

## Product datasheet for **RG234852**

### **GUCY1A2 (NM\_001256424) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GUCY1A2 (NM_001256424) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GUCY1A2
Synonyms:	GC-SA2; GUC1A2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG234852 representing NM\_001256424  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGTCTCGAAGGAAGATTCGTCGAGTCTTCAGCTCCCTGGGCTCCGACTACCTGGAGACCAGCCCGG  
 AGGAGGAGGGGGAGTGCCCCCTGTCTAGGCTCTGCTGGAATGGCAGCCGAGCCCGCCGGCCGCTGGA  
 GCCCAGCCCGGCCGACGTGCCGCTGCCCGGCCCGCCCGACCCCGGCTGCTTCTGCCGCGCCCGCC  
 GCTGCCACTGCCGGGGCCAGGAGGGTGCAGCGCCGGAGCGGGTCAACCTGGACTCGCTGGGCGAGAGCA  
 TCAGCCGCTGACGGCGCCCTCGCCTCAGACGATACAGCAGACTCTCAAGAGGACTGCAGTATTATGA  
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 TGAAGTTTGAGGAAATCAAAAAAGATTTGGTGAAGATTCTTTAATATATGCTTTCATGAGAATGAGAG  
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 CTCTCATGCTCCACTACTTCCACCTCACCATATTGTGGGGTTTGAATGCTGGGGATGATTAAGGCTGC  
 AGGAAAGAAGATCTATCGGCTGGATGTGGAAGTGAACAGGTTGCAAATGAGAAGCTATGCTCTGATGTT  
 TCAAACCCAGGCAATTGTAGCTGTCTTACTTTCTTATCAAAGAATGTGAAAATACTAATATCATGAAGA  
 ACCTTCCACAGGGAACCTCCCAAGTTCCTGCGGACCTCAGAAATAGCATCAACACCTTCTGTAGAGCCTT  
 CCCTTCCACTTGATGTTTATGCCAGCATGTCAGTCTTCAGTTGGGGGAAGGCTAAGGAAGCAGCTT  
 CGATGTGACACTCACAAGTGTCAAGTTTGAGGACTGCTTCGAGATTGTATCTCAAAGGTTAATGCCA  
 CCTTTGAAAGGGTCTGCTGCGACTGTCTACCCCGTTTTGTGATTAGAACCAAGCCTGAGGCTTCTGGCTC  
 TGAATAAAGACAAGGTGATGGAAGTCAAAGGACAAATGATCCATGTTCCAGAATCAAATTCATTTTA  
 TTTTTGGGCTCTCCATGTGTGGACAAGTTGGATGAACTCATGGGCCGAGGGCTACATCTCTCAGACATCC  
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 CCAGAAAGTTTGATGATGCACCATGCTCTTTTCAGACATTGTTGGCTTACAGCCATATGTGCCAGTG  
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 GCCATGCTAAACCCATTGCTCTGATGGCCTTGAAGATGATGGAACCTTTCAGAAGAGGTGCTGACACCTGA  
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 GATCAGCATCAAAGTGAACCGGATTTGGGTACTGAAAAGATGAGGATAGGAATCACTCAGGCTCCGTGC  
 TGGCTGGAGTTGTTGGGGTGCGAATGCCAGTTATTGCCTGTTTGGAAATAATGTCACACTGGCAAGCAA  
 ATTCGAGTCGGGAAGTCAACCTCGGCGCATCAATGTCAGCCCAACCCTTACCAATTATTAACGAGAA  
 GAAAGTTTACATTCAATCCGCGGTCTCGTGAAGAGCTTCCAGACAACCTTCAAAGGAAATTCCTGGGA  
 TCTGCTATTTCTGGAGGTAAGGACTGGTCCAAAGCCACCAAGCCTTCTCTTCTCGTCGAGAATAAA  
 AAAGTTTCTACAACATCGGCACCATGTTCTCCGGGAGACAAGCCTC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG234852 representing NM\_001256424  
 Red=Cloning site Green=Tags(s)

```
MSRRKISSESFSSLGSDYLETSPEEEGECPLSRLCWNGSRSPGPLEPSPAAAAAAPAPTPAASAAAA
AATAGARRVQRRRRVNLDSLGESISRLTAPSPQTIQQLKRTLQYYEHQVIGYRDAEKNFNHISNRCSYA
DHSNKEEIEDVSGILQCTANILGLKFEEIQKRFGEFFNICFHENERVLRVGGTLQDFNGFDALLEHI
RTSFGKQATLESFSLCKELPEGTLMLHYFHPHHIVGFAMLGMIKAAGKKIYRLDVEVEQVANCLKSDV
SNPGNCSCLTFLIKECENTNIMKNLPQGT SQVPADLRISINTFCRAFPFHLMFDPMSVQLQGEGLRKQL
RCDTHKVLKFEDCFEIVSPKVNATFERVLLRLLSTPFVIRTKEASGSENKDKVMEVKGQMIHVPESNSIL
FLGSPCVDKLDLMGRGLHLSDIPIHDA TRD VILVGEQAKAQDGLK KRM DKLKATLER THQALEEEKKKT
VDLLYSIFPGDVAQQLWQQQVQARKFDDVTMLFSDIVGFTAICAQCTPMQVISMLNELYTRFDHQCGFL
DIYKVETIGDAYVAAGLHRKSLCHAKPIALMALKMMELSEEVLTPDGRPIQPQRSELLFSFPVSIQLVP
DQHQSETDLGTEKMRIGIHSGSVLAGVVGVRMPRYCLFGNNVTLASKFESGSHPRRINVSPTTYQLLKRE
ESFTFIPRSREELPDNFPKEIPGICYFLEVRTGPKPPKPSLSSSRIKKVSYNIGTMFLRETSL
```

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001256424

**ORF Size:** 2289 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:**

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\\_001256424.2](#)

**RefSeq Size:** 16233 bp

**RefSeq ORF:** 2292 bp

**Locus ID:** 2977

**UniProt ID:** [P33402](#)

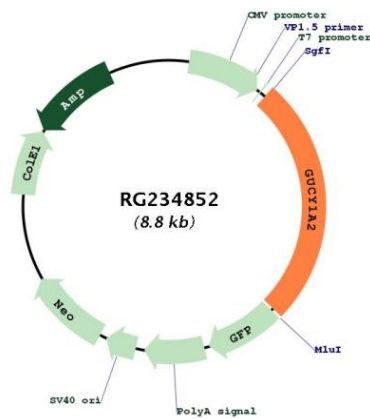
**Cytogenetics:** 11q22.3

**Protein Families:** Druggable Genome

**Protein Pathways:** Gap junction, Long-term depression, Purine metabolism, Vascular smooth muscle contraction

**Gene Summary:** Soluble guanylate cyclases are heterodimeric proteins that catalyze the conversion of GTP to 3',5'-cyclic GMP and pyrophosphate. The protein encoded by this gene is an alpha subunit of this complex and it interacts with a beta subunit to form the guanylate cyclase enzyme, which is activated by nitric oxide. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2012]

**Product images:**



Circular map for RG234852