

## Product datasheet for **RG226553**

### GART (NM\_001136005) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	GART (NM_001136005) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GART
Synonyms:	AIRS; GARS; GARTF; PAIS; PGFT; PRGS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG226553 representing NM_001136005 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCAGCCCAGTACTTATAATTGGCAGTGGAGGAAGGGAACATACGCTGGCCTGGAACTTGCACAGT  
CTCATCATGTCAAACAAGTGTGGTTGCCCCAGGAAACGCAGGCACTGCCTGCTCTGAAAAGATTTCAAA  
TACCGCCATCTCAATCAGTGACCACACTGCCCTTGCTCAATTCTGCAAAGAGAAGAAAATTGAATTTGTA  
GTTGTTGGACCAGAAGCACCTCTGGCTGCTGGGATTGTTGGGAACCTGAGGTCTGCAGGAGTGAATGCT  
TTGGCCCAACAGCAGAAGCGGCTCAGTTAGAGTCCAGCAAAGGTTTGCCAAAGAGTTTATGGACAGACA  
TGGAAATCCAACCGCACAAATGGAAGGCTTTCACCAAACCTGAAGAAGCCTGCAGCTTCATTTTGAAGTGA  
GACTTCCCTGCTTTGGTTGTGAAGGCCAGTGGTCTTGCAGCTGGAAAAGGGGTGATTGTTGCAAAGAGCA  
AAGAAGAGGCCTGCAAAGCTGTACAAGAGATCATGCAGGAGAAAGCCTTTGGGGCAGCTGGGAAACAAT  
TGTCAATGAAGAACTTCTTGACGGAGAAGAGGTGTCGTGTCTGTGTTCACTGATGGCAAGACTGTGGCC  
CCCATGCCCCCAGCACAGGACCAATAAGCGATTACTGGAGGGAGATGGTGGCCCTAACACAGGGGGAAATGG  
GAGCCTATTGTCCAGCCCCTCAGGTTTCTAATGATCTATTACTAAAAATTAAGATACTGTTCTTCAGAG  
GACAGTGGATGGCATGCAGCAAGAGGGTACTCCATATACAGGTATTCTCTATGCTGGAATAATGCTGACC  
AAGAATGGCCAAAAGTTCTAGAGTTTAAATGGCGTTTTGGTGATCCAGAGTGCCAAGTAATCCTCCCAC  
TTCTTAAAAGTGATCTTTATGAAGTGATTCAAGTCCACCTTAGATGGACTGCTCTGCACATCTCTGCCTGT  
TTGGCTAGAAAACACACCGCCCTAACTGTTGTGATGGCAAGTAAAGGTTATCCTGGAGACTACACCAAG  
GGTGTAGAGATAACAGGGTTTCTGAGGCTCAAGCTCTAGGACTGGAGGTGTTCCATGCAGGCACTGCC  
TCAAAAATGGCAAAGTAGTAACTCATGGGGTAGAGTTCTTGCAGTCACAGCCATCCGGGAAAATCTCAT  
ATCAGCCCTTGAGGAAGCCAAGAAAGGACTAGCTGCTATAAAGTTTGGAGGAGCAATTTATAGGAAAGAC  
ATCGGCTTTCGTGCCATAGCTTTCCTCCAGCAGCCAGGAGTTTACTTACAAGGAATCTGGAGTAGATA  
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AGTTGATCTGGAGGTTTTGCTGGTCTTTTATTAAAAGCAGCTGTTTCAAAGATCCCTTCTGGCC



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TCTGGAACAGATGGCGTTGGAAC TAAACTAAAGATTGCCAGCTATGCAATAAACATGATACCATTGGTC  
 AAGATTTGGTAGCAATGTGTGTTAATGATATTCTGGCACAAAGGAGCAGAGCCCCTTCTTCTTCTTGATTA  
 CTTTTCTGTGGAAAACCTTGACCTCAGTGAAC TGAAGCTGTTGTTGCTGGAATTGCTAAAGCTTGTGGA  
 AAAGCTGGATGTGCTCTCCTTGGAGGTGAAACAGCAGAAATGCCTGACATGTATCCCCCTGGAGAGTATG  
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 GGGTGTAGTTGTTGTTGGAATAGCTTCATCTGGTCTTCATAGCAATGGATTTAGCCTTGTGAGGAAAATC  
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 GCAAGAAGCTGTCCCGTGAAGAGGGGTGATACTGTGCAACTCTTTCTGAAAGAGTAAAATTAGCAGAA  
 CATAAAATATTTCTGCAGCCCTCAGCTGGTGCCAGTGAAGTGTACAGCTTGAGAAAATGGCAAGA  
 TCTGTTGGGTTAAAGAGGAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG226553 representing NM\_001136005  
 Red=Cloning site Green=Tags(s)

