

## Product datasheet for **RG206689**

### **GCS1 (MOGS) (NM\_006302) Human Tagged ORF Clone**

#### **Product data:**

|                                  |                          |
|----------------------------------|--------------------------|
| <b>Product Type:</b>             | Expression Plasmids      |
| <b>Tag:</b>                      | TurboGFP                 |
| <b>Symbol:</b>                   | GCS1                     |
| <b>Synonyms:</b>                 | CDG2B; CWH4I; DER7; GCS1 |
| <b>Mammalian Cell Selection:</b> | Neomycin                 |
| <b>Vector:</b>                   | pCMV6-AC-GFP (PS100010)  |
| <b>E. coli Selection:</b>        | Ampicillin (100 ug/mL)   |



ORF Nucleotide Sequence: >RG206689 representing NM\_006302  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCGCGATCGCC

ATGGCTCGGGCGAGCGGCGGCCGCGCAGTGCCTGCGAGAGGAGTGCAGACAGCCGAGAGGGCGGCTC  
 GGGGAGGCCCCGGGCGACGGGACGGCCGGGCGCGGCCGCTAGCACGGCTGGAGGAGTGGCTCTGGC  
 CGTCGTGGTCTGTCTTTGGCCCTGGGTATGTCTGGGCGCTGGGTGCTGGCGTGGTACCGTGCCTGGCGG  
 GCGGTACGCTGCACTCCGCGCCTCCTGTGTTCGCTGCCGACTCCTCCAGCCCCGCGTGGCCCCGGACC  
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 CGGACTGATGTGGGCGCAGCAGGGCAACACCCGGGGACTCCTAAGCTCAGGCACACGTGTGAGCAGGGG  
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 GGGCCTTAAGGCTCACCCTGAGTTCGTCAGAGGCTGGGGTCAAGCAGGAGGGGACTGGAGCTGGAG  
 AGTGACTGTAGAGCCTCAGGACTCAGTACTTCTGCCCTCCCTTTGGTCTCCCTGTTCTTCTATGTGGT  
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 CATCTGGAGGGTCTCACCAGGCTCGGGCTGCCAACTCCACGGTGAAGTCCGTGCCAACGTGGTAGGCA  
 ATGTATGGCGCCAGTACCAGGCTACAGGCTTTCTTTGGGAGCAGTACAGTGACCGCATGGGCGAGGCAT  
 GGGCTGCCGCCCTTCCACGGCTGGACAGCCTGTCTTACTGGCCATGGCTGAAGACTAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG206689 representing NM\_006302

Red=Cloning site Green=Tags(s)

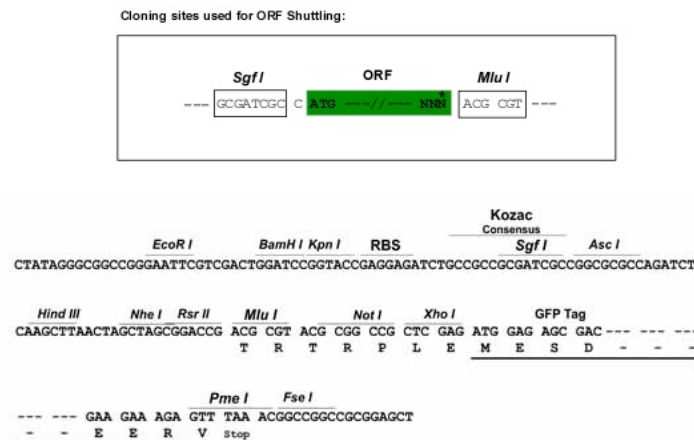
MARGERRRAVPAEGVRTAERAARGGPGRDRGGGPRSTAGGVALAVVVL SLALGMSGRWVLAWYRARR  
AVTLHSAPPVLPADSSSPAVAPDLFWGTYRPHVYFGMKTRSPKPLL TGLMWAQQGTTPGTPKLRHTCEQG  
DGVGPYGWEFHDGLSFGHQHIQDGLRL TTEFVKRPGGQHGDSWRVTVEPQDSGTSALPLVSLFFVYV  
TDGKEVLLPEVGAKGQLKFI SGHTSELGNFRFTLLPPTSPGDTAPKYGSYNVFWTSNPGPLLL TEMVKSR  
LNSWFQHRPPGASPERYLG LPSGLKWEDRGPSGQGQGLIQVTLKIPISIEFVFESGSAQAGNQALP  
RLAGSLLTQALES HAEGFRERFEKTFQLKEKGLSSGEQVLGQAALSGLLGGIGYFYGGQLVLPDIVEGS  
EQKVPDLPFPVPLFTAVPSRSFFPRGFLWDEGFHQLVVQRWDPSLTREALGHWLGLLNADGWIGREQIL  
GDEARAVPPEFLVQRAVHANPPTLLL PVAHMLEVGD PDLAFLRKALPRLHAWFSWLHQSQAGPLPLSY  
RWRGRDPALPTLLNPKTLP SGLDDYPRASHPSVTERHLDLRWVALGARVLTRLAEHLGEAEVAAELGPL  
AASLEAAESLDELHWAPELGVFADFGNHTKAVQLKPRPPQGLVRVVGPRQPQLQYVDALGYVSLFPLLLR  
LLDPTSSRLGPLLDILADSRHLWSPFGLRSLAASSFYGQRNSEHPPYWRGAVWLNVNLYALGALHHYG  
HLEGPHQARA AKLHGLRANVVG NVWRQYQATGFLWEQYSDRDGRGMGCRPFHGWTSLVLLAMAEDY

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN:

NM\_006302

ORF Size:

2511 bp

OTI Disclaimer:

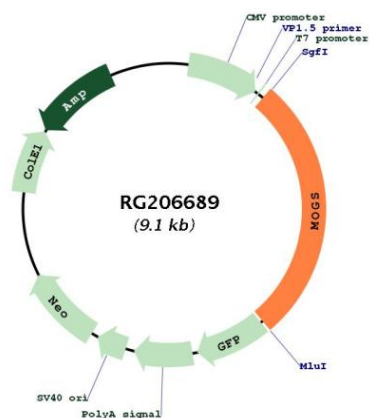
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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.

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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>Reconstitution Method:</b> | <ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol> |
| <b>Note:</b>                  | Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>RefSeq:</b>                | <a href="#">NM_006302.2</a> , <a href="#">NP_006293.2</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>RefSeq Size:</b>           | 2910 bp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>RefSeq ORF:</b>            | 2514 bp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Locus ID:</b>              | 7841                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>UniProt ID:</b>            | <a href="#">Q13724</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Cytogenetics:</b>          | 2p13.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Domains:</b>               | Glyco_hydro_63                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Protein Families:</b>      | Druggable Genome, Transmembrane                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Protein Pathways:</b>      | Metabolic pathways, N-Glycan biosynthesis                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Gene Summary:</b>          | <p>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]</p>               |

Product images:



Circular map for RG206689