

Product datasheet for **RG226662**

GART (NM_001136006) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | GART (NM_001136006) 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: | >RG226662 representing NM_001136006 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCAGCCCAGTACTTATAATTGGCAGTGGAGGAAGGGAACATACGCTGGCCTGGAACTTGCACAGT
CTCATCATGTCAAACAAGTGTGGTTGCCCCAGGAAACGCAGGCACTGCCTGCTCTGAAAAGATTTCAAA
TACCGCCATCTCAATCAGTGACCACACTGCCCTTGCTCAATTCTGCAAAGAGAAGAAAATTGAATTTGTA
GTTGTTGGACCAGAAGCACCTCTGGCTGCTGGGATTGTTGGGAACCTGAGGTCTGCAGGAGTGAATGCT
TTGGCCCAACAGCAGAAGCGGCTCAGTTAGAGTCCAGCAAAGGTTTGCCAAAGAGTTTATGGACAGACA
TGGAAATCCAACCGCACAAATGGAAGGCTTTCACCAAACCTGAAGAAGCCTGCAGCTTCATTTTGAAGTGA
GACTTCCCTGCTTTGGTTGTGAAGGCCAGTGGTCTTGCAGCTGGAAAAGGGGTGATTGTTGCAAAGAGCA
AAGAAGAGGCCTGCAAAGCTGTACAAGAGATCATGCAGGAGAAAGCCTTTGGGGCAGCTGGGAAACAAT
TGTCAATGAAGAACTTCTTGACGGAGAAGAGGTGTCGTGTCTGTGTTCACTGATGGCAAGACTGTGGCC
CCCATGCCCCAGCACAGGACCAATAAGCGATTACTGGAGGGAGATGGTGGCCCTAACACAGGGGGAAATGG
GAGCCTATTGTCCAGCCCTCAGGTTTCTAATGATCTATTACTAAAAATTAAGATACTGTTCTTCAGAG
GACAGTGGATGGCATGCAGCAAGAGGGTACTCCATATACAGGTATTCTCTATGCTGGAATAATGCTGACC
AAGAATGGCCAAAAGTTCTAGAGTTTAAATGGCGTTTTGGTGATCCAGAGTGCCAAGTAATCCTCCCAC
TTCTTAAAAGTGATCTTTATGAAGTGATTCAAGTCCACCTTAGATGGACTGCTCTGCACATCTCTGCCTGT
TTGGCTAGAAAACACACCGCCCTAACTGTTGTGCATGGCAAGTAAAGGTTATCCTGGAGACTACACCAAG
GGTGTAGAGATAACAGGGTTTCTGAGGCTCAAGCTCTAGGACTGGAGGTGTTCCATGCAGGCACTGCC
TCAAAAATGGCAAAGTAGTAACTCATGGGGTAGAGTTCTTGCAGTCACAGCCATCCGGGAAAATCTCAT
ATCAGCCCTTGAGGAAGCAAGAAAGGACTAGCTGCTATAAAGTTTGGAGGAGCAATTTATAGGAAAGAC
ATCGGCTTTCGTGCCATAGCTTTCCTCCAGCAGCCAGGAGTTTACTTACAAGGAATCTGGAGTAGATA
TCGCAGCTGAAAATATGCTGGTCAAGAAAATTCAGCCTTAGCAAAGCCACTTCCAGATCAGGCTGTAA
AGTTGATCTGGAGGTTTGGCTGCTTTTGGATTTAAAAGCAGCTGTTTCAAAGATCCCTTCTGGCC



[View online »](#)

TCTGGAACAGATGGCGTTGGAAC TAAACTAAAGATTGCCAGCTATGCAATAAACATGATACCATTGGTC
 AAGATTTGGTAGCAATGTGTGTTAATGATATTCTGGCACAAGGAGCAGAGCCCCTCTTCTCCTTGATTA
 CTTTTCTGTGGAAAACCTGACCTCAGTGAAC TGAAGCTGTTGTTGCTGGAATTGCTAAAGCTTGTGGA
 AAAGCTGGATGTGCTCTCCTTGGAGGTGAAACAGCAGAAATGCCTGACATGTATCCCCCTGGAGAGTATG
 ACCTAGCTGGGTTTGGCGTTGGTGCCATGGAGCGAGATCAGAACTCCCTCACCTGGAAGAATCACTGA
 GGGTGTAGTTGTTGTTGGAATAGCTTCATCTGGTCTTCATAGCAATGGATTTAGCCTTGTGAGGAAAATC
 GTGGCAAAATCTTCCCTCCAGTACTCCTCTCCAGCACCTGATGGTTGTGGTGACCAGACTTTAGGGGACT
 TACTTCTCAGCCTACCAGAATCTACAGCCATTCACTGTTACCTGTCTACGTTCCAGGACATGTCAAAGC
 CTTTGCCCATATTACTGGTGGAGGATTACTAGAGAACATCCCCAGAGTCTCCTGAGAAAACCTGGGGTA
 GATTTAGATGCCAGACCTGGAGGATCCCAGGGTCTTCTCATGGTTGCAGCAGGAAGGACACCTCTCTG
 AGGAAGAGATGGCCAGAACATTTAACTGTGGGTTGGCGTGTCTTGTGGTATCAAAGGAGCAGACAGA
 GCAGATTCTGAGGGTATCCAGCAGCACAAGGAAGAAGCCTGGGTGATTGGCAGTGTGGTGCACGAGCT
 GAAGGTTCCCCACGTGTAAAGTCAAGAATCTGATTGAAAGCATGCAAAATAATGGGTGAGTGTGAAGA
 ATGGCTCCCTGACAAATCATTCTCTTTTGAAGGTTCAAAAGCCAGAGTGGCTGTCTTAATATCTGGAAC
 AGGATCGAACCTGCAAGCACTTATAGACAGTACTCGGAAACCAATAGCTCTGCACAAATGATATTGTT
 ATCTCAAACAAAGCCGAGTAGCTGGGTTAGATAAAGCGGAAAGAGCTGGTATTCCCACTAGAGTAATTA
 ATCATAAACTGTATAAAATCGTGTAGAATTTGACAGTGAATTGACCTAGTCTTGAAGAGTCTCCAT
 AGACATAGTCTGTCTTGCAGGATTCATGAGAATCTTTCTGGCCCTTTGTCAAAGTGGAAATGGAAAA
 ATGCTCAATATCCACCCATCCTTGTCTCCTTCTTTAAGGGTTCAAATGCCCATGAGCAAGCCCTGGAAA
 CCGGAGTCACAGTTACTGGGTGCACTGTACACTTTGTAGCTGAAGATGTGGATGTGGACAGATTATTT
 GCAAGAAGCTGTCCCGTGAAGAGGGGTGATACTGTGCGCAACTCTTTCTGAAAGAGTAAAATTAGCAGAA
 CATAAAATATTTCTGCAGCCCTCAGCTGGTGCCAGTGAAGTGTACAGCTTGAGAAAATGGCAAGA
 TCTGTTGGGTTAAAGAGGAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG226662 representing NM_001136006
 Red=Cloning site Green=Tags(s)

