

## Product datasheet for **RG232798**

### **HARS1 (NM\_001258040) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	HARS1 (NM_001258040) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	HARS1
Synonyms:	CMT2W; HARS; HRS; USH3B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG232798 representing NM\_001258040  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCAGAGCGTGC GGCGCTGGAGGAGCTGGTGA AACTTCAGGGAGAGCGCGTGC GAGGCCCTCAAGCAGC  
 AGAAGGCCAGCGCCGAGCTGATCGAGGAGGAGGTGGCGAAACTCCTGAAACTGAAGGCACAGCTGGGTCC  
 TGATGAAAGCAAACAGAAATTTGTGCTCAAACCCCAAGGAAACTGATGGGAAAGTATGGGGAAGAC  
 TCCAAGCTTATCTATGACCTGAAGGACCAGGGCGGGGAGCTCCTGTCCCTTCGCTATGACCTCACTGTTC  
 CTTTTGCTCGGTATTTGGCAATGAATAAACTGACCAACATTAACGCTACCACATAGCAAAGGTATATCG  
 GCGGGATAACCCAGCCATGACCCGTGGCCGATACCGGGAATTCACCAGTGTGATTTTGACATTGCTGGG  
 AACTTTGATCCCATGATCCCTGATGCAGAGTGCCTGAAGATCATGTGCGAGATCCTGAGTTCACCTCAGA  
 TAGGCGACTTCCTGGTCAAGGTAACGATCGACGCATTCTAGATGGGATGTTTGTATCTGTGGTGTTC  
 TGACAGCAAGTTCGTACCATCTGCTCCTCAGTAGACAAGCTGGACAAGGTGCTCTGGGAAGAGGTGAAG  
 AATGAGATGGTGGGAGAGAAGGGCCTTGCACTGAGGTGGCTGACCGCATTGGGGACTATGTCCAGCAAC  
 ATGGTGGGGTATCCCTGGTGAACAGCTGCTCCAGGATCCTAAACTATCCAAAAACAAGCAGGCCTTGGA  
 GGGCCTGGGAGACCTGAAGTTGCTCTTTGAGTACCTGACCCTATTTGGCATTGATGACAAAACTCCTTT  
 GACCTGAGCCTTGCTCGAGGGCTGGATTACTACACTGGGGTGATCTATGAGGCAGTGTCTACAGACCC  
 CAGCCCAGGCAGGGGAAGAGCCCTGGGTGTGGCAGTGTGGCTGCTGGAGGACGCTATGATGGGCTAGT  
 GGGCATGTTGACCCAAAGGGCGCAAGGTGCCATGTGTGGGCTCAGCATTGGGGTGGAGCGGATTTTC  
 TCCATCGTGGAACAGAGACTAGAGGCTTTGGAGGAGAAGATACGGACCACGGAGACACAGGTGCTGTGCG  
 CATCTGCACAGAAGAAGCTGCTAGAGGAAAGACTAAAGCTTGTCTCAGAACTGTGGGATGCTGGGATCAA  
 GGCTGAGCTGCTGTACAAGAAGAACCCTAAAGCTACTGAACCAGTTACAGTACTGTGAGGAGGCAGGCATC  
 CCACTGGTGGCTATCATCGGCGAGCAGGAACTCAAGGATGGGGTTCATCAAGCTCCGTTTCAGTGACGAGCA  
 GGGAAAGAGGTGGATGTCCGAAGAGAAGACCTTGTGGAGGAAATCAAAGGAGAACAGGCCAGCCCTCTG  
 CATCTGC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG232798 representing NM\_001258040  
 Red=Cloning site Green=Tags(s)

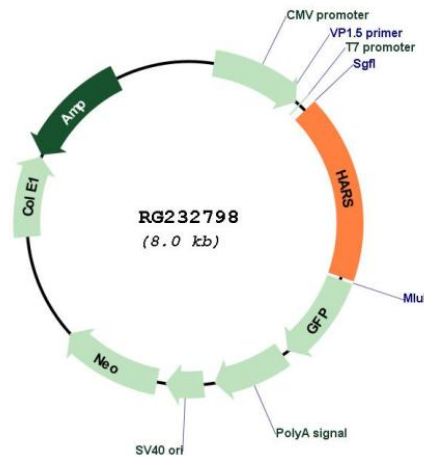
MAERAAL EELVKLQGERVRLKQKASAE LIEEEVAKLLKKAQLGPDESKQKFLKTPKETLMGKYGED  
 SKLIYDLKDQGGELLRLRYDLVTPFARYLAMNKL TNIKRYHIAKVYRRDNPAMTRGRYREFYQCDFDIAG  
 NFDPMIPDAECLKIMCEILSSLQIGDFLVKVNDRRILDGMFAICGVSDSKFRTICSSVDKLDKVSWEVVK  
 NEMVGEKGLAPEVADRI GDYVQQHGGVSLVEQLLQDPKLSQNKQALEGLDGLKLLFEYLTLFGIDDKISF  
 DLSLARGLDYYTGVIIYEAVLLQTPAQAGEEPLGVGSVAAGGRYDGLVGMFDPKGRKVPVGLSIGVERIF  
 SIVEQRLEALEEKIRTTETQVL VASAQKLLLEERLKL VSELWDAGIKAELLYKKNPKLLNQLQYCEEAGI  
 PLVAIIGEQLKDGVIKLRSVTSREEVDVRREDLVEEIKRRTGQPLCIC

**TR**TRPLE - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

**Plasmid Map:**


**ACCN:** NM\_001258040

**ORF Size:** 1407 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\\_001258040.2](#), [NP\\_001244969.1](#)

**RefSeq Size:** 2202 bp

**RefSeq ORF:** 1410 bp

**Locus ID:** 3035

**UniProt ID:** [P12081](#)

**Cytogenetics:** 5q31.3

**Protein Pathways:** Aminoacyl-tRNA biosynthesis

**Gene Summary:** Aminoacyl-tRNA synthetases are a class of enzymes that charge tRNAs with their cognate amino acids. The protein encoded by this gene is a cytoplasmic enzyme which belongs to the class II family of aminoacyl-tRNA synthetases. The enzyme is responsible for the synthesis of histidyl-transfer RNA, which is essential for the incorporation of histidine into proteins. The gene is located in a head-to-head orientation with HARSL on chromosome five, where the homologous genes share a bidirectional promoter. The gene product is a frequent target of autoantibodies in the human autoimmune disease polymyositis/dermatomyositis. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Apr 2012]