

Product datasheet for **RC204009**

HARS1 (NM_002109) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HARS1 (NM_002109) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HARS1
Synonyms:	CMT2W; HARS; HRS; USH3B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC204009 representing NM_002109
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCAGAGCGTGC GGCGCTGGAGGAGCTGGTGA AACTTCAGGGAGAGCGCGTGC GAGGCCCTCAAGCAGC
 AGAAGGCCAGCGCCGAGCTGATCGAGGAGGAGGTGGCGAAACTCCTGAAACTGAAGGCACAGCTGGGTCC
 TGATGAAAGCAAACAGAAATTTGTGCTCAAACCCCAAGGGCACAAGAGACTATAGTCCCCGGCAGATG
 GCAGTTCGCGAGAAGGTGTTGACGTAATCATCCGTTGCTTCAAGCGCCACGGTGCAGAAGTCATTGATA
 CACCTGTATTTGAACTAAAGGAAACTGATGGGAAAGTATGGGGAAGACTCCAAGCTTATCTATGACCT
 GAAGGACCAGGGCGGGGAGCTCCTGTCCCTTCGCTATGACCTCACTGTTCCCTTTTCTCGGTATTTGGCA
 ATGAATAAACTGACCAACATTAACGCTACCACATAGCAAAGGTATATCGGCGGGATAACCCAGCCATGA
 CCCGTGGCCGATACCGGAATTCACCAGTGTGATTTTGACATTGCTGGGAACTTTGATCCCATGATCCC
 TGATGCAGAGTGCCTGAAGATCATGTGCGAGATCCTGAGTTCACCTCAGATAGGCGACTTCTGGTCAAG
 GTAACGATCGACGCATTCTAGATGGGATGTTTGTCTATCTGTGGTGTTCGACAGCAAGTCCCGTACCA
 TCTGCTCCTCAGTAGACAAGCTGGACAAGGTGTCTGGGAAGAGGTGAAGAATGAGATGGTGGGAGAGAA
 GGGCCTTGACCTGAGGTGGCTGACCGCATTGGGGACTATGTCCAGCAACATGGTGGGGTATCCCTGGTG
 GAACAGCTGTCCAGGATCCTAAACTATCCCAAAACAAGCAGGCCTTGGAGGGCCTGGGAGACCTGAAGT
 TGCTCTTTGAGTACCTGACCCTATTTGGCATTGATGACAAAATCTCCTTTGACCTGAGCCTTGCTCGAGG
 GCTGGATTACTACACTGGGGTGTCTATGAGGCAGTGTCTACAGACCCAGCCAGGCAGGGGAAGAG
 CCCCTGGGTGTGGCAGTGTGGCTGCTGGAGGACGCTATGATGGGCTAGTGGGCATGTTTCGACCCCAAAG
 GGCGCAAGTGCCATGTGTGGGCTCAGCATTGGGGTGGAGCGGATTTTCTCCATCGTGGAAACAGAGACT
 AGAGGCTTTGGAGGAGAAGATACGGACCACGGAGACACAGGTGCTTGTGGCATCTGCACAGAAGAAGCTG
 CTAGAGGAAAGACTAAAGCTTGTCTCAGAACTGTGGGATGCTGGGATCAAGGCTGAGCTGCTGTACAAGA
 AGAACCCAAAGCTACTGAACCAGTTACAGTACTGTGAGGAGGCAGGCATCCCACTGGTGGCTATCATCGG
 CGAGCAGGAACTCAAGGATGGGGTCAAGCTCCGTTCAAGTACGAGCAGGGAAGAGGTGGATGTCCGA
 AGAGAAGACCTTGTGGAGGAAATCAAAGGAGAACAGGCCAGCCCTCTGCATCTGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC204009 representing NM_002109
 Red=Cloning site Green=Tags(s)

MAERAAL EELVKLQGERVRLKQKASAE LIEEEVAKLLKKAQLGPDESKQKFLV LKTPKGRDYSRQM
 AVREKVF DVIIRCFKRHGA EVIDTPVFELK ETLMGKYGEDSKL IYDLKDQGGELL SLRYDLTV PARYLA
 MNKLTN ICRYHIAKVYRRD NPAMTRGRY REFYQCDFI AGNFDPMIPDAECLKIMCE ILSLQIGDFLVK
 VNDRRI LDGMFAICGVSD SKFR TICSSVDKLDKVSWE EVKNEMVGEKGLAPEVADR IGDYVQQHGGVSLV
 EQLLQDPKLSQNKQALEGLGDLKLLFEY LTLFGIDDKISFDLSLARGLDYYTGV IYEA VLLQTPAQAGEE
 PLGVGSVAAGGRYDGLVGMFDPKGRKVP CVGLSIGVERIF SIVEQRLEALEEKIRT TETQVLVASAQKKL
 LEERLKL VSELWDAGIKA ELLYKKNPKLLNQLQYCEEAGIPLVAI IGEQELKDGVIKLSVTSREEVDVR
 REDLVEEIKRRTGQPLCIC

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mg8006_e05.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_002109

ORF Size: 1527 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_002109.6](#)

RefSeq Size: 1981 bp

RefSeq ORF: 1530 bp

Locus ID: 3035

UniProt ID: [P12081](#)

Cytogenetics: 5q31.3

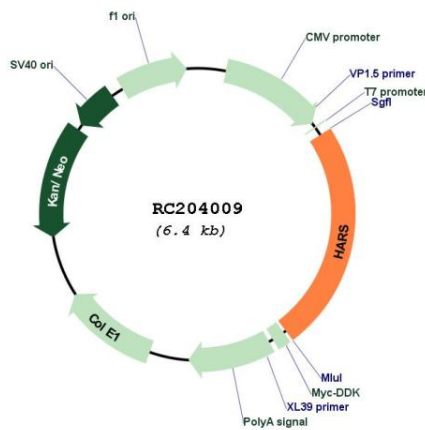
Domains: WHEP-TRS, tRNA-synt_2b, HGTP_anticodon

Protein Pathways: Aminoacyl-tRNA biosynthesis

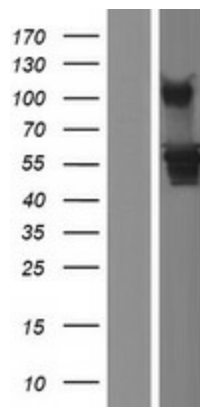
MW: 57.2 kDa

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 HARS1 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]

Product images:



Circular map for RC204009



Western blot validation of overexpression lysate (Cat# [LY419527]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204009 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).