
GILKPLPKKSIDTGMGLERLVSVLQNKMSNYDSDLFVPHYFAIQKGTGARPYTGKVGAEADGI  
DMAYRVLADHARTITVALADGGRPDNTGRGYVLRILRRAVRYAHEKLNASRGFFATLVDVVVQ  
SLGDAFPELKKDPMVKDIINEEEVQFLKTLRGRRIIDRKIQLGDSKTIIPGDTAWLLYDITYGF  
PVDLTGLIAEEKGLVVDMDGFEEERKLAQLKSQKGAGGEDLIMLDIYAIEELRARGLEVTDSD  
PKYNYHLDSSGSYVFENTVATVMALRREKMFVEEVSTGQECGVLDKTCFYAEQGGQIYDEGY  
LVKVDSSSEDKTEFTVKNAQVRGGYVLHIGTIYGDLKVGQVWLFIDEPRRRPIMSNHTATHIL  
NFALRSVLGEADQKGSVLVAPDRLRFDFDTAKGAMSTQQIKKAEIEMIEAAKAVYTQDCPLAA  
AKAIQGLRAVFDETYDPVRRVVSIGVPVSELLDDPSGPAGSLTSVEFCGGTHLRNSSHAGAFVI  
VTEEAIAKGIRRIVAVTGAEAQKALRKAESLKKCLSVMEAKVKAQTAPNKDVQREIADLGEALAT  
AVIPQWQKDELRETLKSLKKVMDDLDRASKADVQKRVLEKTKQFIDSNPNQPLVILEMESGAS  
AKALNEALKLFKMHSPTSAMLFTVDNEAGKITCLCQVPQNAANRGLKASEWVQQVSGLMGDG  
KGGGKDVSAQATGKNVGLQEQALQLATSFAQLRLGDVKN

### Applications

Standard ELISA test, line/dot assay and microarray assay with positive/negative sera panels.





### Formulation

Liquid in storage buffer (50mM Tris, 300-500mM NaCl, 10% Glycerol, Protease inhibitor, pH8.0).

### Storage

Store at -80°C. Avoid repeated freezing /thawing cycles.

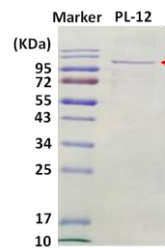
### Quality Control Test

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

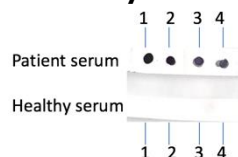
Immunodot analysis to determine functionality of protein.

### SDS-PAGE Gel



### Dot blot assay

**Dot blot analysis of PL-12**



Analysis of serum from healthy subjects and patients. Recombinant autoantigens were utilized in this dot-blot assay for validation

### Contact Us

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