

## Product datasheet for **MG208259**

### **Gba (NM\_008094) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Gba (NM_008094) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Gba
Synonyms:	betaGC; GBA1; GC; GCase; GLUC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG208259 representing NM\_008094  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCTGCCAGGCTCATCGGATTCTTCTATTTACAGGCGGTATCTGGGCATATGGTGCCCAACCTGCA  
 TCCCAAAGCTTTGGCTACAGCTCAGTGGTCTGTGTCTGAATGCATCGTACTGTGACTCTTTGACCC  
 CGTGACCTTACCGGCTCTGGGTACCTTCAGCCGTTACGAGAGCACTCGACGTGGACGTGGATGGAGCTG  
 AGTGTGCGGGCCATCCAGGCCAATCGCACTGGCACAGGGTTACTACTCACTTTGCAGCCAGAAAAGAAGT  
 TCCAGAAAGTAAAGGATTTGGAGGCGCCATGACAGAGCCACTGCGCTCAACATCCTTGCTTTGCCCC  
 ACCTACTCAGAAGCTGCTACTCAGATCCTACTTCTACCAACGGAATTGAATATAACATCATCCGGTA  
 CCCATGGCCAGTTGTGACTTCTCCATCCGTGTCTATACCTATGCTGACACCCCTAACGACTTCCAGTTAT  
 CCAACTCAGCCTCCAGAAGAAGACCAAGCTCAAGATACCCCTGATTCACCAAGCCCTGAAGATGTC  
 CTCAGCCCCATTTCACTCTTTGCCAGTCCCTGGACATCACCCACTTGGCTCAAGACCAATGGAAGAGTG  
 AATGGGAAGGGTTCGCTCAAGGGTCAGCCAGGGGATATCTTTCACCAGACTGGGCCAATTACTTTGTCA  
 AGTTTCTGGATGCTTATGCTAAGTATGGCTAAGATTCTGGGCAGTGACAGCGGAGAATGAACCTACGGC  
 AGGGCTCTTACGGGGTACCCCTTCCAGTGCCTGGGCTTCACTCCTGAACACCAGAGAGACTTCAATTTCC  
 CGTGACCTAGGGCCAGCCCTTGCCAACAGTTCCCATGATGTGAAGCTACTCATGTAGATGACCAACGCT  
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 TGTTCACTGGTATATGGATTTCTGGCTCCAGCCAAAGCTACTTTAGGAGAGACACCCGTTGTTCCCC  
 AACACAATGCTCTTTGCTTCGGAGGCTCGCTGGGCTCCAAGTTCTGGGAACAGAGTGTTCGGTTGGGT  
 CCTGGGATCGAGGATGCAGTACAGTACAGCATCATTACGAACCTCCTTTACCACGTAACGATGGATGGAC  
 GGACTGGAACCTTGCCCTGAATCCTGAAGGAGGCCCAACTGGGTCCGCAACTTTGTGATAGCCCAT  
 ATTGTGACATCCCCAAAGACGCATTTTACAAACAGCCATGTTCTACCATCTTGGCCACTTCAGCAAGT  
 TCATTCAGAGGGATCCCAGAGAGTGGCGTTGGTGGCCAGTGAGAGCACTGACTTGGAAACAGTAGCACT  
 GTTACGCCCTGACGGCTCTGCAGTTGTGGTGTGTTAAACCGATCTTCGGAGGATGTCCCTCTTACCATC  
 AGTGATCCTGACCTGGGCTTCTGGAGACCGTGTACCTGGCTACTCCATTACACTTACCTGTGGCGTC  
 GCCAG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG208259 representing NM\_008094  
 Red=Cloning site Green=Tags(s)

