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Product datasheet for RC200311

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:	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)

ORF Nucleotide Sequence:

>RC200311 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGGCCGTGCAGGCGGCCGAGGTGAAAGTGGATGGCAGCGAGCCGAAACTGAGCAAGAATGAGCTGA
AGAGACGCCTGAAAGCTGAGAAGAAAGTAGCAGAGAAGGAGGCCAAACAGAAGGAGCTCAGTGAGAAACA
GCTAAGCCAAGCCACTGCTGCTGCCACCAACCACACCACTGATAATGGTGTGGGTCCTGAGGAAGAGAGC
GTGGACCCAAATCAATACTACAAAATCCGCAGTCAAGCAATTCATCAGCTGAAGGTCAATGGGGAAGACC
CATACCCACACAAGTTCCATGTAGACATCTCACTCACTGACTTCATCCAAAAATATAGTCACCTGCAGCC
TGGGGATCACCTGACTGACATCACCTTAAAGGTGGCAGGTAGGATCCATGCCAAAAGAGCTTCTGGGGGA
AAGCTCATCTTCTATGATCTTCGAGGAGAGGGGGTGAAGTTGCAAGTCATGGCCAATTCCAGAAATTATA
AATCAGAAGAAGAATTTATTCATATTAATAACAAACTGCGTCGGGGAGACATAATTGGAGTTCAGGGGAA
TCCTGGTAAAACCAAGAAGGGTGAGCTGAGCATCATTCCGTATGAGATCACACTGCTGTCTCCCTGTTTG
CATATGTTACCTCATCTTCACTTTGGCCTCAAAGACAAGGAAACAAGGTATCGCCAGAGATACTTGGACT
TGATCCTGAATGACTTTGTGAGGCAGAAATTTATCATCCGCTCTAAGATCATCACATATATAAGAAGTTT
CTTAGATGAGCTGGGATTCCTAGAGATTGAAACTCCCATGATGAACATCATCCCAGGGGGAGCCGTGGCC
AAGCCTTTCATCACTTATCACAACGAGCTGGACATGAACTTATATATGAGAATTGCTCCAGAACTCTATC
ATAAGATGCTTGTGGTTGGTGGCATCGACCGGGTTTATGAAATTGGACGCCAGTTCCGGAATGAGGGGAT
TGATTTGACGCACAATCCTGAGTTCACCACCTGTGAGTTCTACATGGCCTATGCAGACTATCACGATCTC
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AGAAGAGCTTGAGAAAGCCCTGGGGATGAAGCTGCCAGAAACGAACCTCTTTGAAACTGAAGAAACTCGC
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GATAATGAGCCCTTTGGCTAAATGGCACCGCTCTAAAGAGGGTCTGACTGAGCGCTTTGAGCTGTTTGTC
ATGAAGAAAGAGATATGCAATGCGTATACTGAGCTGAATGATCCCATGCGGCAGCGGCAGCTTTTTGAAG
AACAGGCCAAGGCCAAGGCTGCAGGTGATGATGAGGCCATGTTCATAGATGAAAACTTCTGTACTGCCCT
GGAATATGGGCTGCCCCCCACAGCTGGCTGGGGCATGGGCATTGATCGAGTCGCCATGTTTCTCACGGAC
TCCAACAACATCAAGGAAGTACTTCTGTTTCCTGCCATGAAACCCGAAGACAAGAAGGAGAATGTAGCAA
CCACTGATACACTGGAAAGCACAACAGTTGGCACTTCTGTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC200311 protein sequence
Red=Cloning site Green=Tags(s)

