

## Product datasheet for **MG210334**

### Gars (NM\_180678) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Gars (NM_180678) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Gars
Synonyms:	Gena201; GENA202; Nmf249; Sgrp23
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide  
Sequence:

>MG210334 representing NM\_180678  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGCCCTGTCTGCTCCCCTCGTGCTCAGAGCCACCCGCGCCGCGCTGCCGCTCCTGTGCCGCCCCGAG  
TGGTCGCAGCGTCCGCGTCTCAGCGCTCCTCAGCGCTCCCGCGCAGCCGCGCCTCCCGAGCAGCAT  
GGACAGCGCGGAGGAGCTGCTGGCCCCACTGCGGCTAGCCGTGCGCCAGCAGGGAGACTTTGTACGGAAG  
TAAAAGAAGATAAAGCCCCACAAGTGGATGTGGACAGAGCAGTAGCTGAGCTCAAGGCCGGAAGAGGG  
TTCTGGAAGCAAAGGAGCTGGCATTGCAGCCAAAGATGACATCGTAGATAGAGCAAAAATGGAAGATAC  
GTTGAAGAGGAGGTTTTCTACGATCAGGCTTTTGCTATTTATGGAGGTGTCAGTGGATTGTATGACTTC  
GGCCCGTAGGATGTGCTTTGAAGAACAATATCATCCAGGCTGGAGGCAGCACTTTATCCAAGAGGAGC  
AGATCCTGGAGATTGACTGCACCATGCTCACCCCTGAGCCAGTTTTAAAGACCTCTGCCACGTAGACAA  
ATTTGCTGACTTCATGGTGAAGGACGTGAAGAACGGAGAGTGCTCCGAGCAGACCACCTGTTGAAAGCT  
CATTTACAGAAACTGATGTCAGATAAGAAGTGCTGCTGAGAAGAAGTCAGAGATGGAAAGTGCTTTGG  
CCCAGCTTGATAACTATGGACAACAAGAACTTGC GGATCTTTTTGTGAACTATAATGTAAAAATCTCCAC  
CACTGGCAATGACCTGTCCCCTCCGGTACCTTTAACTTAATGTTCCAGACCTTCATTGGGCCTGGAGGA  
AATATGCCTGGATATCTGAGACCAGAACTGCACAGGGAATTTTCTGAATTTCAAACGACTTTTGGAAAT  
TCAACCAAGGGAAATGCCTTTTGTGCTGCCAGATTGGAACTCCTTCAGAAATGAGATCTCACCTCG  
GTCTGGACTGATCCGAGTCAGGGAGTTTACAATGGCAGAGATTGAGCACTTTGTAGATCCCACTGAGAAA  
GACCATCCCAAGTTCCAAAGTGTGGCCGACCTCGCCTTTATTTGTAAGTACTCAGCAAAAGCCAGGTCAGT  
GACAGTCTGCTCGGAAGATGCGTCTGGGAGATGCTGTTGAACAGGGTGTGATTAACAACACTCAGTATTAG  
CTATTTTATTGGCCGATCTACCTCTACCTCACGAAGTTGGAATATCTCCTGATAAACTCCGCTTCCGG  
CAGCATATGGAGAATGAGATGGCCATTATGCCTGCGACTGCTGGGATGCCGAGTCCAAAACGCTCTATG  
GCTGGATTGAGATTGTTGGATGTGCTGACCGTTCTGCTACGACCTCTCCTGTCATGCTCGAGCCACCAA  
AGTTCCACTAGTAGTGAGAAACCTCTGAAAGAACCCAAAACAGTTAACGTTGTACAGTTTGAGCCCAAC  
AAGGGCGCGTGGCAAGGCGTACAAGAAGGATGCAAAGCTAGTGTGGAGTATCTCAGCGCCTGTGATG  
AGTGCTACATTTAGAGATGGAGCTGCTGCTGAGTGAGAAAGGGGAATTCACTATTGAAACTGAAGGAAA  
AACATTTAGTTAACGAAAGACATGGTCAGTGTGAAGAGATTCCAGAAAACACTGCATGTGAAGAAGTT  
GTTCCGAGTGTAATTGAGCCCTCTTTGGCTTGGCAGGATCATGTATACCATATTGGAACATACATTCC  
ATGTCAGAGAGGAGATGAACAGAGAACGTTCTTCAGTTTCCCTGCTGTGGTTGCTCCATTCAAATGTT  
TGTCCTTCCACTGAGCCAGAACCAAGAGTTTATGCCATTTGTCAAGGAATTATCCGAAGCTCGACCAGG  
AACGGCGTGTCTATAAAGTCGATGACTCCTCTGGGTCTATTGGAAGGCGCTATGCAAGAAGTATGAGA  
TTGGCGTGGCTTTCGGCATCACTATTGACTTTGATACAGTGAACAAGACGCCCCACACTGCAACTCTGAG  
GGACCGAGACTCCATGAGACAGATAAGGGCAGAGGTCTCTGAGCTGCCAGTGTGGTCCGCGATCTGGCC  
AACGGCAACATTACCTGGGCTGATGTGGAGGCCAGGTACCCACTTTTGAAGGGCAAGAGACTGGCAAGA  
AGGAGACAGTAGAGGAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG210334 representing NM\_180678  
Red=Cloning site Green=Tags(s)

