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Product datasheet for RC204925

HARS2 (NM_012208) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HARS2 (NM_012208) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HARS2
Synonyms:	HARSL; HARSR; HisRS; HO3; PRLTS2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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ORF Nucleotide Sequence:

>RC204925 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCCCTGCTCGGACTTCTTCCCAGGAGGGCCTGGGCTTCGCTGCTCAGCCAGCTCCTGCGACCGCCCT
GCGCTTCGTGCACCGGGGCGGTCCGTTGCCAAAGCCAGGTTGCAGAGGCAGTGTTAACATCCCAACTGAA
AGCACATCAAGAGAAACCAAATTTTATTATCAAGACCCCAAAGGGTACCAGGGATCTTAGTCCTCAGCAT
ATGGTTGTGAGGGAGAAAATTCTTGATTTGGTTATCAGCTGCTTTAAACGTCATGGAGCAAAGGGGATGG
ACACCCCAGCATTTGAGCTGAAGGAAACCCTGACTGAGAAGTATGGAGAGGACTCTGGGCTCATGTATGA
TCTGAAGGATCAAGGTGGAGAGCTGTTGTCCCTCCGCTATGACCTTACTGTTCCCTTTGCTCGTTATCTG
GCCATGAATAAGGTGAAGAAGATGAAACGTTATCATGTTGGAAAGGTGTGGCGGCGAGAGAGCCCAACCA
TAGTCCAAGGCCGTTATAGGGAGTTCTGCCAGTGTGATTTTGACATTGCTGGTCAGTTTGACCCTATGAT
CCCCGATGCAGAGTGTTTGAAGATCATGTGTGAAATCCTAAGTGGATTGCAGTTGGGAGACTTTCTCATT
AAGGTAAATGACCGGCGGATTGTGGATGGGATGTTTGCTGTCTGTGGTGTTCCTGAAAGCAAGTTCCGTG
CCATCTGCTCCTCCATAGATAAACTAGACAAGATGGCTTGGAAAGATGTGAGACATGAGATGGTGGTGAA
GAAAGGCCTGGCTCCTGAGGTGGCTGATCGAATTGGGGACTATGTCCAGTGTCATGGTGGGGTATCCCTA
GTAGAGCAAATGTTTCAGGATCCCAGACTATCCCAGAACAAGCAGGCCCTGGAGGGCCTGGGAGACCTAA
AGCTGCTATTTGAATACCTGACTTTATTTGGAATTGCTGATAAGATCTCCTTTGACCTCAGCCTGGCTCG
GGGCCTAGACTACTATACAGGAGTGATCTATGAAGCAGTGCTGCTGCAGACCCCAACTCAGGCTGGGGAG
GAGCCCCTGAATGTGGGCAGTGTGGCTGCTGGTGGGCGCTATGATGGGCTGGTGGGCATGTTTGACCCCA
AGGGCCACAAGGTGCCATGTGTGGGACTCAGCATTGGGGTTGAGCGAATCTTCTACATTGTGGAGCAGAG
GATGAAGACCAAAGGTGAGAAGGTGCGGACTACAGAGACTCAAGTGTTTGTGGCCACACCACAGAAGAAC
TTTCTCCAAGAACGGTTGAAGCTTATTGCAGAGCTTTGGGATTCTGGAATCAAGGCAGAGATGCTATACA
AGAACAACCCCAAACTATTAACCCAGCTGCACTATTGTGAGAGCACAGGCATTCCACTGGTGGTCATTAT
TGGTGAGCAAGAACTGAAAGAAGGGGTCATCAAGATCCGTTCAGTGGCCAGCAGAGAGGAGGTGGCCATT
AAACGGGAAAATTTTGTGGCTGAAATTCAGAAGCGACTGTCTGAGTCT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC204925 protein sequence
Red=Cloning site Green=Tags(s)

MPLLGLLPRRAWASLLSQLLRPPCASCTGAVRCQSQVAEAVLTSQLKAHQEKPNFIIKTPKGTRDLSPQH
MVVREKILDLVISCFKRHGAKGMDTPAFELKETLTEKYGEDSGLMYDLKDQGGELLSLRYDLTVPFARYL
AMNKVKKMKRYHVGKVWRRESPTIVQGRYREFCQCDFDIAGQFDPMIPDAECLKIMCEILSGLQLGDFLI
KVNDRRIVDGMFAVCGVPESKFRAICSSIDKLDKMAWKDVRHEMVVKKGLAPEVADRIGDYVQCHGGVSL
VEQMFQDPRLSQNKQALEGLGDLKLLFEYLTLFGIADKISFDLSLARGLDYYTGVIYEAVLLQTPTQAGE
EPLNVGSVAAGGRYDGLVGMFDPKGHKVPCVGLSIGVERIFYIVEQRMKTKGEKVRTTETQVFVATPQKN
FLQERLKLIAELWDSGIKAEMLYKNNPKLLTQLHYCESTGIPLVVIIGEQELKEGVIKIRSVASREEVAI
KRENFVAEIQKRLSES

