



## Human Threonyl-tRNA Synthetase (PL-7)

<b>Origin:</b>	Recombinant	<b>Cat. No.:</b>	41480
<b>Tag:</b>	N-terminal 6xHis	<b>Size:</b>	0.1 mg
<b>Source:</b>	<i>Spodoptera frugiperda</i> Sf9	<b>Purity:</b>	>90%
<b>Other Names:</b>	TARS, PL 7, PL7	<b>Species:</b>	Human

### Description

Expressed in insect Sf9 cells with total 747 AA. Mw: 86.4 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. Threonyl-tRNA synthetase (TARS, PL-7) is specific for the amino acid threonine. PL-7 is recognized by PL-7 autoantibodies which is present in a subset of patients with polymyositis and dermatomyositis.

### Immunological Function

As an autoantigen, PL-7 binds with IgG-type human auto-antibodies.

### Amino Acid Sequence

**MSYYHHHHHDYDIPTTENLYFQGA**FEEKASSPSGKMGGEEKPIGAGEEKQKEGGKKKN  
KEGSGDGGRAELNPWPEIYTRLEMYNILKAEHDSILA EKA EKDSKPIKVTL PDGKQVDAESWK  
TTPYQIACGISQGLADNTVIAKVNNVWDLDRPLEEDCTLELLKFEDEEAQAVYWHSSAHIMGE  
AMERVYGGCLCYGPIIENGFFYDMYLEEGGVSSNDFSSLEALCKKIIKEKQAFERLEVKKETLLA  
MFKYNKFKCRILNEKVNTPTTTVYRCGPLIDLRCGPHVRHTGKIKALKIHKNSSTYWEGKADME  
TLQRIYGISFPDPKMLKEWEKFQEEAKNRDHRKIGRDQELYFFHELSPGSCFFLPKGAYIYNALIE  
FIRSEYRKRGFQEVVTPNIFNSRLWMTSGHWQH YSENMF SFEVEKELFALKPMNCPGHCLMFD  
HRPRSWRELPLRLADFGVLHRNELSGALTGLTRVRRFQQDDAHIFCAMEQIEDEIKGCLDFLRT  
VYSVFGFSFKLNLSTRPEKFLGDIEVWDQAEKQLENSLNEFGEKWELNSGDGAFYGP KIDIQIK  
DAIGRYHQCATIQ LDFQLPIRFNLTYVSHDGD DKKRPVIVHRAILGSVERMIAILTENYGGKWP  
WLSRQVMVVPVGP TCDEYAQKVRQQFHD AKFMADIDLDPGCTLNKKIRNAQLAQYNFILVVG  
EKEKISGTVNIRTRDNKVH GERTISETIERLQQLKEFRSKQAEEEF

### 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.

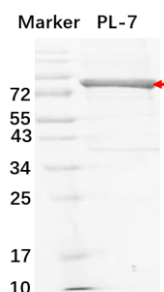
### Quality Control Test

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

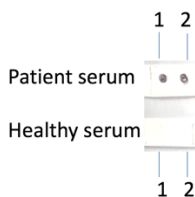
Immunodot analysis to determine functionality of protein.

### SDS-PAGE Gel



### Dot blot assay

**Dot blot analysis of PL-7**



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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