

## Product datasheet for **RG211578**

### Galactosylceramidase (GALC) (NM\_000153) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Galactosylceramidase (GALC) (NM_000153) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Galactosylceramidase
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG211578 representing NM\_000153  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCTGAGTGGCTACTCTCGGCTTCTGGCAACGCCGAGCGAAAGCTATGACTGCGGCCGCGGGTTCGG  
 CGGGCCGCGCCGGTGCCTTCTGCTGTGTGCGCTGCTGGCGCCCGCGCGGTACGTGCTCGACGA  
 CTTCCGACGGGCTGGGCCGGGAGTTCGACGGCATCGGCGCGGTACGCGCGCGGGCAACCTCCCGACTT  
 CTAGTAAATTACCCAGAGCCCTATCGTTCTCAGATATTGGATTATCTCTTTAAGCCGAATTTTGGTGCTT  
 CTTTGCATATTTTAAAAGTGGAAATAGGTGGTGTGGGACAGACAACAGACGGCACTGAGCCCTCCACAT  
 GCATTATGCACTAGATGAGAATTATTTCCGAGGATACGAGTGGTGGTTGATGAAAGAAGCTAAGAAGAGG  
 AATCCCAATATTACACTCATTGGGTTGCCATGGTATTCCCTGGATGGCTGGGAAAAGGTTTCGACTGGC  
 CTTATGTCAATCTTCAGCTGACTGCCTATTATGTCGTGACCTGGATTGTGGGCGCCAAGCGTTACCATGA  
 TTTGGACATTGATTATATTGGAATTTGGAATGAGAGGTCAATAATGCCAATTATATTAAGATATTAAGA  
 AAAATGCTGAATTATCAAGGTCTCCAGCGAGTGAAAATCATAGCAAGTGATAATCTCTGGGAGTCCATCT  
 CTGCATCCATGCTCCTTGATGCCGAACCTTCAAGGTGGTTGATGTTATAGGGGCTCATTATCCTGGAAC  
 CCATTCAGCAAAAGATGCAAAGTTGACTGGGAAGAAGCTTTGGTCTTCTGAAGACTTTAGCACTTTAAAT  
 AGTGACATGGGTGCAGGCTGCTGGGGTTCGATTTTAAATCAGAATTATATCAATGGCTATATGACTTCCA  
 CAATCGCATGGAATTTAGTGGCTAGTACTATGAACAGTTGCCTTATGGGAGATGCGGGTTGATGACGGC  
 CCAGGAGCCATGGAGTGGGCACTACGTGGTAGAATCTCCTGTCTGGGTATCAGCTCATACCACTCAGTTT  
 ACTCAACCTGGCTGGTATTACCTGAAGACAGTTGGCCATTTAGAGAAAAGGAGGAAGCTACGTAGCTCTGA  
 CTGATGGCTTAGGGAACCTCACCATCATCATTGAAACCATGAGTCATAAACATTCTAAGTGCATACGGCC  
 ATTTCTTCTTATTTCAATGTGTCACAACAATTTGCCACCTTTGTTCTTAAGGGATCTTTTAGTGAATA  
 CCAGAGCTACAGGTATGGTATACCAAACCTTGAAAAACATCCGAAAGATTTCTTTTAAAGCAGCTGGATT  
 CTCTATGGCTCCTTGACAGCGATGGCAGTTTCACACTGAGCCTGCATGAAGATGAGCTGTTACACTCAC  
 CACTCTCACCCTGGTCGCAAAGGCAGCTACCCGCTTCTCCAAAATCCCAGCCCTTCCCAAGTACCTAT  
 AAGGATGATTTCAATGTTGATTACCATTTTTTAGTGAAGCTCCAACTTTGCTGATCAAACCTGGTGTAT  
 TTGAATATTTTACAAATATTGAAGACCCTGGCGAGCATCACTTACGCTACGCCAAGTTCTCAACCAGAG  
 ACCCATTACGTGGGCTGCCGATGCATCCAACACAATCAGTATTATAGGAGACTACAACCTGGACCAATCTG  
 ACTATAAAGTGTGATGTATACATAGAGACCCTGACACAGGAGGTGTGTTCAATTGCAGGAAGAGTAATA  
 AAGGTGGTATTTTATTAGAAAGTCCAGAGGAATTTTCTTCTGGATTTTGCAAAATGGATCTTACAGGGT  
 TACAGGTGATTTAGCTGGATGGATTATATGCTTTAGGACGTGTTGAAGTTACAGCAAAAAAATGGTAT  
 ACACTCACGTTAACTATTAAGGGTCATTTACCTCTGGCATGCTGAATGACAAGTCTCTGTGGACAGACA  
 TCCCTGTGAATTTTCAAAGAATGGCTGGGCTGCAATTGGAACCTCACTCCTTTGAATTTGCACAGTTTGA  
 CAACTTCTTGTGGAAGCCACACGC

