

Product datasheet for **SC120078**

Galactosylceramidase (GALC) (NM_000153) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Galactosylceramidase (GALC) (NM_000153) Human Untagged Clone
Tag:	Tag Free
Symbol:	Galactosylceramidase
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_000153, the custom clone sequence may differ by one or more nucleotides

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ATGGCTGAGTGGCTACTCTCGGCTTCTGGCAACGCCGAGCGAAAGCTATGACTGCGGCCGCGGTTTCGG
CGGGCCGCGCCGCGGTGCCCTTGCTGCTGTGTGCGCTGCTGGCGCCCGCGCGCGTACGTGCTCGACGA
CTCCGACGGGCTGGCCGGGAGTTCGACGGCATCGGCGCGGTGAGCGCGCGGGCAACCTCCCGACTT
CTAGTAAATTACCCAGAGCCCTATCGTTCTCAGATATTGGATTATCTCTTTAAGCCGAATTTTGGTGCCT
CTTTGCATATTTTAAAAGTGAAAATAGGTGGTGTATGGCAGACAACAGACGGCACTGAGCCCTCCACAT
GCATTATGCACTAGATGAGAATTATTTCCGAGGATACGAGTGGTGGTTGATGAAAAGAAGCTAAGAAGAGG
AATCCCAATATTACACTCATTGGGTTGCCATGGTCATTCCCTGGATGGCTGGGAAAAGGTTTCGACTGGC
CTTATGTCAATCTTCAGCTGACTGCCTATTATGTCGTGACCTGGATTGTGGGCGCCAAGCGTTACCATGA
TTTGGACATTGATTATATTGGAATTTGGAATGAGAGGTGATATAATGCCAATTATATTAAGATATTAAGA
AAAATGCTGAATTATCAAGGTCTCCAGCGAGTGAAAATCATAGCAAGTGATAATCTCTGGGAGTCCATCT
CTGCATCCATGCTCCTTGATGCCGAACCTTCAAGGTGGTTGATGTTATAGGGGCTCATTATCCTGGAAC
CCATTCAGCAAAAAGATGCAAAGTTGACTGGGAAGAAGCTTTGGTCTTCTGAAGACTTTAGCACTTTAAAT
AGTGACATGGGTGCAAGCTGCTGGGGTTCGATTTTAAATCAGAATTATATCAATGGCTATATGACTTCCA
CAATCGCATGGAATTTAGTGGCTAGTACTATGAACAGTTGCCTTATGGGAGATGCGGGTTGATGACGGC
CCAGGAGCCATGGAGTGGGCACTACGTGGTAGAATCTCCTGTCTGGGTATCAGCTCATACCACTCAGTTT
ACTCAACCTGGCTGGTATTACCTGAAGACAGTTGGCCATTTAGAGAAAGGAGGAAGCTACGTAGCTCTGA
CTGATGGCTTAGGGAACCTCACCATCATCATTGAAACCATGAGTCATAAACATTCTAAGTGCATACGGCC
ATTTCTTCCTTATTTCAATGTGTCACAACAATTTGCCACCTTTGTTCTTAAGGGATCTTTTAGTGAATA
CCAGAGCTACAGGTATGGTATACCAAACCTTGAAAAACATCCGAAAGATTTCTTTTTAAGCAGCTGGATT
CTCTATGGCTCCTTGACAGCGATGGCAGTTTCACTGAGCCTGCATGAAGATGAGCTGTTACACTCAC
CACTCTCACTGGTTCGCAAAGGCAGCTACCCGCTTCTCCTCAAAAATCCCAGCCCTTCCCAAGTACCTAT
AAGGATGATTTCAATGTTGATTACCCATTTTTTAGTGAAGCTCCAACTTTGCTGATCAAACCTGGTGTAT
TTGAATATTTTACAAATATTGAAGACCCTGGCGAGCATCACTTACGCTACGCCAAGTTCTCAACCAGAG
