

## Product datasheet for **SC118837**

### **HARS1 (NM\_002109) Human Untagged Clone**

#### **Product data:**

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids                    |
| Product Name:             | HARS1 (NM_002109) Human Untagged Clone |
| Tag:                      | Tag Free                               |
| Symbol:                   | HARS1                                  |
| Synonyms:                 | CMT2W; HARS; HRS; USH3B                |
| Mammalian Cell Selection: | None                                   |
| Vector:                   | <u><a href="#">pCMV6-XL5</a></u>       |
| E. coli Selection:        | Ampicillin (100 ug/mL)                 |



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**Fully Sequenced ORF:** >OriGene ORF within SC118837 sequence for NM\_002109 edited (data generated by NextGen Sequencing)

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ATGGCAGAGCGTGC GGCGCTGGAGGAGCTGGTGA AACTTCAGGGAGAGCGCGTGCGAGGC
CTCAAGCAGCAGAAGGCCAGCGCCGAGCTGATCGAGGAGGAGGTGGCGAAACTCCTGAAA
CTGAAGGCACAGCTGGGTCTGATGAAAGCAAACAGAAATTTGTGCTCAAAACCCCAAG
GGCACAAGAGACTATAGTCCCCGGCAGATGGCAGTTCGCGAGAAGGTGTTTGACGTAATC
ATCCGTTGCTTCAAGCGCCACGGTGCAGAAGTCATTGATACACCTGTATTTGAACATAAG
GAAACACTGATGGGAAAGTATGGGGAAGACTCCAAGCTTATCTATGACCTGAAGGACCAG
GGCGGGGAGCTCCTGTCCCTTCGCTATGACCTCACTGTTCCCTTTGCTCGGTATTTGGCA
ATGAATAAACTGACCAACATTAACGCTACCACATAGCAAAGGTATATCGGCGGGATAAC
CCAGCCATGACCCGTGGCCGATACCGGAATTCTACCAGTGTGATTTTGACATTGCTGGG
AACTTTGATCCCATGATCCCTGATGCAGAGTGCCTGAAGATCATGTGCGAGATCCTGAGT
TCACTTCAGATAGGCGACTTCTGGTCAAGGTAACGATCGACGCATTCTAGATGGGATG
TTTGCTATCTGTGGTGTCTGACAGCAAGTCCGTACCATCTGCTCCTCAGTAGACAAG
CTGGACAAGGTGCTCTGGGAAGAGGTGAAGAATGAGATGGTGGGAGAGAAGGGCCTTGCA
CCTGAGGTGGCTGACCGCATTGGGGACTATGTCCAGCAACATGGTGGGGTATCCCTGGTG
GAACAGCTGCTCCAGGATCCTAAACTATCCAAAACAAGCAGGCCTTGGAGGGCCTGGGA
GACCTGAAGTTGCTCTTTGAGTACCTGACCCTATTTGGCATTGATGACAAAATCTCCTTT
GACCTGAGCCTTGCTCGAGGGCTGGATTACTACACTGGGGTGTATATGAGGCAGTGTGCTG
CTACAGACCCAGCCAGGCAGGGGAAGAGCCCTGGGTGTGGGCAGTGTGGCTGCTGGA
GGACGCTATGATGGGCTAGTGGGCATGTCGACCCAAAGGGCGCAAGGTGCCATGTGTG
GGGCTCAGCATTGGGGTGGAGCGGATTTTCTCCATCGTGAACAGAGACTAGAGGCTTTG
GAGGAGAAGATACGGACCACGGAGACACAGGTGCTTGTGGCATCTGCACAGAAGAAGCTG
CTAGAGGAAAGACTAAAGCTTGTCTCAGAACTGTGGGATGCTGGGATCAAGGCTGAGCTG
CTGTACAAGAAGAACCCAAAGCTACTGAACCAAGTTACAGTACTGTGAGGAGGCAGGCATC
CCTGCTGGTGGCTATCATCGGCGAGCAGGAACTCAAGGATGGGGTTCATCAAGCTCCGTTCA
GTGACGAGCAGGGAAGAGGTGGATGTCCGAAGAGAAGACCTTGTGGAGGAAATCAAAAGG
AGAACAGGCCAGCCCTCTGCATCTGCTGA
    
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Clone variation with respect to NM\_002109.3

