

## Product datasheet for MR206157

### Ugcg (NM\_011673) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Ugcg (NM_011673) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ugcg
Synonyms:	AU043821; C80537; Epcs21; GlcT-1; Ugcgl
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR206157 representing NM_011673 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGCTGCTGGACCTGGCCCAGGAGGGAATGGCCTTGTTGGCTTCGTGCTCTTCGTGGTGCTGTGGC  
TGATGCATTTTCATGTCCATCATCTACACCCGGTTACACCTCAACAAGAAGGCAACAGACAAAACAGCCGTA  
TAGCAAGCTCCCTGGTGTCTCTCTCTGAAGCCACTGAAGGGGTGGATCCTAACCTAATCAACAACCTG  
GAGACATCTTTGAACTGGATTATCCCAAATGAAGTACTCCTTTGTGTACAAGATCATGATGATCCAG  
CCATTGATGTATGTAAGAAATTGCTTGGAAAATACCCAAATGTCGATGCTAGATTATTTATAGGTGGCAA  
AAAGGTTGGCATTAAACCTAAAATTAATAATTTGATGCCAGCATATGAAGTTGAAAATATGATCTCATA  
TGGATTTGTGATAGCGGAATAAGAGTCATCCCAGACACATTAAGTACATGGTGAATCAGATGACAGAGA  
AAGTGGGGTGGTCCACGGGCTGCCGATGTAGCCGACAGACAAGGCTTTGCTGCCACCTTAGAGCAGGT  
ATATTTTGAACCTCACACCAAGATCCTATATCTCTGCCAATGTAAGTGGCTTCAAATGTGTGACGGGG  
ATGTCTTGTGGATGAGGAAGGATGTGCTAGATCAGGCAGGAGGGCTCATAGCCTTTGCTCAGTACATTG  
CTGAAGATTACTTTATGGCCAAAGCAATAGCCGACCGAGGTTGGAGGTTTCAATGTCTACTCAAGTTGC  
CATGCAAACTCTGGTTCGTACTCAATTTCTCAGTTTCAATCCAGAATGATCAGGTGGACCAAATGAGA  
ATTAACATGCTTCTGCTACAATAATTTGTGAGCCAATTCAGAATGCTTTGTTGCCAGTTAATTTATTG  
GGTGGGCAGCCACCATGTATTCAGATGGGATATCATGGTCTTCTTCATGTGCCACTGCCTGGCATGGTT  
TATATTTGACTACATTCAACTCAGGGGTGTCAGGGTGGCACACTGTGTTTTTCAAACCTTGATTATGCT  
GTGGCCTGGTTACCCGTAATCCATGACAATCTACATTTTCTGTGCGCATTATGGGACCCGACTATAA  
GCTGGAGAAGTGGTCGCTACAGGTTACGCTGTGGGGGACAGCAGAGGAGATCCTGGATGTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR206157 representing NM\_011673  
 Red=Cloning site Green=Tags(s)

MALLDLAQEGMALFGFVLFVVLWLMHFMSIIYTRLHLNKKATDKQPYSKLPVSLKPLKGVDPNLINNL  
 ETFFELDYPKYEVLLCVQDHDPAIDVCKLLGKYPNVDARLFIGGKKVGINPKINMLPAYEVAKYDLI  
 WICDSGIRVIPDTLTDVMNQMTKEVGLVHGLPYVADRQGF AATLEQVYFGTSHPRYSISANVTGFKCVTG  
 MSCLMRKDVLDQAGGLIAFAQYIAEDYFMAKAIADRGWRF SMSTQVAMQNSGSYSISQFQSRMIRWTKLR  
 INMLPATIICEPISECFVASLIIGWAHHVFRWDIMVFFMCHCLAWFIFDYIQLRGVQGGTLCFSKLDYA  
 VAWFIRESMTIYIFLSALWDPTISWRTGRYRLRCGGTAEIEILDV

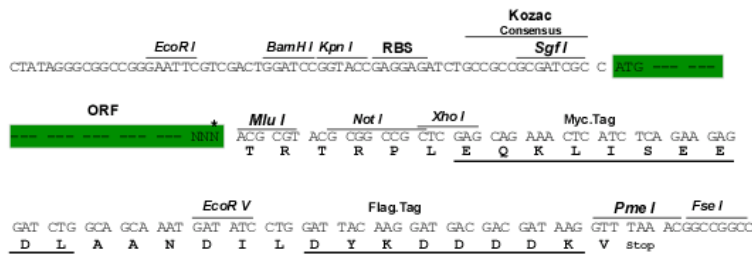
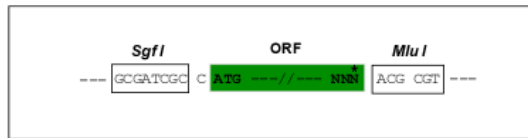
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_011673

**ORF Size:** 1182 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\\_011673.2](#)

**RefSeq Size:** 3719 bp

**RefSeq ORF:** 1185 bp

**Locus ID:** 22234

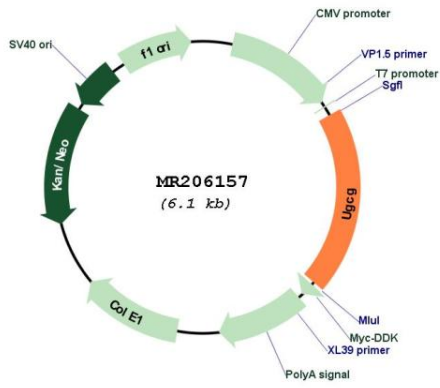
**UniProt ID:** [O88693](#)

**Cytogenetics:** 4 B3

**MW:** 45.3 kDa

**Gene Summary:** Catalyzes at the cytosolic surface of the Golgi, the initial step of the glucosylceramide-based glycosphingolipid/GSL synthetic pathway, the transfer of glucose from UDP-glucose to ceramide to produce glucosylceramide/GlcCer (PubMed:10430909, PubMed:16109770, PubMed:28373486). Glucosylceramide is the core component of glycosphingolipids/GSLs, amphipathic molecules consisting of a ceramide lipid moiety embedded in the outer leaflet of the membrane, linked to one of hundreds of different externally oriented oligosaccharide structures (PubMed:10430909). Glycosphingolipids are essential components of membrane microdomains that mediate membrane trafficking and signal transduction (PubMed:10430909). They are implicated in many fundamental cellular processes, including growth, differentiation, migration, morphogenesis, cell-to-cell and cell-to-matrix interactions (PubMed:10430909). They are required for instance in the proper development and functioning of the nervous system (PubMed:16109770). As an example of their role in signal transduction, they regulate the leptin receptor/LEPR in the leptin-mediated signaling pathway (PubMed:23554574). They also play an important role in the establishment of the skin barrier regulating keratinocyte differentiation and the proper assembly of the cornified envelope (PubMed:17145749, PubMed:23748427). The biosynthesis of GSLs is also required for the proper intestinal endocytic uptake of nutritional lipids (PubMed:22851168).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR206157