

Product datasheet for **SC113746**

IARS2 (NM_018060) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	IARS2 (NM_018060) Human Untagged Clone
Tag:	Tag Free
Symbol:	IARS2
Synonyms:	CAGSSS; ILERS
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_018060, the custom clone sequence may differ by one or more nucleotides

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ATGCGTTGGGGGCTGCGCCCTCGCGGGCCGGGCGCGGCCGCCCTGGCCACTGCCGAAGTTTGTGGGGGA
CGCCCCGCTTCCCTGCAGCCCGGGATGGCAAGGGGCGACGAAGAGGCTTCTGGTGGCGTCTCCGG
GGCCAGTAACCACCAGCCGAACCTCGAATAGTGGCAGATACCGGGACACGGTGTCTGCTGCCGACAGCAGC
TTCCCCATGAAGCTGCTGGGCCCGCAGCAGCCGGACACGGAGCTGGAGATCCAGCAGAAAATGGGATTTT
CAGAACTTTATTCATGGCAAAGAGAAAAGAAAAGTAAAGACAGAATTTTGCCTTCATGATGGACCTCCTTA
TGCAAACGGTGACCCTCATGTTGGACATGCTTTAAATAAGATTTTGAAGACATAGCCAATCGATTCCAT
ATGATGAATGGCTCCAAAATACATTTTGTGCCGGCTGGGATTGTCATGGGTTGCCATTGAAAATAAAG
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TGCTACTATACATTTGATGGGAAGTATGAAGCCAAACAGTTGAGAACTTTTACCAAATGTATGATAAGG
GCTTGGTTTATCGATCTTACAAACCTGTGTTTTGGTCTCCGTCATCTAGGACTGCATTGGCTGAGCAGA
ACTTGAATATAATCCTGAGCATGTCAGTCGTTCAATATATGTAATAATTTCTCTCTTAAAGCCTTCTCCA
AAATTGGCATCTTATAGATGGTTCATCTCTGTTAGTATTTGGTCTGGACCACACAACCTTGGACGA
TTCCAGCCAATGAAGCTGTTTGCTATATGCCTGAATCAAAGTATGCTGTTGTGAAATGTTCTAAGTCTGG
AGACCTTACGTACTGGCGGCAGATAAAGTAGCATCTGTTGCTTCTACTTTGAAAACAACATTTGAGACT
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CTCCTCTTTTACCTGCAAATCATGTGACCATGGCAAAAGGAACGGGATTGGTTCACACAGCCCCAGCTCA
TGGTATGGAAGACTACGGTGTAGCGTCTCAGCACAACTGCCCATGGATTGTCTAGTGGACGAAGATGGA
GTTTTTACAGATGTTGCAGTCTGAACCTCAAACAAGGCTGCCTTGAAGAGGAACTGATGTGGTTA
TAAAGATGCTTACAGACTGCAAAGAATTTGTTGAAAGAGGAGAAAATGGTGCATAGCTATCCGTATGACTG
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GCAGCCAAGGAATTGTTAAAAAGGTGAAATTTATTCCTGGATCAGCACTGAATGGCATGGTTGAAATGA
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TAAGACCAAGGATGAATACTTGTCAACAGCCAAACCCTGAGCATATTGTTAAACTAGTGAACAACAC
GGCAGTGATATCTGGTGGACTCTCCCCCTGAACAACCTCTTCCAAAAGAAGTCTTATCTGAGGTTGGT
GCCCTGATGCCTTGAATATGTGCCAGGTCAGGATATTTGGACATCTGGTTTATGACGGAACTTCATG
GTCTTATGTTCTCCAGGTCCTGACCAAGAGCAGATTTGTAAGTGAAGGAAAAGACCAGCTCGGGGGT
TGGTTTACAGTCATCCTTATTAACAAGTGTGGCAGCAAGGAAGAGACACCTTATAAGACAGTGATTGTT
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TGTGTTAATGGAGGACAAGATCAAAGCAAAGAGCCTCCGTATGGTGTGATGTCCTTCGCTGGTGGGTA
GCTGATTTCAATGTCTTACCAGAGTTGCAATTTGGCCATCCGTGCTCAATGCTGCCAGAGATGATATTA
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CTGGCTGAAGAGGTGTTCCAGCACATACCTTATATTAAGAGCCCAAGAGTGTTCCTGACTGGGTGGA
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AGGGAAATTCCTCATCAACTTAGAAGGTGGTATTCGTTGAAGAGTCTTCTATAAAGTAAATGTCATG
CCGACTACGAAAGAAAATGCCCCGTTGTTGGAAGTATACAGCGGAGTCTTCCAGATACACTGTGTCCTC
GATGTGCAGAAGTTGTCAGTGGAAAATAG
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_018060 unedited
 AGGGCGGCCACGACATTCGCACGAGGTCTTACTCGGCTCCCTTGGTTTCTGGGGTCT
 GCCCTTCAAGCTGGGGCGGGAGCGGAGGACCCGCTCTCAGGGGTTGCCGGACCATGCC
 TTGGGGGCTGCGCCCTCGCGGGCCGGGCGGGCCGCCCTGGCCACTGCCCGAAGTTTGTG
 GGGGATCGCTCCTCCTCCCTGCAGCCCGGATGGCAAGGGGCGACGAAGAGGCTTCTGG
 TGCGGTGCTGCTCGCGGCCAGTAACCACGACCGAAGCTCGAATAGTGGCAGATACCGGG
 ACACGGGCTGGAGATCCAGCAGAAATGTGGATTTTCAGAACTTTATTCATGGCAAAGAG
 AAAGAAAAGTAAAGACAGAATTTTGCCTTCATGATGGACCTCCTATGCAAACGGTGACC
 CTCATGTTGGACATGCTTTAAATAAGATTTTAAAAGACATAGCCAATCGATTCCATATGA
 TGAATGGTCCAAAATACATTTTGTGCCCGGCTGGGATTGTCATGGGTTGCCATTGAAA
 TAAAAGTATTATCAGAACTTGGTAGAGAAGCTCAGAACTTTTCAGCTATGGAAATTAGAA
 AGAAAGCTAGATCATTGCTAAAGCAGCCATTGAGAAACAGAAATCAGCATTATTCGTT
 GGGGAATAATGGCAGATTGGAATAATTGCTACTATACATTTGATGGGAAGTATGAAGCCC
 AAACAGTTGAGACTTTTTACCAAATGTATGATAAGGGCTTGGTTTATCGATCTTACAAC
 CTGTGTTTGTCTCCGTCATCTAGGACTGCATTGGCTGAAGCAGAAGT

