

Product datasheet for **RG226093**

GUCY1A1 (NM_001130683) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GUCY1A1 (NM_001130683) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GUCY1A1
Synonyms:	GC-S-alpha-1; GC-SA3; GCS-alpha-3; GUC1A3; GUCA3; GUCSA3; GUCY1A3; MYMY6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide
Sequence:

>RG226093 representing NM_001130683
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGCC**

ATGTTCTGCACGAAGCTCAAGGATCTCAAGATCACAGGAGAGTGTCTTTCTCCTTACTGGCACCAGGTC
AAGTTCCTAACGAGTCTTCAGAGAGGAGCAGGAAGCTCAGAGAGCTGCAAAGCAACCGTGCCCATCTG
TCAAGACATTCCTGAGAAGAACATACAAGAAAGTCTTCCTCAAAGAAAAACAGTCGGAGCCGAGTCTAT
CTTCACACTTTGGCAGAGAGTATTTGCAAAGTATTTCCAGAGTTTGAACGGTGAATGTTGCACTTC
AGAGAATTGGCAAAGCACAAAATAAAAGAAAGCAGGAAATCTTTGAAAGAGAAGACTTTGAAAAAC
AATTGCAGAGCAAGCAGTTGCAGCAGGAGTCCAGTGGAGGTTATCAAAGAATCTTTGGTGAAGAGGTT
TTTAAAAATATGTTACGAGGAAGATGAAAACATCCTTGGGGTGGTGGAGGCACCCTTAAAGATTTTTTAA
ACAGCTTCAGTACCCTTCTGAAACAGAGCAGCCATTGCCAAGAAGCAGGAAAAAGGGGCAGGCTTGAGGA
CGCTCCATTCTATGCCTGGATAAGGAGGATGATTTTCTACATGTTTACTACTTCTCCCTAAGAGAACC
ACCTCCCTGATTCTCCCGGCATCATAAAGGCAGCTGCTCACGTATTATGAAAACGGAAGTGGAAGTGT
CGTTAATGCCTCCCTGCTTCCATAATGATTGCAGCGAGTTTGTGAATCAGCCCTACTTGTGTACTCCGT
TCACATGAAAAGCACCAAGCCATCCCTGTCCCCAGCAAACCCAGTCTCGCTGGTGAATCCCACATCG
CTATTCTGCAAGACATTTCCATTCCATTTCATGTTTGACAAAGATATGACAATTCGCAATTTGGCAATG
GCATCAGAAGGCTGATGAACAGGAGAGACTTTCAAGGAAAGCCTAATTTTGAAGAATACTTTGAAATTC
GACTCCAAAAATCAACCAGACGTTTAGCGGGATCATGACTATGTTGAATATGCAGTTTGTGTACGAGTG
AGGAGATGGGACAACCTGTGAAAAAATCTTCAAGGGTTATGGACCTCAAAGGCCAAATGATCTACATTG
TTGAATCCAGTGCAATCTGTTTTTGGGGTACCCTGTGTGGACAGATTAGAAGATTTTACAGGACGAGG
GCTCTACCTCTCAGACATCCCAATTCACAATGCACTGAGGGATGTGGTCTTAATAGGGGAACAAGCCCGA
GCTCAAGATGGCCTGAAGAAGAGGCTGGGGAAGCTGAAGGCTACCCTTGAGCAAGCCCACCAAGCCCTGG
AGGAGGAGAAGAAAAAGACAGTAGACCTTCTGTGCTCCATATTTCCCTGTGAGGTTGCTCAGCAGCTGTG
GCAAGGGCAAGTTGTGCAAGCCAAGAAGTTCAGTAATGTCACCATGCTCTTCTCAGACATCGTTGGGTTT
ACTGCCATCTGCTCCAGTGCTCACCCTGCAGGTCATCACCATGCTCAATGCACGTACACTCGCTTCG
ACCAGCAGTGTGGAGAGCTGGATGTCTACAAGGTGGAGACCATTGGCGATGCCTATTGTGTAGCTGGGG
ATTACACAAAGAGAGTGATACTCATGCTGTTTCAAGATAGCGCTGATGGCCCTGAAGATGATGGAGCTCT
GATGAAGTTATGTCTCCCATGGAGAACCTATCAAGATGCGAATTGGACTGCACTCTGGATCAGTTTTTG
CTGGCGTGGTGGAGTTAAAATGCCCGTTACTGTCTTTTGGAAACAATGCACTCTGGCTAACAAATT
TGAGTCTGCAGTGTACCACGAAAAATCAATGTCAGCCCAACAACCTTACAGATTACTCAAAGACTGTCT
GGTTTCGTGTTTACCCTCGATCAAGGGAGGAACTTCCACCAAACCTCCCTAGTAAATCCCCGGAATCT
GCCATTTCTGGATGCTTACCAACAAGGAACAACCTCAAACCATGCTTCCAAAAGAAAGATGTGGAAGA
TGGCAATGCCAATTTTTTAGGCAAAGCATCAGGAATAGAT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG226093 representing NM_001130683
 Red=Cloning site Green=Tags(s)