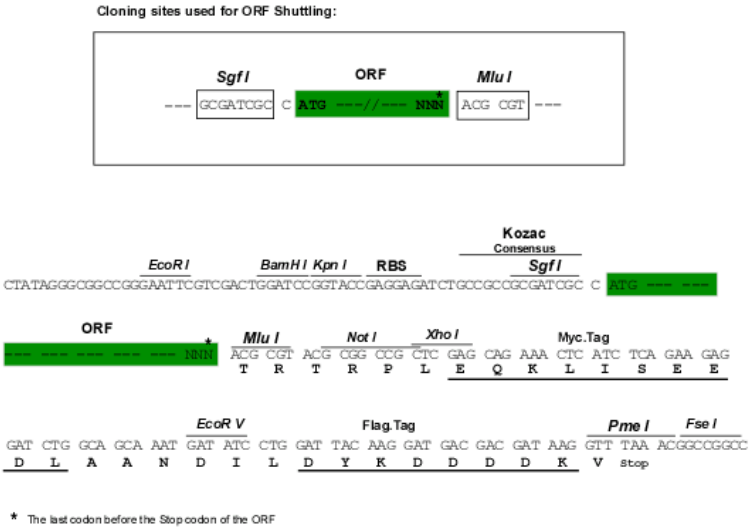
MAAVQAAEVKVDGSEPKLSKNELKRRLKAEKKVAEKEAKQKELSEKQLSQATAAATNHTTDNGVGPEEES
VDPNQYYKIRSQAIHQLKVNGEDPYPHKFHVDISLTDFIQKYSHLQPGDHLTDITLKVAGRIHAKRASGG
KLIFYDLRGEGVKLQVMANSRNYKSEEEFIHINNKLRRGDIIGVQGNPGKTKKGELSIIPYEITLLSPCL
HMLPHLHFGLKDKETRYRQRYLDLILNDFVRQKFIIRSKIITYIRSFLDELGFLEIETPMMNIIPGGAVA
KPFITYHNELDMNLYMRIAPELYHKMLVVGGIDRVYEIGRQFRNEGIDLTHNPEFTTCEFYMAYADYHDL
MEITEKMVSGMVKHITGSYKVTYHPDGPEGQAYDVDFTPPFRRINMVEELEKALGMKLPETNLFETEETR
KILDDICVAKAVECPPPRTTARLLDKLVGEFLEVTCINPTFICDHPQIMSPLAKWHRSKEGLTERFELFV
MKKEICNAYTELNDPMRQRQLFEEQAKAKAAGDDEAMFIDENFCTALEYGLPPTAGWGMGIDRVAMFLTD
SNNIKEVLLFPAMKPEDKKENVATTDTLESTTVGTSV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6154_a04.zip

Restriction Sites: SgfI-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.

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

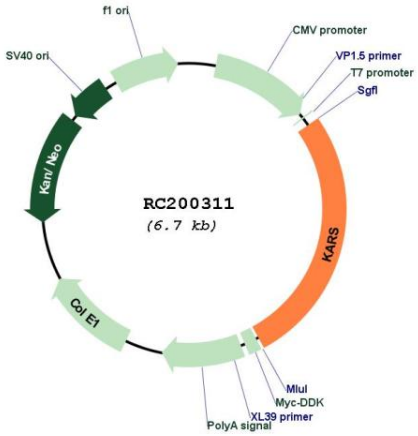
RefSeq: NM_005548.3

RefSeq Size: 2017 bp

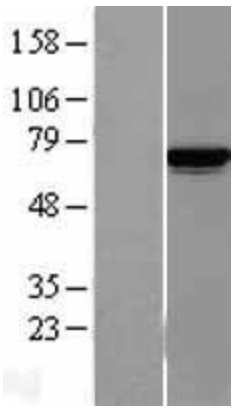
RefSeq ORF: 1794 bp

Locus ID:	3735
UniProt ID:	Q15046
Cytogenetics:	16q23.1
Domains:	tRNA-synt_2, tRNA_anti
Protein Pathways:	Aminoacyl-tRNA biosynthesis
MW:	68 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]

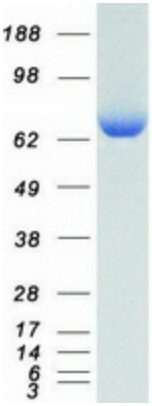
Product images:



Circular map for RC200311



Western blot validation of overexpression lysate (Cat# [LY401702]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200311 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified KARS protein (Cat# [TP300311]). The protein was produced from HEK293T cells transfected with KARS cDNA clone (Cat# RC200311) using MegaTran 2.0 (Cat# [TT210002]).