

## Product datasheet for **RC226041**

### Lysyl tRNA synthetase (KARS) (NM\_001130089) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Lysyl tRNA synthetase (KARS) (NM_001130089) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Lysyl tRNA synthetase
Synonyms:	CMTRIB; DEAPLE; DFNB89; KARS; KARS2; KRS; LEPID
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC226041 representing NM\_001130089  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGTTGACGCAAGCTGCTGTAAGGCTTGTAGGGGTCCTGCGCAAACCTCTGGCAGAGTGGGGTC  
 ACAGGAACTGCGACTGGGTCAACTTGCTCCTTTACAGCGCCTACAAGGACAAGTCATTTTCTGATCA  
 AAGAAGTGAGCTGAAGAGACGCCTGAAAGCTGAGAAGAAAGTAGCAGAGAAGGAGCCAAACAGAAAGAG  
 CTCAGTGAGAAACAGCTAAGCCAAGCCACTGCTGCTGCCACCAACCACCACTGATAATGGTGTGGGTC  
 CTGAGGAAGAGAGCGTGGACCAATCAATACTACAAAATCCGCAGTCAAGCAATTCATCAGCTGAAGGT  
 CAATGGGAAGACCCATACCCACACAAGTTCATGTAGACATCTCACTCACTGACTTCATCCAAAAATAT  
 AGTCACCTGCAGCCTGGGATCACCTGACTGACATCACCTTAAGGTGGCAGGTAGGATCCATGCCAAA  
 GAGCTTCTGGGGAAAGCTCATCTTCTATGATCTTCGAGGAGAGGGGGTGAAGTTGCAAGTCATGCCAA  
 TTCCAGAAATTATAAATCAGAAGAAGATTTATTCATATTAATAACAACTGCGTCGGGGAGACATAATT  
 GGAGTTACAGGGGAATCCTGGTAAAACCAAGAAGGGTGAGCTGAGCATCATTCCGTATGAGATCACACTGC  
 TGCTCCCTGTTTGCATATGTTACCTCATCTTCACTTTGGCCTCAAAGACAAGGAAAACAAGTATCGCCA  
 GAGATACTGGACTTGATCCTGAATGACTTTGTGAGGCAGAAATTTATCATCCGCTTAAGATCATCACA  
 TATATAAGAAGTTTCTTAGATGAGCTGGGATTCCTAGAGATTGAAACTCCCATGATGAACATCATCCAG  
 GGGGAGCCGTGGCCAAGCCTTTCATCACTTATCACAACGAGCTGGACATGAACCTATATATGAGAATTGC  
 TCCAGAACTCTATCATAAGATGCTTGTGGTTGGTGGCATCGACCGGGTTTATGAAATTGGACGCCAGTTC  
 CGGAATGAGGGGATTGATTTGACGCACAATCCTGAGTTCACCACCTGTGAGTTCTACATGGCCTATGCAG  
 ACTATCAGCATCTCATGGAAATCACGGAGAAGATGGTTTCAGGGATGGTGAAGCATATTACAGCCATTA  
 CAAGGTACCTACCACCCAGATGGCCAGAGGGCCAAGCCTACGATGTTGACTTACCCACCCCTTCCGG  
 CGAATCAACATGGTAGAAGAGCTTGAGAAAGCCCTGGGGATGAAGCTGCCAGAAACGAACCTCTTTGAAA  
 CTGAAGAAACTCGAAAATTTCTTGATGATATCTGTGTGGCAAAGCTGTTGAATGCCCTCCACCTCGGAC  
 CACAGCCAGGCTCCTTGACAAGCTTGTGGGGAGTTCTGGAAGTGAAGTGCATCAATCCTACATTCATC  
 TGTGATCACCCACAGATAATGAGCCCTTGGCTAAATGGCACCCTCTAAAGAGGGTCTGACTGAGCGCT  
 TTGAGCTGTTTGCATGAAGAAAGAGATATGCAATGCGTATACTGAGCTGAATGATCCCATGCGGCAGCG  
 GCAGCTTTTTGAAGAACAGGCCAAGGCCAAGGCTGCAGGTGATGATGAGGCCATGTTATAGATGAAAAC  
 TTCTGACTGCCCTGGAATATGGCTGCCCCACAGCTGGCTGGGCATGGGCATTGATCGAGTCGCCA  
 TGTTTCTCAGGACTCCAACAACATCAAGGAAGTACTTCTGTTTCTGCCATGAAACCCGAGACAAGAA  
 GGAGAATGTAGCAACCACTGATACACTGAAAAGCACAACAGTTGGCACTTCTGTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

