

## Product datasheet for **RG229007**

### **GCS1 (MOGS) (NM\_001146158) Human Tagged ORF Clone**

#### **Product data:**

|                           |                                                   |
|---------------------------|---------------------------------------------------|
| Product Type:             | Expression Plasmids                               |
| Product Name:             | GCS1 (MOGS) (NM_001146158) Human Tagged ORF Clone |
| Tag:                      | TurboGFP                                          |
| Symbol:                   | GCS1                                              |
| Synonyms:                 | CDG2B; CWH41; DER7; GCS1                          |
| Mammalian Cell Selection: | Neomycin                                          |
| Vector:                   | pCMV6-AC-GFP (PS100010)                           |
| E. coli Selection:        | Ampicillin (100 ug/mL)                            |



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**ORF Nucleotide Sequence:**

>RG229007 representing NM\_001146158  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGCTCGGGCGAGCGGCGCGCCGCGCAGTCCCGGCAGAGGGAGTCCGGCAGAGCCGAGAGGGCGGCTC  
 GGGGAGGCCCGGGCGACGGGACGGCCGGGGCGCGGGCCGCTAGCACGGCTGGAGGAGTGGCTCTGGC  
 CGTCGTGGTCTGTCTTTGGCCCTGGGTATGTCGGGGCGCTGGGTGCTGGCGTGGTACCGTGCGCCGCGG  
 GCGGTACGCTGCACTCCGCGCCTCTGTGTTGCCTGCCGACTCTCCAGCCCGCGCTGGCCCCGGACC  
 TCTTCTGGGGAACCTACCGCCCTCACGTCTACTTCGGCATGAAGACCCGAGCCCGAAGCCCTCTCAC  
 CGGACTGATGTGGGCGCAGCAGGGCACCACCCGGGGACTCCTAAGCTCAGGCACACGTGTGAGCAGGGG  
 GACGGTGTGGTCCCTATGGCTGGGAGTCCACGACGGCCTCTCCTTCGGGCGCAACACATCCAGGATG  
 GGGCCTTAAGGCTCACCCTGAGTTCGTAAGAGGCTGGGGTACGACGGAGGGGACTGGAGCTGGAG  
 AGTGACTGTAGAGCCTCAGGACTCAGTACTTCTGCCCTCCCTTTGGTCTCCCTGTTCTTCTATGTGGT  
 ACAGATGGCAAGGAAGTCTACTACCAGAGGTTGGGGCAAGGGGCAAGTTGAAGTTATCAGTGGGCACA  
 CCAAGTGAACCTGGTAACCTCCGCTTTACACTTTTGCCACCAACCAGTCCAGGGGATACAGCCCCAAGTA  
 TGGCAGCTACAATGTCTTCTGGACTCCAACCCAGGACTGCCCTGCTGACAGAGATGGTAAAGAGTCGC  
 CTAATAGCTGGTTTCAGCATCGCCCCAGGGGCTCCCTGAACGCTACCTCGGCTTGCAGGATCCC  
 TGAAGTGGGAGGACAGAGTCCAAGTGGCAAGGGCAGGGGCAAGTTCTTGATACAGCAGGTGACCCTGAA  
 AATTCCCATTTCCATAGAGTTTGTGTTGAATCAGGCAGTGGCCAGGCAGGAGGAAATCAAGCCCTGCCA  
 AGACTGGCAGGCAGTCTACTGACCCAGGCCCTGGAGAGCCATGCTGAAGGCTTTAGAGAGCGCTTTGAGA  
 AGACTTCCAGCTGAAGGAGAAGGGCCTGAGCTTGCGCAGCAGGTTTTGGTCAAGCTCCCTCGCCGCGG  
 CCTCCTTGGTGGAAATGGCTACTTCTACGACAAAGGGCTGGTATTGCCAGACATCGGGGTGGAAAGGTCT  
 GAGCAGAAGTGGACCCAGCCCTCTTCCACCCGTACCTCTTTTTACAGCAGTGCCTCCCGGTATTCT  
 TCCACAGAGGCTTCTTTGGGATGAAGGCTTTCACCAGCTGGTGGTTCAGCGGTGGGATCCCTCCCTCAC  
 CCGGGAAGCCCTTGGCCACTGGCTGGGGCTGCTAAATGCTGATGGCTGGATTGGGAGGGAGCAGATACTG  
 GGGGATGAGGCCCGAGCCCGGTGCCTCCAGAATTCCTAGTACAACGAGCAGTCCACGCCAACCCCCAA  
 CCCTACTTTTGCCTGTAGCCATATGCTAGAGGTTGGTGACCCTGACGACTTGGCTTTCCTCGAAAGGC  
 CTTGCCCCGCTGCATGCCTGGTTTTCTGGCTCCATCAGAGCCAGGCAGGCCACTGCCACTATCTTAC  
 CGCTGGCGGGGACGGGACCTGCCTTACCAACCTTACTGAACCCAAAGACCTACCTCTGGGCTGGATG  
 ACTACCCCGGGCTTACACCCTTCAGTAACCGAGCGGCACCTGGACCTGCGATGTTGGGTGGCACTGGG  
 TGCCCGTGTGCTGACCGGCTGGCAGAGCATCTGGGTGAGGCTGAGGTAGCTGCTGAGCTGGGCCACTG  
 GCTGCCTCACTGGAGGCAGCAGAGAGCCTGGATGAGCTGCACTGGGCCCCAGAGCTAGGAGTCTTTGCGA  
 ACTTTGGGAACCACAAAAGCAGTACAGCTGAAGCCAGGCCCCCTCAGGGGCTCGTTCGGGTGGTGGG  
 TCGGCCCAACCTCAACTGCAGTATGTAGATGCTCTTGGCTATGTGAGTCTTTTCCCTTGTGCTGCGA  
 CTGCTGGACCCACCTCATCCCGCTTGGGCCCTGCTGGACATTCTAGCCGACAGCCCATCTCTGGA  
 GCCCTTTGGTTTACGCTCCCTTGACGCTCCAGCTCCTTTATGGCCAGCGCAATTGAGAGCATGATCC  
 CCCCTACTGGCGGGTGTGTGGCTCAATGTCAACTACCTGGCTTTGGGAGCACTCCACCACTATGGG  
 CATCTGGAGGGTCTCACCAGGCTCGGGCTGCCAACTCCAGGTGAGCTCCGTGCCAACGTGGTAGGCA  
 ATGTATGGCGCCAGTACCAGGCTACAGGCTTTCTTTGGGAGCAGTACAGTGACCGGATGGGCGAGGCAT  
 GGGCTGCCCCCTTCCACGGCTGGACCAGCCTTGTCTTACTGGCCATGGCTGAAGACTAC

**ACCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:** >RG229007 representing NM\_001146158  
 Red=Cloning site Green=Tags(s)

MARGERRRAVPAEGVRTAERAARGGPRRDGRGGGPRSTAGGVALAVVVL SLALGMSGRWVLAWYRARR  
 AVTLHSAPPVLPADSSSPAVAPDLFWGTYRPHVYFGMKTRSPKPLLTGLMWAQQGTTPGTPKLRHTCEQG  
 DGVGPGYGEFHDGLSFGRQHIQDGLRLTTEFVKRPGGQHGGDWSWRVTVEPQDSGTSALPLVSLFFYVV  
 TDGKEVLLPEVGAKGQLKFI SGHTSELGNFRFTLLPPTSPGDTAPKYGSYNVFWTSNPGLPLLTEMVKSR  
 LNSWFQHRPPGASPERYLGLPGSLKWEDRGPSGQGQQLIQQVTLKIPISIEFVFE SESAQAGGNQALP  
 RLAGSLLTQALESHAEGFRERFEKTFQLKEKGLSSGEQVLGQAALSGLLGGIGYFYGQGLVLPDIGVEGS  
 EQKVPALFPPVPLFTAVPSRSFFPRGFLWDEGFHQLVVQRWDPSLTREALGHWLGLLNADGWIGREQIL  
 GDEARARVPPEFLVQRAVHANPPTLLLPAHMLEVGD PDDLAFLRKALPRLHAWFSWLHQSQAGPLPLSY  
 RWRGRDPALPTLLNPKTLPSGLDDYPRASHPSVTERHDLRCWVALGARVLTRLAEHLGEAEVAELGPL  
 AASLEAAESLDELHWAPELGVFADFGNHTKAVQLKPRPPQGLVRVVGRPQPQLQYVDALGYVSLFPLLLR  
 LLDPTSSRLGPLLDILADSRHLWSPFGLRSLAASSSFYQQRNSEHDPPYWRGAVWLVNLYLALGALHHYG  
 HLEGPQARA AKLHGELRANVVG NVWRQYQATGFLWEQYSDRDGRGMGCRPFHGWTSLVLLAMAEDY

TRTRPLE - GFP Tag - V

**Restriction Sites:** Sgfl-MluI

Cloning Scheme:



ACCN: NM\_001146158

ORF Size: 2514 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\\_001146158.1](#), [NP\\_001139630.1](#)

**RefSeq Size:** 2584 bp

**RefSeq ORF:** 2196 bp

**Locus ID:** 7841

**UniProt ID:** [Q13724](#)

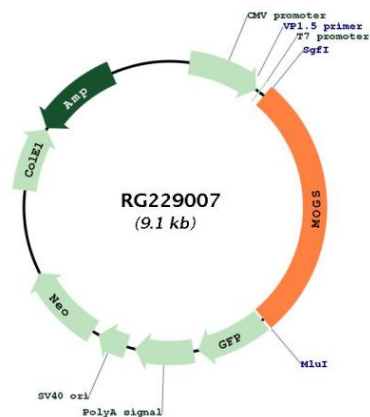
**Cytogenetics:** 2p13.1

**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Metabolic pathways, N-Glycan biosynthesis

**Gene Summary:** This gene encodes the first enzyme in the N-linked oligosaccharide processing pathway. The enzyme cleaves the distal alpha-1,2-linked glucose residue from the Glc(3)-Man(9)-GlcNAc(2) oligosaccharide precursor. This protein is located in the lumen of the endoplasmic reticulum. Defects in this gene are a cause of type IIb congenital disorder of glycosylation (CDGIIb). Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2009]

## Product images:



Circular map for RG229007