

Product datasheet for **RG200311**

Lysyl tRNA synthetase (KARS) (NM_005548) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Lysyl tRNA synthetase (KARS) (NM_005548) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Lysyl tRNA synthetase
Synonyms:	CMTRIB; DEAPLE; DFNB89; KARS; KARS2; KRS; LEPID
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG200311 representing NM_005548
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGGCGGTGCAGGCGGCCGAGGTGAAAGTGGATGGCAGCGAGCCGAAACTGAGCAAGAATGAGCTGA
 AGAGACGCCTGAAAGCTGAGAAGAAAGTAGCAGAGAAGGAGGCCAAACAGAAGGAGCTCAGTGAGAAACA
 GCTAAGCCAAGCCACTGCTGCTGCCACCAACCACCACTGATAATGGTGTGGGTCTGAGGAAGAGAGC
 GTGGACCCAAATCAATACTACAAAATCCGCAGTCAAGCAATTCATCAGCTGAAGGTCAATGGGGAAGACC
 CATACCCACACAAGTTCATGTAGACATCTCACTACTGACTTCATCCAAAAATATAGTCACCTGCAGCC
 TGGGGATCACCTGACTGACATCACCTTAAAGGTGGCAGGTAGGATCCATGCCAAAAGAGCTTCTGGGGGA
 AAGCTCATCTTCTATGATCTTCGAGGAGAGGGGTGAAGTTGCAAGTCATGGCCAATCCAGAAATTATA
 AATCAGAAGAAGAATTTATTCATATTAATAACAACTGCGTCGGGGAGACATAATTGGAGTTCAGGGGAA
 TCCTGGTAAAACCAAGAAGGGTGAAGTGAAGTCAATCCGATGAGATCACACTGCTGTCTCCCTGTTTG
 CATATGTTACCTCATCTTCACTTTGGCCTCAAAGACAAGGAAACAAGGTATCGCCAGAGATACTGGACT
 TGATCCTGAATGACTTTGTGAGGCAGAAATTTATCATCCGCTCTAAGATCATCACATATATAAGAAGTTT
 CTTAGATGAGCTGGGATTCCTAGAGATTGAAACTCCCATGATGAACATCATCCCAGGGGGAGCCGTGGCC
 AAGCCTTTCATCACTTATCACAACGAGCTGGACATGAAGTATATATGAGAATTGCTCCAGAAGTCTATC
 ATAAGATGCTTGTGGTGGTGGCATCGACCGGGTTTATGAAATGGACGCCAGTTCGGGAATGAGGGGAT
 TGATTTGACGCACAATCCTGAGTTCACCACCTGTGAGTTCACATGGCCTATGCAGACTATCACGATCTC
 ATGGAAATCACGGAGAAGATGGTTTCAGGGATGGTGAAGCATATTACAGGCAGTTACAAGGTCACCTACC
 ACCCAGATGGCCAGAGGGCCAAGCCTACGATGTTGACTTCACCCACCCTTCGGCGCAATCAACATGTT
 AGAAGAGCTTGAGAAAGCCTGGGGATGAAGCTGCCAGAACGAACCTCTTTGAAACTGAAGAAACTCGC
 AAAATCTTGATGATATCTGTGTGGCAAAGCTGTTGAATGCCCTCCACCTCGGACCACAGCCAGGCTCC
 TTGACAAGCTTGTGGGGAGTTCCTGGAAGTGAAGTGCATCAATCCTACATTCATCTGTGATCACCCACA
 GATAATGAGCCCTTTGGCTAAATGGCACCGCTCTAAAGAGGGTCTGACTGAGCGCTTTGAGCTGTTTGT
 ATGAAGAAAGAGATATGCAATGCGTATACTGAGCTGAATGATCCCATGCGGCAGCGGCAGCTTTTGAAG
 AACAGGCCAAGGCCAAGGCTGCAGGTGATGATGAGGCCATGTTTCATAGATGAAAAGTCTGTACTGCCCT
 GGAATATGGGCTGCCCCACAGCTGGCTGGGGCATGGGCATTGATCGAGTCGCCATGTTTCTCACGGAC
 TCCAACAACATCAAGGAAGTACTTCTGTTTCTGCCATGAAACCCGAAGACAAGAAGGAGAATGTAGCAA
 CCACTGATACACTGGAAGCACAAACAGTTGGCACTTCTGTC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG200311 representing NM_005548
 Red=Cloning site Green=Tags(s)

MAAVQAAEVKVDGSEPKLSKNELKRRLKAEKKVAEKEAKQKELSEKQLSQATAAAATNHTTDNGVGPPEES
 VDPNQYYKIRSQAIIHLKVNEDPYPHKHFVVDISLDFIQKYSHLQPGDHLTDITLKVAGRIHAKRASGG
 KLIFYDLRGEVQLQVMANSRNYKSEEFIHINNKLRRGDIIGVQGNPGKTKKGELSIIPYEITLLSPCL
 HMLPHLHFGLKDKETRYRQRYLDLILNDFVRQKFIIRSKIITYIRSFLDELGFLEIETPMNNIIPGGAVA
 KPFITYHNELDMNLYMRIAPELYHKMLVGGIDRVYVEIGRQFRNEGIDLTHNPEFTTCEFYMAYADYHDL
 MEITEKMYSGMVKHITGSYKVTYHPDGPEQAYDVDFTPPFRRINMVEELEKALGMKLPETNLFETEETR
 KILDDICVAKAVECPPRRTARLLDKLVGEFLEVTCINPTFICDHPQIMSPLAKWHRSEGLTERFELFV
 MKKEICNAYTELNDPMRQQLFEEQAKAKAAGDDEAMFIDENFCTALEYGLPPTAGWGMGIDRVAMFLTD
 SNNIKEVLLFPAMKPEDKKNVATTDLTLESTTVGTSV

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_005548

ORF Size: 1791 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_005548.1](#), [NP_005539.1](#)

RefSeq Size: 1997 bp

RefSeq ORF: 1794 bp

Locus ID: 3735

UniProt ID: [Q15046](#)

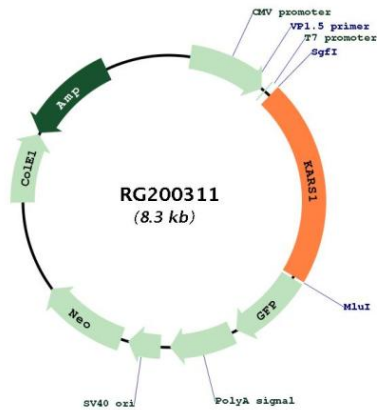
Cytogenetics: 16q23.1

Domains: tRNA-synt_2, tRNA_anti

Protein Pathways: Aminoacyl-tRNA biosynthesis

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 RG200311