MAARLIGFFLFQAVSWAYGAQPCIPKSFYSSVVCNASCYDSDLDPVTLPALGTF SRYESTRRGRMEL  
 SVGAIQANRTGTGLLLTLQPEKKFQKVKFGGAMTDATALNILALSPPTQKLLRSYFSTNGIEYNIIRV  
 PMASCF S IRVYTYADTPNDFQLSNFSLPEEDTKLKIPLIHQALKMSSRPISLFA SPWTSPTWLKTNGRV  
 NGKGS LKQPGDIFHQ TWANYFVKFLDAYKYGLRFWAVTAENEPTAGLFTGYPFQCLGFTPEHQDFIS  
 RDLGPALANSSHDKLLMLDDQRLLLPRWAEVVLSDPEAAKYVHGI AVHWYMDFLAPAKATLGETHRFP  
 NTMLFA SEACVGSKFWEQSVRLGSWDRGMQYSHSIIITNLLYHVTGWDWNLALNPEGPNWVRNFVDSPI  
 IVDIPKDAFYKQPMFYHLGHFSKFIPEGSQRVALVASESTDLETVALLRPDGSAVVVVLNRSSDVPLTI  
 SDPDLGFLETVSPGYSIHTYLWRRQ

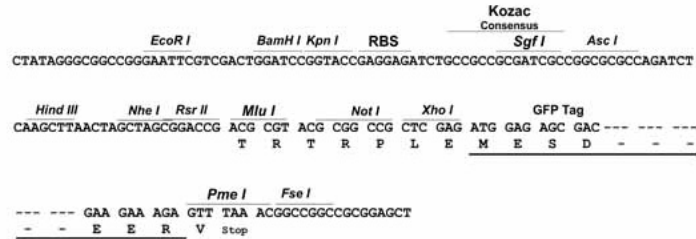
**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

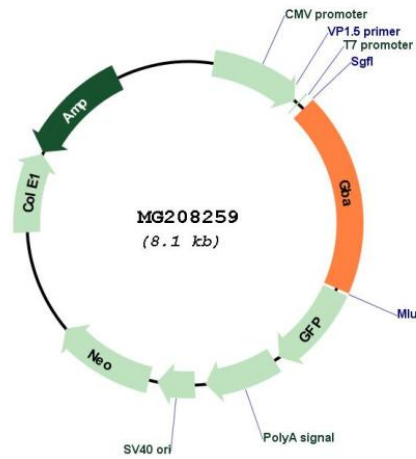
Sgfl-Mlul

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



**Plasmid Map:**



<b>ACCN:</b>	NM_008094
<b>ORF Size:</b>	1545 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	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>RefSeq:</b>	<a href="#">NM_008094.3</a>
<b>RefSeq Size:</b>	1938 bp
<b>RefSeq ORF:</b>	1548 bp
<b>Locus ID:</b>	14466
<b>UniProt ID:</b>	<a href="#">P17439</a>
<b>Cytogenetics:</b>	3 39.01 cM
<b>Gene Summary:</b>	Glucosylceramidase that catalyzes, within the lysosomal compartment, the hydrolysis of glucosylceramide/GlcCer into free ceramide and glucose (PubMed:24211208). Thereby, plays a central role in the degradation of complex lipids and the turnover of cellular membranes (PubMed:27378698). Through the production of ceramides, participates to the PKC-activated salvage pathway of ceramide formation (By similarity). Also plays a role in cholesterol metabolism (PubMed:24211208). May either catalyze the glucosylation of cholesterol, through a transglucosylation reaction that transfers glucose from glucosylceramide to cholesterol (PubMed:24211208). The short chain saturated C8:0-GlcCer and the mono-unsaturated C18:0-GlcCer being the most effective glucose donors for that transglucosylation reaction (By similarity). Under specific conditions, may alternatively catalyze the reverse reaction, transferring glucose from cholesteryl-beta-D-glucoside to ceramide (By similarity). Finally, may also hydrolyze cholesteryl-beta-D-glucoside to produce D-glucose and cholesterol (By similarity).[UniProtKB/Swiss-Prot Function]