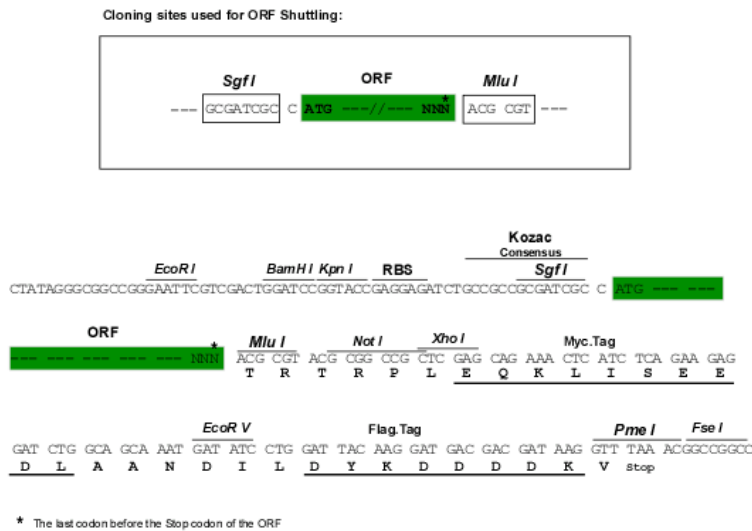
**Protein Sequence:**

>RC226041 representing NM\_001130089  
 Red=Cloning site Green=Tags(s)

MLTQAAVRLVRGSLRKTSWAEWGHLRLGQLAPFTAPHKDKSFSDQRSELKRRLKAEKKVAEKEAKQKE  
 LSEKQLSQATAAATNHTTDNGVGPPEESVDPNQYYKIRSQAIIHQLKVNAGEDPYPHKFHVDISLTDIFIQKY  
 SHLQPGDHLTDITLKVAGRIHAKRASGGKLIIFYDLRGEVVKLVQMANSRNYKSEEEFIHINNKLRRGDII  
 GVQGNPGKTKKGELSIIPYEITLLSPCLHMLPHLHFGLKDKETRYRQRYLDLILNDFVRQKFIIRSKIIT  
 YIRSFDELGFLEIETPMNIIIPGAVAKPFITYHNELDMLYMRIAPELYHKMLVVGIDRVYIEGRQF  
 RNEGIDLTHNPEFTTCEFYMAYADYHDLMEITEKMSVGMVKHITGSYKVTYHPDGPEGQAYDVDFTPPFR  
 RINMVEELEKALGMKLPETNLFETEETRKILDDICVAKAVECPPRRTARLLDKLVGEFLEVTCINPTFI  
 CDHPQIMSPLAKWHRKEGLTERFELFVMKKEICNAYTELDNPMRQRQLFEEQAKAKAAGDDEAMFIDEN  
 FCTALEYGLPPTAGWGMGIDRVAMFLTDSNNIKEVLLFPAMKPEDKKNVATDTLESTTVGTSV

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mk8070\\_d04.zip](https://cdn.origene.com/chromatograms/mk8070_d04.zip)  
 Restriction Sites: SgfI-MluI  
 Cloning Scheme:



ACCN: NM\_001130089

ORF Size: 1875 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

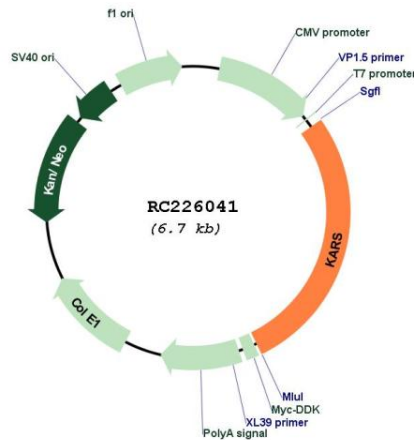
RefSeq: [NM\\_001130089.2](#)

RefSeq ORF: 1878 bp

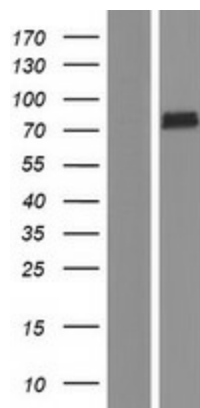
**Locus ID:** 3735  
**UniProt ID:** [Q15046](#)  
**Cytogenetics:** 16q23.1  
**Protein Pathways:** Aminoacyl-tRNA biosynthesis  
**MW:** 71.3 kDa

**Gene Summary:** Aminoacyl-tRNA synthetases are a class of enzymes that charge tRNAs with their cognate amino acids. Lysyl-tRNA synthetase is a homodimer localized to the cytoplasm which belongs to the class II family of tRNA synthetases. It has been shown to be a target of autoantibodies in the human autoimmune diseases, polymyositis or dermatomyositis. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RC226041



Western blot validation of overexpression lysate (Cat# [LY427157]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC226041 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).