

## Product datasheet for **RG202852**

### **GARS1 (NM\_002047) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GARS1 (NM_002047) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GARS1
Synonyms:	CMT2D; DSMAV; GARS; GlyRS; HMN5; HMN5A; SMAD1; SMAJI
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG202852 representing NM\_002047  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCCCTCTCCGGTCCAGTGTCTTAGAGTGTCTCGCGCCGCTCTGCTGCTGCTGCCGCCCGGC  
 TCTTAGCCCGACCTCGCTCCTGCTCCGCGGTCCCTCAGCGCGCCTCCTGCGCCCGATCTCCTTGCC  
 CGCCGCCCTCCCGGAGCAGCATGGACGGCGGGGGCTGAGGAGGTGCTGGCACCTCTGAGGCTAGCA  
 GTGCGCCAGCAGGGAGATCTTGTGCGAAAACCAAGAAGATAAAGCACCCCAAGTAGACGTAGACAAAAG  
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 GAACAAGACCCCCCACTGCAACTCTGAGGGACCGTACTCAATGCGGCAGATAAGAGCAGAGATCTCT  
 GAGCTGCCAGCATAGTCCAAGACCTAGCCAATGGCAACATCACATGGGCTGATGTGGAGGCCAGGTATC  
 CTCTGTTTGAAGGCAAGAGACTGGTAAAAAGAGACAATCGAGGAA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

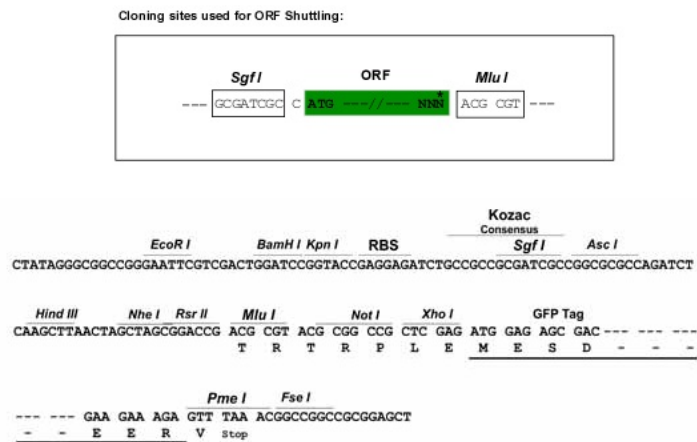
**Protein Sequence:** >RG202852 representing NM\_002047  
Red=Cloning site Green=Tags(s)

```
MPSRPVLLRGARAALLLLLPPRLLARPSLLLRRSL SAASCAPI SL PAAASRSSMDGAGAEVLA PLRLA
VRQQGDLVRKLEKDKAPQVDVDKAVAELKARKRVLEAKELALQPKDDIVDRAKMEDTLKRRFFYDQAF AI
YGGVSGLYDFGPVGCALKNNIIQTWRQHF IQEEQILEIDCTML TPEPVLTSGHVDKFA DFMVKDVKNGE
CFRADHLLKAHLQKLMSDKKCSVEKKSEMSVLAQLDNYGQQELADLFVNYNVKSPITGNDLSPVVSFNL
MFKTFIGPGGNMPGYLRPETAQGI FLNFKRLLEFNQGKLPFAAAQIGNSF RNEISPRSGLIRVREF TMAE
IEHFVDPSEKDHDPKFQNVADLHLYLSAKAQVSGQSARKMRLGDAVEQGVINNTVLGYF IGRIYLYLTKV
GISPKLRF RQH MENEMAHYACDCWDAESKTSYGWIEIVGCADRSCYDLSCHARATK VPLVAEKPLKEPK
TVNVVQFEP SKGAIGKAYKDKAKLVMEYLAICDECYITEMEMLLNEKGEFTIETEGKTFQLTKDMINVKR
FQKTLVVEEVPNVI E P S FGLGRIMYTVFEHTFHVREGDEQRTFFSFP AVVAPFKCSVLPLSQNQEFMPF
VKELSEALTRHG VSHKVDSSSGSIGRRYARTDEIGVAFGVTIDFDTVNKTPHTATLRDRDSMRQIRAEIS
ELPSIVQDLANGNITWADVEARYPLFEGQETGKKE TIEE
```

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_002047

**ORF Size:** 2217 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).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_002047.2](#), [NP\\_002038.2](#)

**RefSeq Size:** 2759 bp

**RefSeq ORF:** 2220 bp

**Locus ID:** 2617

**UniProt ID:** [P41250](#)

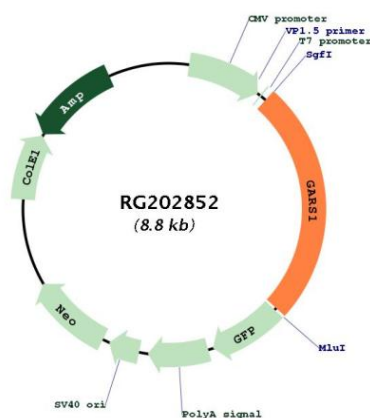
**Cytogenetics:** 7p14.3

**Domains:** WHEP-TRS, tRNA-synt\_2b, HGTP\_anticonodon

**Protein Pathways:** Aminoacyl-tRNA biosynthesis

**Gene Summary:** This gene encodes glycyl-tRNA synthetase, one of the aminoacyl-tRNA synthetases that charge tRNAs with their cognate amino acids. The encoded enzyme is an (alpha)<sub>2</sub> dimer which belongs to the class II family of tRNA synthetases. It has been shown to be a target of autoantibodies in the human autoimmune diseases, polymyositis or dermatomyositis. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Oct 2015]

## Product images:



Circular map for RG202852