

Product datasheet for **MC228122**

Gba (NM_001077411) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gba (NM_001077411) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Gba
Synonyms:	betaGC; GBA1; GC; GCase; GLUC
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >MC228122 representing NM_001077411
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCTGCCAGGCTCATCGGATTCTTCTATTTACAGGCGGTATCTGGGCATATGGTGCCCAACCCTGCA
 TCCCCAAAAGCTTTGGCTACAGCTCAGTGGTCTGTGTCTGAATGCATCGTACTGTGACTCTTTGACCC
 CGTGACCTTACCGGCTCTGGGTACCTTCAGCCGTTACGAGAGCACTCGACGTGGACGTGGATGGAGCTG
 AGTGTGGGGCCATCCAGGCCAATCGCACTGGCACAGGGTTACTACTCACTTTGCAGCCAGAAAAGAAGT
 TCCAGAAAGTGAAGGATTTGGAGGCGCCATGACAGAGCCACTGCGCTCAACATCCTTGCTTTGCCCC
 ACCTACTCAGAAGCTGCTACTCAGATCCTACTTCTACCAACGGAATTGAATATAACATCATCCGGGTA
 CCCATGGCCAGTTGTGACTTCTCCATCCGTGTCTATACCTATGCTGACACCCCTAACGACTTCCAGTTAT
 CCAACTCAGCCTCCCAGAAGAAGACCAAGCTCAAGATACCCCTGATTCACCAAGCCCTGAAGATGTC
 CTCAGCCCCATTTCACTCTTTGCCAGTCCCTGGACATCACCCACTTGGCTCAAGACCAATGGAAGAGTG
 AATGGGAAGGGTTCGCTCAAGGGTCAGCCAGGGGATATCTTTCACCAGACCTGGGCAATTACTTTGTCA
 AGTTTCTGGATGCTTATGCTAAGTATGGCCTAAGATTCTGGGCAGTGACAGCGGAGAATGAACCTACAGC
 AGGGCTCTTACGGGGTACCCCTTCCAGTGCCTGGGCTTCACTCCTGAACACCAGAGAGACTTCAATTCC
 CGTGACCTAGGGCCAGCCCTTGCCAACAGTTCCCATGATGTGAAGCTACTCATGCTAGATGACCAACGCT
 TGCTGCTACCCCGCTGGGAGAGGTGGTCTCTGATCCAGAGGCAGCTAAGTACGTTCCATGGCATTGC
 TGTTCACTGGTATATGGATTTCTGGCTCCAGCCAAAGCTACTTTAGGAGAGACACCCGTTGTTCCCC
 AACACAATGCTCTTTGCTTCGGAGGCTCGGTGGGCTCCAAGTTCTGGGAACAGAGTGTTCGGTTGGGT
 CCTGGGATCGAGGGATGCAGTACAGTACAGCATATTACGAACCTCCTTACCACGTAACCTGGATGGAC
 GGACTGGAACCTTGCCCTGAATCCTGAAGGAGGGCCCAACTGGGTCCGCAACTTTGTGATAGCCCCATT
 ATTGTGACATCCCCAAAGACGCATTTTACAAACAGCCATGTTCTACCATCTTGGCCACTTCAGCAAGT
 TCATTCAGAGGGATCCCAGAGAGTGGCGTTGGTGGCCAGTGAGAGCACTGACTTGGAAACAGTAGCACT
 GTTACGCCCTGACGGCTCTGCAGTTGTGGTGTAAACCGATCTTCGGAGGATGTCCCTCTTACCATC
 AGTGATCCTGACCTGGGCTTCTGGAGACCGTGTACCTGGCTACTCCATTACACTTACCTGTGGCGTC
 GCCAG**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-Mlul

ACCN: NM_001077411

Insert Size: 1548 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation: Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.

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_001077411.2](#), [NP_001070879.1](#)

RefSeq Size: 2069 bp

RefSeq ORF: 1548 bp

Locus ID: 14466

UniProt ID: [P17439](#)

Cytogenetics: 3 39.01 cM

Gene Summary: 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]

Transcript Variant: This variant (2) represents the shortest transcript and encodes the functional protein. Variants 1 and 2 encode the same protein.