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_018060 unedited
 CGGCCGAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTTTTTTTTTTCCAGAATGCCTTTAT
 TTTTCAGTATCATAGAATTTAAATACAGAGTCAAAAGATGATTTATAAAATATAAAACATT
 TTCTGCTTGGCCGATTTTGAAGACAAGCTGAATACATATCTATGTTCTGAATAAGTCCAC
 TATGGATATATATAGGAAGAGATATACATATATCCATCCACAGATACACACACACATATA
 TATTTCTGCATGTATATACATAAATCCTTTCTATAGTTACAGGAAATACTTCTTCTATA
 ATTCTGATTTTACTCCCATCCTCCACCATTTACTCATCCAATCATTACCTAAATCCTGG
 CTTTCTTTCTATATTGTAATAATCCATCCAACTTCTAGCCAGTACTGTCAGGAGGGT
 TCTTGCTCGAGTGAGCTGTTAATACTATTTTCCACTGACAATCTGCACATCGAGGACA
 CAGTGTATCTGAAGACTCCGCTGTATACTTCCAACAACGGGGGCATTTTTCTTTCGTAGT
 CGGCATGACAATTAATTTATAGGAAGACTCTTACGAATATCACCACCTTCTAAGTTGAT
 GAGGAATTTCCCTTTAAGCTCGATTACATCTGCAGTCTCTCGTGGTTCCTGAGCCAG
 TAAAGTTGACTCAGAAGCCATCATTAAATTCATTCAACTGAGAGGTGCTGGAAGTCTCTTC
 AGACTGCAGCATCTCTATTATCTCAAAAAGCAGTCCAGGTTCTATCACAGTGATAACCTT
 GTACTCAGCTGCATTTTGGCAGGNATGCTTCCAAGAAATGAGTTTCGCATTGCACACGC
 ACTTCTCACAGGTTCTTTCAACCCGGGCTTTTTCCAGATAGAAGTCTAGNCCTAATCCCCC
 ATACGGAAAACACCTCTGGGCTTTTATTAAGGTATGTGCTGGAACACCTTTANCCCGT
 GAGGAGAATGGAGCTAAGACGATCTTCT

Restriction Sites:

NotI-NotI

ACCN:

NM_018060

Insert Size:

3410 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](#)

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_018060.3](#), [NP_060530.3](#)

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]