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Product datasheet for RG211919

IARS2 (NM_018060) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	IARS2 (NM_018060) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	IARS2
Synonyms:	CAGSSS; ILERS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>RG211919 representing NM_018060
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCGTTGGGGGCTGCGCCCTCGCGGGCCGGGCGCGGCCGCCCTGGCCACTGCCCGAAGTTTGTGGGGGA
CGCCCCGCCTTCCCTGCAGCCCGGGATGGCAAGGGGCGACGAAGAGGCTTCTGGTGCGGTCGGTCTCCGG
GGCCAGTAACCACCAGCCGAACTCGAATAGTGGCAGATACCGGGACACGGTGCTGCTGCCGCAGACGAGC
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GAGGACCAAGAAACCTGTGGTTATTCGTGCCAGCAAGCAGTGGTTTATAAACATCACGGATATTAAGACT

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GCAGCCAAGGAATTGTTAAAAAAGGTGAAATTTATTCCTGGATCAGCACTGAATGGCATGGTTGAAATGA
TGGACAGGCGGCCATATTGGTGTATATCAAGGCAAAGAGTTTGGGGTGTTCCAATTCCTGTGTTTCATCA
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CCGACTACGAAAGAAAAATGCCCCCGTTGTTGGAAGTATACAGCGGAGTCTTCAGATACACTGTGTCCTC
GATGTGCAGAAGTTGTCAGTGGAAAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG211919 representing NM_018060
Red=Cloning site Green=Tags(s)

MRWGLRPRGPGAAALATARSLWGTPRLPCSPGWQGATKRLLVRSVSGASNHQPNSNSGRYRDTVLLPQTS
FPMKLLGRQQPDTELEIQQKCGFSELYSWQRERKVKTEFCLHDGPPYANGDPHVGHALNKILKDIANRFH
MMNGSKIHFVPGWDCHGLPIEIKVLSELGREAQNLSAMEIRKKARSFAKAAIEKQKSAFIRWGIMADWNN
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GSDIWWTLPPEQLLPKEVLSEVGGPDALEYVPGQDILDIWFDSGTSWSYVLPGPDQRADLYLEGKDQLGG
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LAEEVFQHIPYIKEPKSVFRTGWISTSSIWKKPGLEEAVESACAMRDSFLGSIPGKNAAEYKVITVIEPG
LLFEIIEMLQSEETSSTSQLNELMMASESTLLAQEPREMTADVIELKGKFLINLEGGDIREESSYKVIVM
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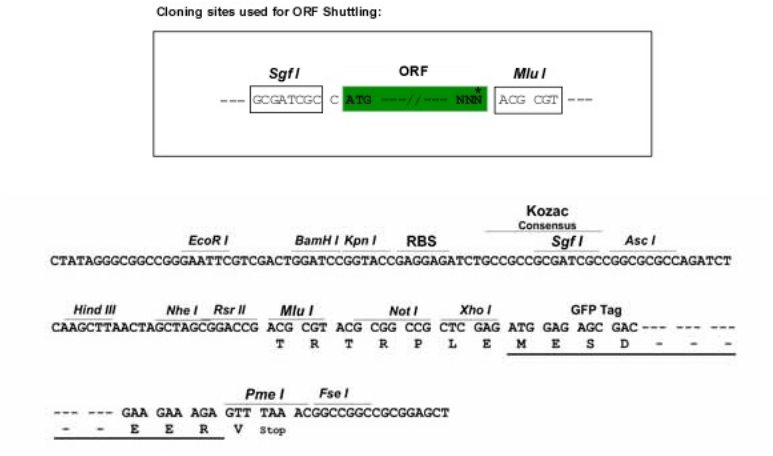
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_018060

ORF Size: 3036 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_018060.4

RefSeq Size: 3549 bp

RefSeq ORF: 3039 bp

Locus ID: 55699

UniProt ID: Q9NSE4

Cytogenetics: 1q41

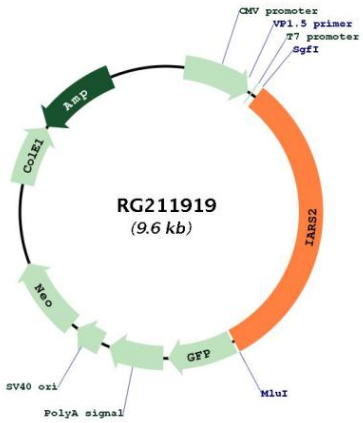
Domains: tRNA-synt_1

Protein Families: Druggable Genome

Protein Pathways: Aminoacyl-tRNA biosynthesis, Valine, leucine and isoleucine biosynthesis

Gene Summary: Aminoacyl-tRNA synthetases catalyze the aminoacylation of tRNA by their cognate amino acid. Because of their central role in linking amino acids with nucleotide triplets contained in tRNAS, aminoacyl-tRNA synthetases are thought to be among the first proteins that appeared in evolution. Two forms of isoleucine-tRNA synthetase exist, a cytoplasmic form and a mitochondrial form. This gene encodes the mitochondrial isoleucine-tRNA synthetase which belongs to the class-I aminoacyl-tRNA synthetase family. [provided by RefSeq, Dec 2014]

Product images:



Circular map for RG211919