

## Product datasheet for **RG218539**

### Tryptophanyl tRNA synthetase (WARS) (NM\_213645) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Tryptophanyl tRNA synthetase (WARS) (NM_213645) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	WARS1
Synonyms:	GAMMA-2; HMN9; IFI53; IFP53; WARS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG218539 representing NM\_213645  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCCAACAGTGAGCCGCATCTCTGCTGGAGCTGTTCAACAGCATCGCCACACAAGGGGAGCTCGTAA  
 GGTCCCTCAAAGCGGAAATGCGTCAAAGGATGAAATTGATTCTGCAGTAAAGATGTTGGTGCATTAAA  
 AATGAGCTACAAAGCTGCCGCGGGGAGGATTACAAGGCTGACTGTCTCCAGGGAACCCAGCACCTACC  
 AGTAATCATGGCCAGATGCCACAGAAGCTGAAGAGGATTTTGTGGACCCATGGACAGTACAGACAAGCA  
 GTGCAAAAGGCATAGACTACGATAAGCTCATTGTTTCGGTTTGAAGTAGTAAAATTGACAAAAGAGCTAAT  
 AAACCGAATAGAGAGAGCCACCGGCCAAAGACCACCACTTCTGCGCAGAGGCATCTTCTTCACAC  
 AGAGATATGAATCAGGTTCTTGATGCCTATGAAAATAAGAAGCCATTTTATCTGTACACGGGCCGGGCC  
 CCTCTTCTGAAGCAATGCATGTAGGTCACCTCATTCCATTTATTTTACAAAAGTGGCTCCAGGATGTATT  
 TAACGTGCCCTTGGTCATCCAGATGACGGATGACGAGAAGTATCTGTGGAAGGACCTGACCTGGACCAG  
 GCCTATAGCTATGCTGTGGAGAATGCCAAGGACATCATCGCTGTGGCTTTGACATCAACAAGACTTTCA  
 TATTCTCTGACCTGGACTACATGGGGATGAGCTCAGGTTTCTACAAAAATGTGGTGAAGATTCAAAAGCA  
 TGTTACCTTCAACCAAGTAAAAGGCATTTTCGGCTTCACTGACAGCGACTGCATTGGGAAGATCAGTTTT  
 CCTGCCATCCAGGCTGCTCCCTCCTCAGCAACTCATTCCACAGATCTTCCGAGACAGGACGGATATCC  
 AGTGCCTTATCCCATGTGCCATTGACCAGGATCCTTACTTTAGAATGACAAGGGACGTCGCCCCAGGAT  
 CGGCTATCCTAAACCAGCCCTGCTGCACTCCACCTTCTCCAGCCCTGCAGGGCCGACAGCAAAATG  
 AGTGCCAGCGACCCCACTCCTCCATCTTCTCACCAGCAGGCCAAGCAGATCAAAACCAAGGTCAATA  
 AGCATGCGTTTTCTGGAGGGAGAGACCATCGAGGAGCACAGGCAGTTTGGGGCACTGTGATGTGGA  
 CGTGTCTTTCATGTACCTGACCTTCTTCTCGAGGACGACGACAAGCTCGAGCAGATCAGGAAGGATTAC  
 ACCAGCGGAGCCATGCTACCGGTGAGCTCAAGAAGGCACTCATAGAGTTCTGCAGCCCTTGTATCGCAG  
 AGCACCAGGCCCGCGCAAGGAGGTCACGGATGAGATAGTAAAAGAGTTCATGACTCCCCGAAGCTGTC  
 CTTGACTTTTCAG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG218539 representing NM\_213645  
 Red=Cloning site Green=Tags(s)

MPNSEPASLLELFNSIATQGELVRSKAGNASKDEIDSAVKMLVSLKMSYKAAAGEDYKADCPPGNPAPT  
 SNHGPDTEAEEDFVDPWTVQTSSAKGIDYDKLIVRFGSSKIDKELINRIERATGQRPHHFLRRGIFFSH  
 RDMNQVLDAYENKPFYLYTGRGPSSEAMHVGHLPFIFTKWLQDVFNVPLVIQMTDDEKYLWKDLTLDQ  
 AYSYAVENAKDIIACGFDINKTFIFSDLDYMGSSGFYKNVVKIQKHVTFNQVKGIFGFTSDSICGKISF  
 PAIQAAPSFSNSFPQIFRDRDIIQCLIPCAIDQDPYFRMTRDVAPRIGYPKALLHSTFFPALQGAQTKM  
 SASDPNSSIFLTDQAKQIKTKVNHAFSGGRDTEEHRQFGNCDVDVSFMYLTFLEDDDKLEQIRKDY  
 TSGAMLTGELKKALIEVLQPLIAEHQARRKEVTDEIVKEFMPRKLSTDFDQ

**TRTRPLE** – GFP Tag – V

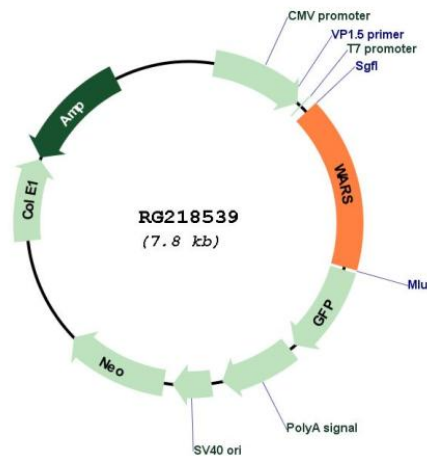
**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_213645

ORF Size: 1416 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_213645.1</a> , <a href="#">NP_998810.1</a>
<b>RefSeq Size:</b>	2488 bp
<b>RefSeq ORF:</b>	1293 bp
<b>Locus ID:</b>	7453
<b>UniProt ID:</b>	<a href="#">P23381</a>
<b>Cytogenetics:</b>	14q32.2
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Aminoacyl-tRNA biosynthesis, Tryptophan metabolism
<b>Gene Summary:</b>	<p>Aminoacyl-tRNA synthetases catalyze the aminoacylation of tRNA by their cognate amino acid. Because of their central role in linking amino acids with nucleotide triplets contained in tRNAs, aminoacyl-tRNA synthetases are thought to be among the first proteins that appeared in evolution. Two forms of tryptophanyl-tRNA synthetase exist, a cytoplasmic form, named WARS, and a mitochondrial form, named WARS2. Tryptophanyl-tRNA synthetase (WARS) catalyzes the aminoacylation of tRNA(trp) with tryptophan and is induced by interferon. Tryptophanyl-tRNA synthetase belongs to the class I tRNA synthetase family. Four transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]</p>