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6238_g06.zip

Restriction Sites: SgfI-MluI

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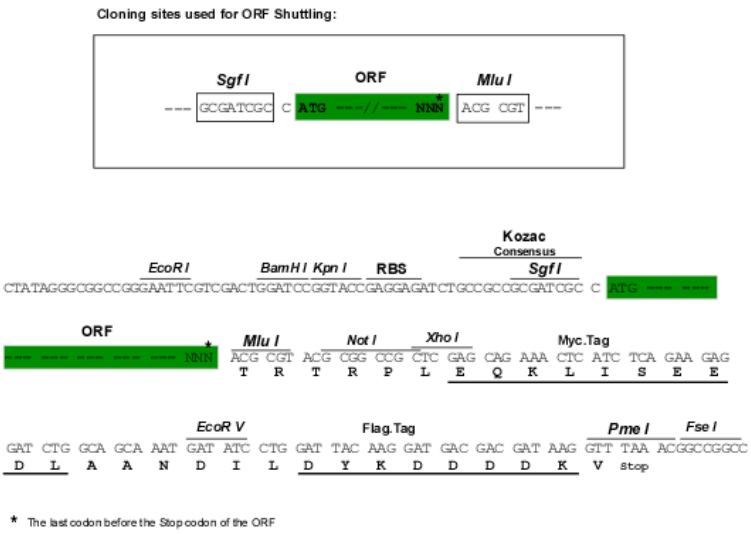
Cloning Scheme:



ACCN: NM_012208

ORF Size: 1518 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_012208.4

RefSeq Size: 2515 bp

RefSeq ORF: 1521 bp

Locus ID: 23438

UniProt ID: P49590

Cytogenetics: 5q31.3

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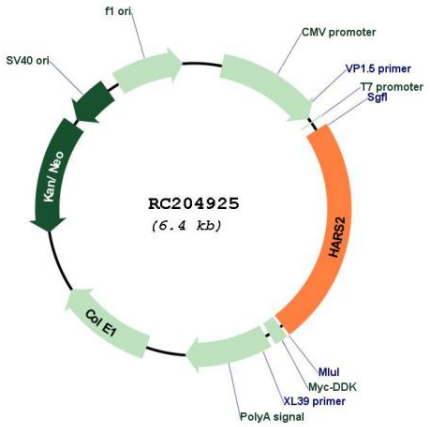
Domains: tRNA-synt_2b, HGTP_anticodon

Protein Pathways: Aminoacyl-tRNA biosynthesis

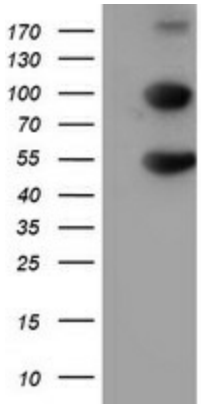
MW: 56.9 kDa

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 an enzyme belonging to the class II family of aminoacyl-tRNA synthetases. Functioning in the synthesis of histidyl-transfer RNA, the enzyme plays an accessory role in the regulation of protein biosynthesis. The gene is located in a head-to-head orientation with HARS on chromosome five, where the homologous genes likely share a bidirectional promoter. Mutations in this gene are associated with the pathogenesis of Perrault syndrome, which involves ovarian dysgenesis and sensorineural hearing loss. Alternative splicing results in multiple transcript variants of this gene. [provided by RefSeq, Jul 2013]

Product images:



Circular map for RC204925



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY HARS2 (Cat# RC204925, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-HARS2(Cat# [TA503866]). Positive lysates [LY415917] (100ug) and [LC415917] (20ug) can be purchased separately from OriGene.

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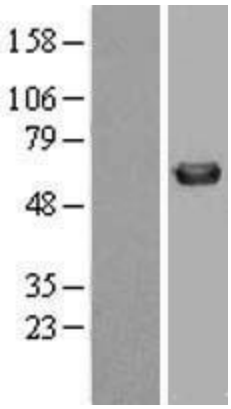
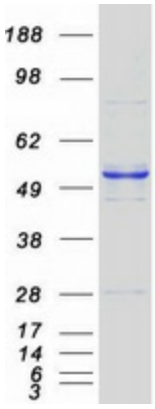


Western blot validation of overexpression lysate (Cat# [LY415917]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204925 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HARS2 protein (Cat# [TP304925]). The protein was produced from HEK293T cells transfected with HARS2 cDNA clone (Cat# RC204925) using MegaTran 2.0 (Cat# [TT210002]).

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