MAARVLIIGSGGREHTLAWKLAQSHHVQVLVAPGNAGTACSEKISNTAISISDHTALAQFCKEKKIEFV
 VVGPEAPLAAGIVGNLRSAGVQCFGPTAEAAQLESSKRFKEFMDRHGIPTAQWKAFKPEEACSFILSA
 DFPALVVKASGLAAGKGVIVAKSKEEACKAVQEI MQEKAFGAAGETIVIEELLDGEEVSCLCFDTGKTVA
 PMPPAQDHRKRLLEGDGGPNTGGMGAYCPAPQVSNL LLLIKDVTLQRTVDGMQQEGTPYTGILYAGIMLT
 KNGPKVLEFNCRFGDPECQVILPLLKSDLYEVIQSTLDGLLCTSLPVWLENHTAL TVVMASKGYPGDYTK
 GVEITGFPEAQLGLEVFHAGTALKNGKVVTHGGRVLA VTAIRENLISALEEAKKGLAAIKFEGAIYRKD
 IGFRAIAFLQQPRSLTYKESGVDIAAGNMLVKKIQPLAKATSRSGCKVDLGGFAGLFDLKAAGFKDPLLA
 SGTGVDGKTKLIAQLCNKHDTIGQDLVAMCVNDILAQGA EPLFFLDYFSCGKLDLSVTEAVVAGIAKACG
 KAGCALLGGETAEMPMYPPGEYDLAGFAVGAMERDQKLP HLERITEGDVVVGIASSGLHSNGFSLVRKI
 VAKSSLQYSSPAPDGCQDQTLGDLLLTPTR IYSHSLLPVLRSGHVKAFAHITGGGLLENIPRVLPEKLG
 VDLDAQTRIPRVFSWLQQEHLSEEEMARTFNCGVGAVL VVSKEQTEQILRGIQQHKEEAWVIGSVVARA
 EGSPRVKVKNLIESMQINGSVLKNGSLTNHFSFEK KARVAVLISGTGSNLQALIDSTREPNSSAQIDIV
 ISNKA AVAGLDKAERAGIPTRVINHKLYKNRVEFDSAIDL VLEEFSDIVCLAGFMRI LSGPFVQKWNGK
 MLNIHPSLLPSFKGSNAHEQALETGVTVTGCTVHFVAEDVDAGQIILQEAVPVKRGDTVATLSERVKLA E
 HKIFPAALQLVASGTVQLGENGKICWVKEE

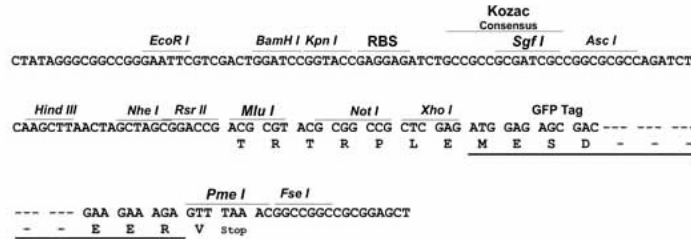
TRTRPLE - GFP Tag - V

Restriction Sites:

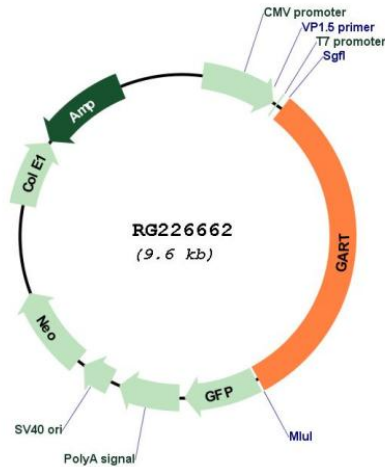
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_001136006

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](#)

| | |
|-------------------------------|---|
| 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: | <ol style="list-style-type: none">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: | <u>NM_001136006.1</u> , <u>NP_001129478.1</u> |
| RefSeq Size: | 3515 bp |
| RefSeq ORF: | 3033 bp |
| Locus ID: | 2618 |
| UniProt ID: | <u>P22102</u> |
| Cytogenetics: | 21q22.11 |
| Protein Pathways: | Metabolic pathways, One carbon pool by folate, Purine metabolism |
| Gene Summary: | 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] |