

## Product datasheet for **RG239043**

### **GUCY1B1 (NM\_001291952) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GUCY1B1 (NM_001291952) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GUCY1B1
Synonyms:	GC-S-beta-1; GC-SB3; GUC1B3; GUCB3; GUCSB3; GUCY1B3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG239043 representing NM\_001291952.  
 Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGGATCGCC
ATGCTTATGTGCTTTATAAAAAGAGGCACAGTTAGATGAAGAAGGACAGTTTCTTGTGAGAATAATATAT
GATGACTCCAAAACCTTATGATTTGGTTGCTGCTGCAAGCAAAGTCTCAATCTCAATGCTGGAGAAATC
CTCCAAAATGTTTGGGAAGATGTTTTTCGTCTTTTGCCAAGAATCTGGTTATGATACAATCTTGCCTGTC
CTGGGCTCTAATGTCAGAGAATTTCTACAGAACCTTGATGCTCTGCACGACCACCTTGCTACCATCTAC
CCAGGAATGCGTGCACCTTCCTTTAGGTGCACTGATGCAGAAAAGGGCAAAGGACTCATTTTGCCTACTAC
TACTCAGAGAGAGAAGGACTTCAGGATATTGTCATTGGAATCATCAAACAGTGGCACAACAAATCCAT
GGCACTGAAATAGACATGAAGTTATTACAGCAAAGAAATGAAGAATGTGATCATACTCAATTTTTAATT
GAAGAAAAAGAGTCAAAGAAGAGGATTTTTATGAAGATCTTGACAGATTTGAAGAAAATGGTACCCAG
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GTGGTCACTCAGTGTGGCAATGCTATATACAGAGTTCTCCCCAGCTCCAGCCTGGGAATTCAGCCTT
CTGTCTGTCTTCTCGCTGGTTCCTCATATTGATATTAGTTTCCATGGGATCCTTTCTCACATCAAT
ACTGTTTTTGTATTGAGAAGCAAGGAAGGATTGTTGGATGTGGAGAAATAGAATGTGAGGATGAACTG
ACTGGGACTGAGATCAGCTGCTTACGTCTCAAGGGTCAAATGATCTACTTACCTGAAGCAGATAGCATA
CTTTTTCTATGTTACCAAGTGTGATGAACCTGGACGATTTGACAAGGAGAGGGCTGTATCTAAGTGAC
ATCCCTCTGCATGATGCCACGCGCATCTTGTCTTTTGGGAGAACAAATTTAGAGAGGAATACAACTC
ACCAAGAAGTGGAAATCCTCACTGACAGGCTACAGCTCACGTTAAGAGCCCTGGAAGATGAAAAGAAA
AAGACAGACACATTGCTGTATTCTGTCTTCTCCGTCTGTTGCAATGAGCTGCGGCACAAGCTCCA
GTGCTGCCAAAAGATATGACAATGTGACCATCCTCTTTAGTGGCATTGTGGGCTCAATGCTTTCTGT
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GACACACTGACTGATTCCCGAAAAACCCATTTGTTTATAAGGTGGAGACTGTTGGTGACAAGTATATG
ACAGTGAGTGGTTTACCAGAGCCATGCATTACCATGCACGATCCATCTGCCACCTGGCCTTGGACATG
ATGGAAATGCTGGCCAGGTTCAAGTAGATGGTGAATCTGTTGAGATAACAATAGGGATACACACTGGA
GAGGTAGTTACAGGTGTCATAGGACAGCGGATGCCTCGATACTGTCTTTTGGGAATACTGTCAACCTC
ACAAGCCGAACAGAAACACAGGAGAAAAGGGAAAAATAAATGTGTCTGAATATACATACAGATGTCTT
ATGTCTCCAGAAAATTCAGATCCACAATCCACTTGGAGCACAGAGGCCAGTGTCCATGAAGGGCAA
AAAGAACCAATGCAAGTTTGGTTTCTATCCAGAAAAAATACAGGAACAGAGGAAACAAAGCAGGATGAT
GAC
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```

**Protein Sequence:**

>Peptide sequence encoded by RG239043  
 Blue=ORF Red=Cloning site Green=Tag(s)

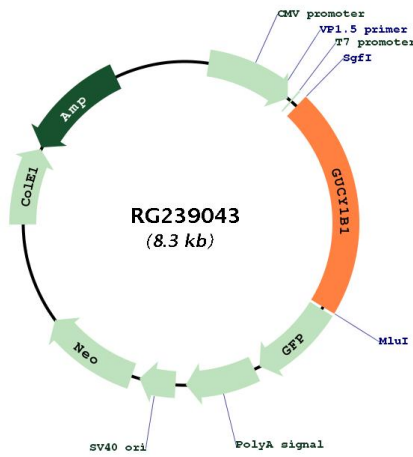
```
MLMCFIKEAQLDEEGQFLVRIIYDDSKTYDLVAAASKVLNLNAGEILQMFQGMFFVFCQESGYDILRV
LGSNREFLQNLDALHDHLATIYPGRAPSRCTDAEKGKGLILHYYSEREGLQDIVIGI IKTVAQQIH
GTEIDMKVIQQRNEECDHTQFLIEEKESKEEDFYEDLDRFEENGTQESRISPYTFCKAFPFIHIFDRDL
VVTQCGNAIYRVLPLQLQPGNCSLLSVFSLVRPHIDISFHGILSHINTVFVLSKEGLLDVEKLECEDEL
TGTEISCLRLKGQMIYLPADSILFLCSPSVMNLDL TRRGLYLSDIPLHDATRDVLVLLGEQFREEYKL
TQELEILTDRQLTLRALEDEKKKTDLLYSVLPSPVANELRHKRPVPAKRYDNVTILFSGIVGFNAFC
SKHASGEGAMKIVNLLNDLYTRFDL TDSRKNPFVYKVE TVGDKYMTVSGLPEPCIHARSICHLALDM
MEIAGQVQVDGESVQITIGIHTGEVVTGVIQRMPTCLFGNTVNLTSRTETTGEKGINVSEYTYRCL
MSPENSDPQFHLEHRGPVSMKGGKPEMQVWFLSRKNTGTETKQDDD
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMKSTKGALTFSPYLLSHV
MGYGFYHFGTYPSTYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPEP
SVIFTDKIIIRSNATVEHLHPMGDNDLDGFSFTRTFLSRDGGYSSVVDVSHMHFSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
```

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:


**Plasmid Map:**


ACCN: NM\_001291952  
 ORF Size: 1797 bp

<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>RefSeq:</b>	<a href="#">NM_001291952.2</a>
<b>RefSeq Size:</b>	3413 bp
<b>RefSeq ORF:</b>	1800 bp
<b>Locus ID:</b>	2983
<b>UniProt ID:</b>	<a href="#">Q02153</a>
<b>Cytogenetics:</b>	4q32.1
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Gap junction, Long-term depression, Purine metabolism, Vascular smooth muscle contraction
<b>MW:</b>	68.6 kDa
<b>Gene Summary:</b>	This gene encodes the beta subunit of the soluble guanylate cyclase (sGC), which catalyzes the conversion of GTP (guanosine triphosphate) to cGMP (cyclic guanosine monophosphate). The encoded protein contains an HNOX domain, which serves as a receptor for ligands such as nitric oxide, oxygen and nitrovasodilator drugs. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2014]