

## Product datasheet for SC115260

### Isoleucyl tRNA synthetase (IARS) (NM\_013417) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Isoleucyl tRNA synthetase (IARS) (NM_013417) Human Untagged Clone
Tag:	Tag Free
Symbol:	Isoleucyl tRNA synthetase
Synonyms:	GRIDHH; IARS; ILERS; ILRS; IRS; PRO0785
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_013417, the custom clone sequence may differ by one or more nucleotides

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ATGCTTCAACAAGTTCAGAAAAACATAAAATTTTCTGCTGAAGAAGAGAAAATCTTGAGTTTTGGACTG
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GGTTTCATTACCCGTTTAAAAACAAGAGGGAGTTTGAGGATGCTTTTCTGCAGATTTTCATTGCCGAGGGC  
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 GACTTCTAG

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_013417 unedited  
 TCGGCATTTTGAATACGACTTCACTATAGGGCGCCGCGATTCCGGCACCAGCGTTGCAT  
 CACCTCCGTGCGCCCGTTGCAGCGTGGACGCCGGATGAGTTGCTTTTAGGCTTGTGCG  
 CCGCGGGGCTGTCCAGGCACGCGAGGCCCTCAGCAACAAAATGCTTCAACAAGTTCCAG  
 AAAACATAAAATTTCTGCTGAAGAAGAGAAAATCTTGGAGTTTTGGACTGAATTTAATT  
 GTTTTCAGGAATGCTTAAAGCAATCAAAACATAAACCAAAATTTACCTTCTATGATGGTC  
 CTCCTTTTGAACCTGGACTGCCTCACTATGGACATATACTTGGGGTACAATTAAGATA  
 TAGTTACAAGATATGCTCACCAGAGTGGGTTTCATGTTGACAGAAGATTTGGATGGGATT  
 GCCATGGCTTACCTGTGGAATATGAAATGATAAGACTGGGAATCAGAGGACCAGAGG  
 ATGTGGCCAAAATGGGGATTACAGAGTATAACAATCAGTCCCAGCAATTTGTGATGAGAT  
 ATTTCTGCTGAGTGAAGTCTACTGTTAGCAGACTTGGCCGATGGATTGACTTTGACAATG  
 ACTATAAAACTCTGTATCCACAATTCATGGAATCAGTCTGGTGGTCTTCAAACAACCTCT  
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 CTCACCTTTCCAACCTCGAGTCAACACAGAAATATAAAGATGTTCAAGATCCTTCAGTAT  
 TTGTAACCTTTCCCTTTGGAAGAAGATGAAACTGTATCTTTAGTTGCTTGGACACCACNTC  
 CTGGACTCTACCTAGTACCCTGCTGTGTGTTATCCAGAATGCATATGTGAAAAATAAG  
 ATGTGCCAAAGGACGATACTCATTTAATGGAGCCAGATGTAGCCCTT

<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_013417 unedited CCCCCCCTTTTACTTGNCGCGCGCCGCTTTCTACGACCGGTCTTTTTTTTTTTTTTTTT TTTTACACCTGAGTTTGTATTGTTCTGATTTACTGCAACTTAAATATTCATCAAATT ATCCAGGACAATCCAGGTGGCAGACAAATATAATATGTCCATTTTCATCAGGAGTCTCAA ACAAATTTTAAAAGGCCAGACAATGATATATACTATGCCATTTAAATCACTTCTATCT TCTGTACTTAAGAACTCACGTATAGAAAATAAACTGTGGGCTGAAGTAACATTGTAACCTG CTCCCAACATGACTGCATAGGTGTCTAAGGTTAAGTGTGAACATTACTGCGAGGTCTCAC GTTACTTGACTAATTCTCTCCATTTGAATTTCAATCCTCGCACTATATTTTACACCCAC CTGTAAGGAACACACCTTCCGCGCGTCCATGTGTGCGCCTATGCGCATGCATGTGTACGG GACTCGTGTACCCCGCGAACTCCCCCACCACCCTCCCCACCAATTTACCCCCCAC CTCCCTCTCTTCTCCCTCCTCCTCCCCCCCCACACCCCTCTCCTTCTGTCTCCT TTTACCACCCCTCCATCCCTCACCACCCCTCCCCCTCCCCGCCACACCTTCCCTCC CTACCCCTCCTACTCCCCACCCTCTCCCCATCCCCCTCACCTCCTCTCCCCACCA TTCTTTCTCTTCTTCTCCTTCTCCTCCTCCTCCTCCTCCTCCTCCTTCCCTCTGTCTC TTATTTCTCCTCCTCCTCCCCACCCACTACCGCCTACTCCACCTCTCCCCAAGTA ATCCACTACTATCCGACCGTACCTCATTCTACCTCCTCCAATCCACGTCTAATTCCC CATATTGCACTTCCAACCAACCATTATTACCCCTCT
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_013417
<b>Insert Size:</b>	3890 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_013417.1</a> , <a href="#">NP_038203.1</a>
<b>RefSeq Size:</b>	4508 bp
<b>RefSeq ORF:</b>	3789 bp
<b>Locus ID:</b>	3376
<b>UniProt ID:</b>	<a href="#">P41252</a>
<b>Cytogenetics:</b>	9q22.31
<b>Domains:</b>	tRNA-synt_1
<b>Protein Families:</b>	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. Isoleucine-tRNA synthetase belongs to the class-I aminoacyl-tRNA synthetase family and has been identified as a target of autoantibodies in the autoimmune disease polymyositis/dermatomyositis. Alternatively spliced transcript variants have been found. [provided by RefSeq, Nov 2012]

Transcript Variant: This variant (2) has an alternate splice site in the 5' UTR, compared to variant 1. Variants 1 and 2 encode the same protein.