

## Product datasheet for **RG203384**

### **RARS2 (NM\_020320) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	RARS2 (NM_020320) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	RARS2
Synonyms:	ArgRS; DALRD2; PCH6; PRO1992; RARSL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG203384 representing NM\_020320  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCGTGGCGCTTTCGCGCGCTATTGCTTGCCAGCTTCCAGAGTGTTGAATCTCCACCAGAAAAC  
 TGATCACATCAATATCTGCAGTTCCAATTTCCAAAAAGAAGAAGTAGCTGATTTTCAGCTTCTGTGGA  
 TCTTTATTGAAAAAGACAATGACCATTCAAGACCAGATATTCAAGTTCAAGCCAAGAGACTAGCAGAG  
 AAGCTAAGATGTGATACAGTGGTGGAGTAAATCAGTACTGGTCAAAGGACTGTAAATTTCAAATAAACA  
 GAGAGCTCTTAACAAAGACAGTGTACAACAAGTAATTGAAGATGGCTCAAATATGGATTAAAAAGTGA  
 ACTTTTCTCTGGACTTCCCAGAAAGATTGTGGTTGAATTCAGTTCACCTAATGTTGCCAAAAAATTT  
 CATGTTGGACATTTGCGTCTACCATCATAGGAAATTTATAGCAATCTCAAAGAAGCTTTAGGACATC  
 AAGTAATAAGAATAAATTACCTTGGCGATTGGGCGATGCAGTTTGGTCTTCTGGGAACTGGCTTCCAGCT  
 GTTTGGCTATGAGAAAACTGCAGTCCAATCCTCTACAGCATCTTTTGAAGTTTATGTACAAGTTAAT  
 AAAGAAGCAGCAGATGATAAAAGTGTAGCAAAAGCAGCACAGGAGTTCTTCCAACGATTGGAAGTGGCGG  
 ATGTGCAAGCACTTTCACTGTGGCAAAAAATTCGGGACTTGAGCATTGAAGAGTACATTCGGGTTTACAA  
 GCGTCTGGGAGTATATTTGATGAATATTCAGGAGAATCATTTTATCGTGAAAAATCTCAAGAGGTCTTA  
 AAGTTGCTGGAGAGTAAAGGACTCCTACTGAAAACAATAAAAGGAACGGCTGTAGTAGATCTCTCTGGGA  
 ATGGCGACCCCTCCTCAATTTGTACTGTAAATGCGAAGTGTAGGACTTCTCTATGCAACCAGAGATCT  
 TGCAGCTGCTATAGATCGAATGGACAAGTATAATTTGATACAATGATATATGTGACAGATAAAGGACAA  
 AAAAAGCATTTTCAGCAAGTATTCAAAATGCTGAAGATCATGGGATATGACTGGGAGAAAGGTGCCAGC  
 ACGTGGCTTTGGAGTAGTACAGGGAATGAAGACTCGAAGAGGAGATGTCACCTTCTGGAAAGTGT  
 AAATGAGATTCAAATTAAGGATGCTACAGAACATGGCTTCAATTAAGACAACCTAAAGAAGTCAAGAACCCA  
 CAAGAGACTGCAGAGAGGGTCGGGCTCGCAGCACTCATTATTCAGGACTTCAAAGGTTTACTCTTATCTG  
 ACTACAAGTTCAGCTGGGATCGTGTTCAGAGTTCGCGGGGACACAGGAGTCTTCTACAGTACACACA  
 CGCCCGCTCCACAGTTTGAAGAGACTTTGGATGTGGGTACCTGAATGACTTCAACACTGCTTGTTTA  
 CAAGAGCCACAGTCTGTTTCAATTTCTCAGCATCTTCTCAGGTTTCGACGAGGTGCTTTATAAATCATCTC  
 AGGACTTCAACCCAGGCATATCGTCAGTTACCTTCTAACTTTAAGTCATCTTGCAGCTGTGCCACACAA  
 AACACTACAAATAAAAGATAGTCTCCTGAAGTGGCTGGGCCAGACTTCATCTTTCAAAGCTGTCCGT  
 TCTGCTAGCCAATGGAATGAACTTCTTGAATAACACCTGTATGTAGGATG

**ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA**

**Protein Sequence:**

>RG203384 representing NM\_020320  
 Red=Cloning site Green=Tags(s)

MACGFRRAIACQLSRVLNLPENLITSISAVPISQKEEVADFQLSVDSLLEKDNDRPDIQVQAKRLAE  
 KLRCDTVVSEISTGQRTVNFKINRELLTKTVLQQVIEDGSKYGLKSELFSGLPQKKIVVEFSSPNVAKKF  
 HVGHLRSTIIGNFIANLKEALGHQVIRINYLDWGMQFGLLGTGFQLFGYEEKLQSNPLQHLFEVYVQVN  
 KEAADDKSVAKAAQEFFQRLELGDVQALSLWQFRDL SIEEYIRVYKRLGVYFDEYSGESFYREKSQEV  
 KLLLESKGLLLKTIKGTAVVDLSGNGDPSSICTVMRSDGTSLYATRDLAAAIDRMDKYNFDTMIYVTDKQ  
 KKHFFQVQFQMLKIMGYDWAERCQHVPFVGVQGMKTRRGDVTFLQYTHARLHSLEETFQCGYLNDFNACL  
 QEPQSVSILQHLLRFDEVLYKSSQDFQPRHIVSYLLTLSHLAAVAHKTLQIKDSPPEVAGARLHLFKAVR  
 SVLANGMKLLGITPVCRM

**TRTRPLE - GFP Tag - V**

**Restriction Sites:**

SgfI-MluI



<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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_020320.5</a>
<b>RefSeq Size:</b>	1848 bp
<b>RefSeq ORF:</b>	1737 bp
<b>Locus ID:</b>	57038
<b>UniProt ID:</b>	<a href="#">Q5T160</a>
<b>Cytogenetics:</b>	6q15
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Aminoacyl-tRNA biosynthesis
<b>Gene Summary:</b>	This nuclear gene encodes a protein that localizes to the mitochondria, where it catalyzes the transfer of L-arginine to its cognate tRNA, an important step in translation of mitochondrially-encoded proteins. Defects in this gene are a cause of pontocerebellar hypoplasia type 6 (PCH6). Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2016]