MPCLLP SLLRATRAALPLLSPPRVVAASASQRLLSAPAQPAASRSSMDSAEELLAPLRLAVRQQGDFVRK  
 LKEDKAPQVDVDRVAELKARKRVLEAKELALQPKDDIVDRAKMEDTLKRRFFYDQAFIYGGVSGLYDF  
 GPVGCALKNNIIQAWRQHF IQEEQILEIDCTMLTPEPVLKTSGHVDKFADFMVKDVKNCEFRADHLLKA  
 HLQKLMSDKKCSAEKKSEME SVLAQLDNYGQQLADLFVNYNVKSPPTTGNLSPPVPFNLMFQTFIGPGG  
 NMPGYLRPETAQGI FLNFKRLLEFNQGLPF AAAQIGNSFNEISPRSGLIRVREFTMAEIEHFVDPTEK  
 DHPKFQSVADLCLYL YSAKAQVTGQSARKMRLGDAVEQGVINNSVLGYF IGRIYLYLTKVIGISPDKLRF  
 QHMENEMAHYACDCWDAESKTSYGWIEIVGCADRSCYDLSCHARATKVPLVAEKPLKEPKTVNVVQFEPN  
 KGAVGKAYKKDAKL VLEYL SACDECIYSEMELLSEKGEFTIETEGKTFQLTKDMVSVKRFQKTLHVEEV  
 VPSVIEPSFGLGRIMYILEHTFHVREGDEQRTFFSFPVAVPFKCSVLPLSQNQEFMPFVKELSEALTR  
 NGVSHKVDSSSGISGRRYARTDEIGVAFGITIDFDTVNKTPHTATLRDRDSMRQIRAEVSELPVVRDLA  
 NGNITWADVEARYPLFEGQETGKKETVEE

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_180678

**ORF Size:** 2187 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.

**RefSeq:** [NM\\_180678.2](#)

**RefSeq Size:** 2390 bp

**RefSeq ORF:** 2190 bp

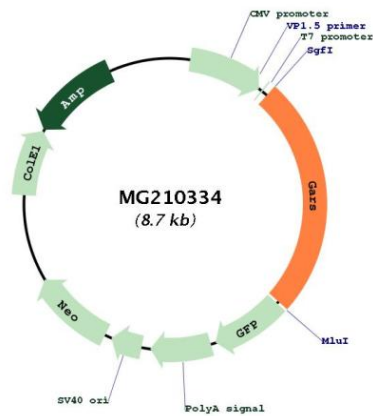
**Locus ID:** 353172

**UniProt ID:** [Q9CZD3](#)

**Cytogenetics:** 6 27.29 cM

**Gene Summary:** Catalyzes the ATP-dependent ligation of glycine to the 3'-end of its cognate tRNA, via the formation of an aminoacyl-adenylate intermediate (Gly-AMP). Also produces diadenosine tetraphosphate (Ap4A), a universal pleiotropic signaling molecule needed for cell regulation pathways, by direct condensation of 2 ATPs. Thereby, may play a special role in Ap4A homeostasis.[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MG210334