**5' Read Nucleotide Sequence:**

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>OriGene 5' read for NM_002109 unedited
ATACGACTTCACTATAGGGCGGCCGGAATTCGCACGAGGGGCAACCACCGCAGGTGCGAG
ACAGCAGGCGGCTCAAGTGGACAGCCGGATGGCAGAGCGTGGCGCGCTGGAGGAGCTGG
TGAAACTTCAGGGAGAGCGCGTGCAGGGCTCAAGCAGCAGAAGGCCAGCGCCGAGCTGA
TCGAGGAGGAGGTGGCGAAACTCCTGAAACTGAAGGCACAGCTGGGTCTGATGAAAGCA
AACAGAAATTTGTGCTCAAAACCCCAAGGGCACAAGAGACTATAGTCCCCGGCAGATGG
CAGTTCGCGAGAAGGTGTTTGACGTAATCATCCGTTGCTTCAAGCGCCACGGTGCAGAAG
TCATTGATACACCTGTATTTGAACTAAAGGAAACACTGATGGGAAAGTATGGGAAAGACT
CCAAGCTTATCTATGACCTGAAGGACCAGGGCGGGGAGCTCCTGTCCCTTCGCTATGACC
TCACTGTTCCCTTTGCTCGGTATTTGGCAATGAATAAACTGACCAACATTAACGCTACC
ACATAGCAAAGGTATATCGGCGGGATAACCCAGCCATGACCCGTGGCCGATACCGGGAAT
TCTACCAGTGTGATTNTGACATTGCTGGGAACTTTGATCCCATGATCCCTGATGCAGAGT
GCCTGAAGATCATGTGCGAGATCCTGAGNTCACTTCAGATAGGCGACTTCTGGTCAAGT
AAACGATCGACGATTCTAGATGGGATGNTNGCTATCTGTGGTGTCTGACAGCAAGTT
CCGTACCATCTGCTNCTCAGTANACAAGCTGGACAAGGTGNTGNAAGAGGTGAAAAT
GANATGGTGGNAGAGAAGGGCTTGACACCTGAGTGGCTGACCGATTGGGGACTATTGTCAG
CACATGTTGGGGTTTCCCTGGTGAACANTGCTC
    
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|                                     |   |
|-------------------------------------|---|
| <b>3' Read Nucleotide Sequence:</b> | >OriGene 3' read for NM_002109 unedited<br>GCTGTGGACCCGCGGCCCAATCTANGATCGAGTTTTTTTTTTTTTTTTTTTTCCGTGGTTG<br>AGGCATTTTATTGGACCTTTGGCAATTGGTGGTGGGGAGGCATCTGCTCCAACCTGGTGCG<br>GGGCCCTGCAGATGGGACCATCTCAGGCTGGGTCTTGTAGCCCAGGAGCACAGACTGGA<br>CTAAGCCTCCTGGGCCTTGATGAAAAAGGTGGTTGNACCTGGCCGTTTTTGCCAGTAA<br>TAATCAATAAAAAAACCATAATAAAAAATCAAAGGCTCTGTTCTGACCACCTCTTCAGGTCT<br>TCCGCTGAAACCGAAAAGTGCAAAGCAATTGAAGTACATATGCAGTTTGTCTTAACTCA<br>AATAGTGCCAGTCCCACTTCCTTTCTCTGATAGTTTGTTCAGTTCAGCAGATGCAGAGG<br>GGCTGGCCTGTTCTCCTTTTGATTTCTCCACAAGGTCTTCTCTTCGGACATCCACCTCT<br>TCCCTGCTCGTCACTGAACGGAGCTTGATGACCCCATCCTTGAGTTCCTGCTCGCCGATG<br>ATAGCCACCAGTGGGATGCCTGCCTCCTCACAGTACTGTAACCTGGTTCAGTAGCTTTGGG<br>TTCTTCTGTACAGCAGCTCAGCCTTGATCCCAGCATCCCACAGTTCTTGAGACAAGCTT<br>TAGTCTTTCTCTAGCAGCTTCTCTGTGCAGATGCCACCAGCACCTGTGTCTCCGTGGT<br>CCCTATCTTCTCCTCAAAGCCTTTATTTCTTGTCCACGATGGAGAAATCCGCTCCACCC<br>TATGCTGGACCCAACTGGCACCTTGCCCCCTTTGGGGTTAACATGCCACTTCCCTTA<br>TAAGGTTCTCCAGAAGCCAATTGCCCCACCCAGGGTTTTTCCCTGCCGGGCTGGGGTCT<br>GACCACCTGCCTCTTTATAACCCCATGTAATATCCACCTTACCAGTTTCAGGTAAAGGA<br>ATTTTGTTAATGCCAAATGGTCAG |
| <b>Restriction Sites:</b>           | NotI-NotI   |
| <b>ACCN:</b>                        | NM_002109   |
| <b>Insert Size:</b>                 | 2050 bp   |
| <b>OTI Disclaimer:</b>              | Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).  |
| <b>Components:</b>                  | 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_002109.3</a> , <a href="#">NP_002100.2</a>   |
| <b>RefSeq Size:</b>                 | 1981 bp   |
| <b>RefSeq ORF:</b>                  | 1530 bp   |
| <b>Locus ID:</b>                    | 3035  |
| <b>UniProt ID:</b>                  | <a href="#">P12081</a>  |
| <b>Cytogenetics:</b>                | 5q31.3  |
| <b>Domains:</b>                     | WHEP-TRS, tRNA-synt_2b, HGTP_anticonodon  |

**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]  
Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (1).