

Product datasheet for **RG226038**

GUCY1A1 (NM_001130687) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GUCY1A1 (NM_001130687) 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:

>RG226038 representing NM_001130687
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTTCTGCACGAAGCTCAAGGATCTCAAGATCACAGGAGAGTGTCTTTCTCCTTACTGGCACCAGGTC
 AAGTTCCTAACGAGTCTTCAGAGAGGCGAGCAGGAAGCTCAGAGAGCTGCAAAGCAACCGTGCCCATCTG
 TCAAGACATTCCTGAGAAGAACATACAAGAAAGTCTCCTCAAAGAAAAACAGTCGGAGCCGAGTCTAT
 CTTACACTTTGGCAGAGAGTATTTGCAAAGTATTTCCAGAGTTTGAACGGCTGAATGTTGCACTTC
 AGAGAATTGGCAAAGCACAAAATAAAAGAAAGCAGGAAATCTTTGAAAGAGAAGACTTTGAAAAAC
 AATTGCAGAGCAAGCAGTTGCAGCAGGAGTCCAGTGGAGGTTATCAAAGAATCTTTGGTGAAGAGGTT
 TTTAAAATATGTTACGAGGAAGATGAAAACATCCTTGGGGTGGTGGAGGCACCCCTAAAGATTTTTTAA
 ACAGCTTCAGTACCCCTTCTGAAACAGAGCAGCCATTGCCAAGAAGCAGGAAAAAGGGGCAGGCTTGAGGA
 CGCTCCATTCTATGCCTGGATAAAGGAGGATGATTTTCTACATGTTTACTACTTCTCCCTAAGAGAACC
 ACCTCCCTGATTCTCCCGGCATCATAAAGGCAGCTGCTCACGATTATATGAAACGGAAGTGGAAGTGT
 CGTTAATGCCTCCCTGCTTCCATAATGATTGCAGCGAGTTTGTGAATCAGCCCTACTTGTGTACTCCGT
 TCACATGAAAAGCACCAAGCCATCCCTGTCCCCAGCAAACCCAGTCTCGCTGGTGATTCCCACATCG
 CTATTCTGCAAGACATTTCCATTCCATTTCATGTTTGACAAAGATATGACAATTCGCAATTTGGCAATG
 GCATCAGAAGGCTGATGAACAGGAGAGACTTTCAAGGAAAGCCTAATTTTGAAGAATACTTTGAAATTC
 GACTCCAAAAATCAACCAGACGTTTAGCGGGATCATGACTATGTTGAATATGCAGTTTGTGTACGAGTG
 AGGAGTGGGACAACCTGTGAAAAAATCTTCAAGGGTTATGGACCTCAAAGGCCAAATGATCTACATTG
 TTGAATCCAGTGCAATCTTGTTTTTGGGGTCACCTGTGTGGACAGATTAGAAGATTTTACAGGACGAGG
 GCTCTACCTCTCAGACATCCCAATTACCAATGCCTGAGGGATGTGGTCTTAATAGGGGAACAAGCCCGA
 GCTCAAGATGGCCTGAAGAAGAGGCTGGGGAAGCTGAAGGCTACCCCTGAGCAAGCCCACCAAGCCCTGG
 AGGAGGAGAAGAAAAAGACAGTAGACCTTCTGTGCTCCATATTTCCCTGTGAGGTTGCTCAGCAGCTGTG
 GCAAGGGCAAGTTGTGCAAGCCAAGAAGTTCAGTAATGTCACCATGCTCTTCTCAGACATCGTTGGGTTT
 ACTGCCATCTGCTCCCAGTGTCCAGCTGCAGGTCATCACCATGCTCAATGCACGTACACTCGCTTCG
 ACCAGCAGTGTGGAGAGCTGGATGTCTACAAGGTGGAGACCATTGGCGATGCCTATTGTGTAGCTGGGG
 ATTACACAAAGAGAGTGATACTCATGCTGTTTCAAGATAGCGCTGATGGCCCTGAAGATGATGGAGCTCT
 GATGAAGTTATGTCTCCCATGGAGAACCTATCAAGATGCGAATTGGACTGCACTCTGGATCAGTTTTTG
 CTGGCGCTCGTTGGAGTTAAAATGCCCGTTACTGTCTTTTTGAAACAATGCTCACTCTGGCTAACAAAT
 TGAGTCTGCAGTGTACCACGAAAAATCAATGTCAGCCCAACAACCTACAGG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG226038 representing NM_001130687
 Red=Cloning site Green=Tags(s)

MFCTKLKDLKITGECPPSLLAPGQVPNESSEEAAGSSESCKATVPICQDIPEKNIQESLPQRKTSRSRVY
 LHTLAESICKLIFPEFERLNVALQRTLAKHKIKESRKSLEDFEKTIAEQAVAAGVPVEVIKESLGEEV
 FKICYEEDENILGVVGGTLKDFLNSFSTLLKQSSHCQEAGKRGRLEDASILCLDKEDDFLHVVYFFPKRT
 TSLILPGI I KAAAHVLYETEVEVSLMPPCFHNDCESEFVNQPYLLYSVHMKSTKPSLSPSKPQSSLVIPTS
 LFCKTFPFHFMFDKDMTILQFGNGIRRLMNRDFQGKPNFEEYFEILTPKINQTFSGIMTMLNMQFVVRV
 RRWDNSVKKSSRVMDLKGQMIYIVESSAILFLGSPCVDRLEDFTGRGLYLSDIPIHNALRDVVLIGEQR
 AQDGLKKRLGKLGKATLEQAHQALEEEKKTVDLLCSIFPCEVAQQLWQQVYVQAKKFSNVTMLFSDIVGF
 TAICSQCSPQVITMLNLYTRFDQCCGELDVYK VETIGDAYCVAGGLHKESDTHAVQIALMALKMMELS
 DEVMSPHGEPKMRIGLHSGSVFAGVVGKMPRYCLFGNNVTLANKFESCSVPRKINVSPTTYR

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001130687

ORF Size: 1872 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_001130687.3](#)

RefSeq Size: 2354 bp

RefSeq ORF: 1875 bp

Locus ID: 2982

UniProt ID: [Q02108](#)

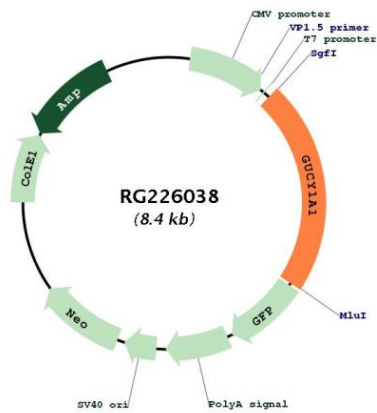
Cytogenetics: 4q32.1

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]

Product images:



Circular map for RG226038