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:** >RG211578 representing NM\_000153  
Red=Cloning site Green=Tags(s)

MAEWLLSASWQRRAKAMTAAAGSAGRAAVPLLLCALLAPGGAYVLDDSDGLGREFDGIGAVSGGGATSRL  
LVNYPEPYRSQILDYLFKPNFGASLHILKVEIGGDGQTTDGTPEPSSHMYALDENYFRGYEWLMKEAKKR  
NPNITLIGLPWSFPGWLKGFDPYVNLQLTAYVVVTWIVGAKRYHDLIDYIGIWNERSYNANYIKILR  
KMLNYQGLQRVKIIASDNLWESISASMLLDAELFKVVDVIGAHYPGTHSAKDAKLTGKKLWSEDFSTLN  
SDMGAGCWGRILNQYINGYMTSTIAWNLVASYEQLPYGRCGLMTAQEPWSGHYVVEPVWVSAHTTQF  
TQPGWYYLKTIVGHLEKGGSYVALTDGLGNLTIIETMSHKHSCIRPFLPYFNVSQQFATFVLKGSFSEI  
PELQVWYTKLGKTSERFLFKQLDSLWLLSDGSFTLSLHEDELFTLTTLTTGRKGSYPLPPKSQFPFSTY  
KDDFNVDYPFFSEAPNFADQTVFEYFTNIEDPGEHHFTLRQVLNQRPIITWAADASNTISIIIGDYNWNTL  
TIKCDVYIETPDTGGVF IAGRVNKGIL IRSARGIFFWIFANGSYRVTDLAGWIIYALGRVEVTAKKWY  
TLTLTIKGHFTSGMLNDKSLWTDIPVNF PKNGWAAIGTHSFEFAQFDNFLVEATR

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000153

**ORF Size:** 2055 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_000153.3](#)

**RefSeq Size:** 4185 bp

**RefSeq ORF:** 2058 bp

**Locus ID:** 2581

**UniProt ID:** [P54803](#)

**Cytogenetics:** 14q31.3

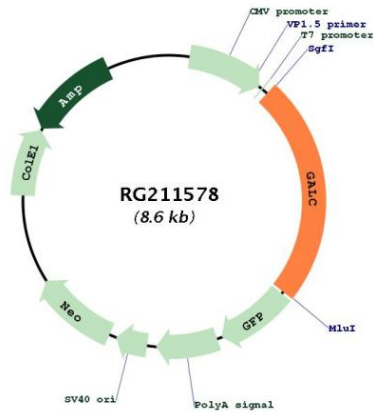
**Domains:** Glyco\_hydro\_59

**Protein Families:** Druggable Genome

**Protein Pathways:** Lysosome, Metabolic pathways, Sphingolipid metabolism

**Gene Summary:** This gene encodes a lysosomal protein which hydrolyzes the galactose ester bonds of galactosylceramide, galactosylsphingosine, lactosylceramide, and monogalactosyldiglyceride. Mutations in this gene have been associated with Krabbe disease, also known as globoid cell leukodystrophy. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG211578