MFCTKLDLKITGECPFSLAPGQVPNESSEEAAGSSESCKATVPICQDIPEKNIQESLPQRKTSRSRVY
 LHTLAESICKLIFPEFERLNVALQRTLAKHKIKESRKS LEREDFEK TIAEQAVAAGVPVEVIKESLGEEV
 FKICYEEDENILGVVGGTLKDFLNSFSTLLKQSSHQCQAGKRGRLEDASILCLDKEDDFLHVVYFFPKRT
 TSLILPGI I KAAAHLVYETEVEVSLMPPCFHND CSEFVNQPYLLYSVHMKSTKPSLSPSKPQSSLVIPTS
 LFCKTFPFHFMFDKMTILQFGNGIRRLMNRDFQGKPNFEEYFEILTPKINQTFSGIMTMLNMQFVVRV
 RRWDNSVKSSRVMDLKGQMIYIVESSAILFLGSPCVDRLEDFTGRGLYLS DIP IHNALRDVVLIGE QAR
 AQDGLKKRLGKLKATLEQAHQALEEEKKKTVDLLCSIFPCEVAQQLWQQVQVQAKKFSNVTMLFSDIVGF
 TAICSQCSPLQVITMLNALYTRFDQQCGELDVYK VETIGDAYCVAGGLHKE SDTHAVQIALMALKMMELS
 DEVMSPHGEP I KMRIGLHSGSVFAGVVGKMPRYCLFGNNVTLANKFESCSVPRKINVSPTTYRLLKDCP
 GFVFTPRSREELPPNFPSEIPGICHFLDAYQQGTNSKPCFQKKDVEDGNANFLGKASGID

TRTRPLE - GFP Tag - V

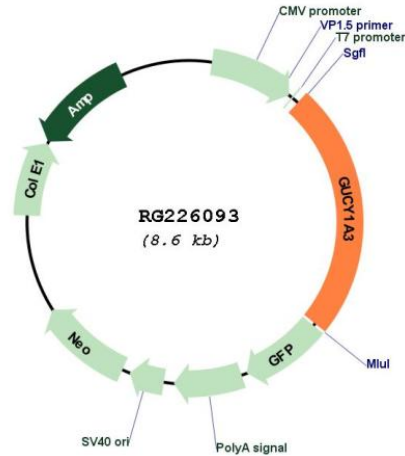
Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:


ACCN: NM_001130683

ORF Size: 2070 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_001130683.4](#)

RefSeq Size: 9328 bp

RefSeq ORF:	2073 bp
Locus ID:	2982
UniProt ID:	<u>Q02108</u>
Cytogenetics:	4q32.1
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. Several transcript variants encoding a few different isoforms have been found for this gene. [provided by RefSeq, Jan 2012]