MAARVLIIGSGGREHTLAWKLAQSHHVQVLVAPGNAGTACSEKISNTAISISDHTALAQFCKEKKIEFV  
 VVGPEAPLAAGIVGNLRSAGVQCFGPTAEAAQLESSKRFKEFMDRHGIPTAQWKAFKPEEACSFILSA  
 DFPALVVKASGLAAGKGVIVAKSKEEACKAVQEI MQEKAFGAAGETIVIEELLDGEEVSCLCFDTGKTVA  
 PMPPAQDHRKRLLEGDGGPNTGGMGAYCPAPQVSNL LLLKIKDTVLQRTVDGMQQEGTPYTGILYAGIMLT  
 KNGPKVLEFNCRFGDPECQVILPLLKSDLYEVIQSTLDGLLCTSLPVWLENHTAL TVVMASKGYPGDYTK  
 GVEITGFPEAQLGLEVFHAGTALKNGKVVTHGGRVLA VTAIRENLISALEEAKKGLAAIKFEGAIYRKD  
 IGFRAIAFLQQPRSLTYKESGVDIAAGNMLVKKIQPLAKATSRSGCKVDLGGFAGLFDLKAAGFKDPLLA  
 SGTGVDGVTGLKIAQLCNKHDTIGQDLVAMCVNDILAQGAEP LFFLDYFSCGKLDLSVTEAVVAGIAKACG  
 KAGCALLGGETAEMPMYPPGEYDLAGFAVGAMERDQKLP HLERITEGDVVVGIASSGLHSNGFSLVRKI  
 VAKSSLQYSSPAPDGCQDQTLGDLLLTPTR IYSHSLLPVLRSGHVKAFAHITGGGLLENIPRVLPEKLG  
 VDLDAQTRIPRVFSWLQQEHLSEEEMARTFNCGVGAVL VVSKEQTEQILRGIQQHKEEAWVIGSVVARA  
 EGSPRVVKNLIESMQINGSVLKNGSLTNHFSFEKKARVAVL ISGTGSNLQALIDSTREPNSSAQIDIV  
 ISNKAAVAGLDKAERAGIPTRVINHKLKYNRVEFDSAIDL VLEEFSDIVCLAGFMRI LSGPFVQKWNK  
 MLNIHPSLLPSFKGSNAHEQALETGVTVTGCTVHFVAEDVDAGQIILQEAVPVKRGDTVATLSERVKLA  
 HKIFPAALQLVASGTVQLGENGKICWVKEE

TRTRPLE - GFP Tag - V

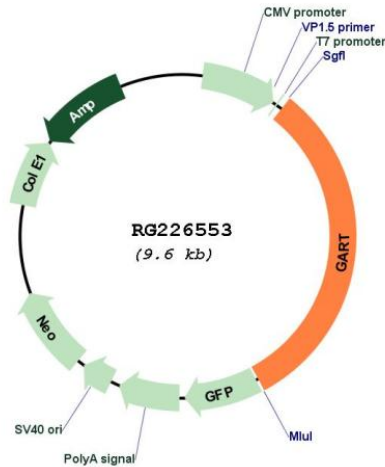
**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_001136005

ORF Size: 3030 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](#)

<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>	<u><a href="#">NM_001136005.1</a></u> , <u><a href="#">NP_001129477.1</a></u>
<b>RefSeq Size:</b>	3552 bp
<b>RefSeq ORF:</b>	3033 bp
<b>Locus ID:</b>	2618
<b>UniProt ID:</b>	<u><a href="#">P22102</a></u>
<b>Cytogenetics:</b>	21q22.11
<b>Protein Pathways:</b>	Metabolic pathways, One carbon pool by folate, Purine metabolism
<b>Gene Summary:</b>	The protein encoded by this gene is a trifunctional polypeptide. It has phosphoribosylglycinamide formyltransferase, phosphoribosylglycinamide synthetase, phosphoribosylaminoimidazole synthetase activity which is required for de novo purine biosynthesis. This enzyme is highly conserved in vertebrates. Alternative splicing of this gene results in two transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]