ACCCATTACGTGGGCTGCCGATGCATCCAACACAATCAGTATTATAGGAGACTACAACCTGGACCAATCTG
ACTATAAAGTGTGATGTATACATAGAGACCCTGACACAGGAGGTGTGTTTATTGCAGGAAGAGTAAATA
AAGGTGGTATTTTATTAGTAAGTGCAGAGGAATTTCTTCTGGATTTTTCGAAATGGATCTTACAGGGT
TACAGGTGATTTAGCTGGATGGATTATATGCTTTAGGACGTGTTGAAGTTACAGCAAAAAAATGGTAT
ACACTCACGTTAACTATTAAGGGTCATTTACCTCTGGCATGCTGAATGACAAGTCTCTGTGGACAGACA
TCCTGTGAATTTTCAAAGAATGGCTGGGCTGCAATTGGAACCTCACTCCTTTGAATTTGCACAGTTTGA
CAACTTCTTGTGGAAGCCACACGCTAA
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_000153 unedited
 AAAAGATTCGGATTTGTACACGATTCACTATAGGCGGCCGCAATTCGCACGAGGCCTCG
 TGCCGAATTCGGCAGGAGGGCGCGTCAGCATCAGCGGCCTCCTGCCCGTATCTATCGTG
 GCGGCGACGGGACCCGCCTCCCTGGGCGCCGGAGTCATGTGACCCACACAATGGCTGAGT
 GGCTACTCTCGGCTTCTGGCAACGCCGAGCGAAAGCTATGACTGCGGCCGCGGGTTCGG
 CGGGCCGCGCCGGTGCCTTGTCTGTGTGCGCTGCTGGCGCCCGCGGCGCGTACG
 TGCTCGACGACTCCGACGGGCTGGGCGGGAGTTCGACGGCATCGGCGCGGTGACGCGCG
 GCGGGGCAACCTCCCGACTTCTAGTAAATTACCCAGAGCCCTATCGTTCTCAGATATTGG
 ATTATCTCTTTAAGCCGAATTTTGGTGCCTCTTTGCATATTTTAAAAGTGAAATAGGTG
 GTGATGGGCAGACAACAGACGGCACTGAGCCCTCCACATGCATTATGCACTAGATGAGA
 ATTATTTCCGAGGATACGAGTGGTGGTTGATGAAAGAAGCTAAGAAGAGGAATCCCAATA
 TTACACTCATTGGGTTGCCATGGTCATTCCCTGGATGGCTGGGAAAAGTTTTGACTGGC
 CTTATGTCAATCTTCAGCTGACTGCCTATTATGTCGTGACCTGGATTGTGGGCGCCAAGC
 GTTACCATGATTTGGACATTGATTATATTGGAATTTGGAATGAGAGGTGATATAATGCCA
 ATTATATTAAGATATTAAGAAAAATGGCTGATTATCAAGGTCTCCAGCGAGTAAATCAT
 AGCAGTGGATATCTCTGGGAGTCCATCTCTGCATCCATGCTNCTTGATGCCCGACTCTTC
 AGGGTGTTN

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_000153 unedited
 AGCTATGNNACCGCGCCGAATCTAANGATCGGTTTTTTTTTTTTTTTTTTTGTAAATG
 TAGACAGTTTTAATTGTAGTATCAGAAACTGGTGGGAGGAAACAAATTTGGTATATTC
 ATACAATGGAAAACCTCTCAGAAATAAGAAGGAACAAACCACTGAATCACACAACATGGA
 CCAATCTCAAATCATTATGCTGATGGAAAGAAACCATTATAAGAATACACAGTACATGA
 CGCCGCTTTCATGATGTTCTGGAACAAAGAAAACCTAACCTATAGTGATAGAATTCCTATC
 AATGGCTGCCAACAAATTTGGGAGTAAAAGGAACTGACTGAGCAGGTATACAAGAGAACCTT
 CTGGGGTGATGGAAATATTCTGAAGCTTACTGGAGTGTGGTTACATGGGTATATCAAT
 TTATCAAACTCACTGAATTTGTATATTTAAAGTAGGAACATTTTATTGTAATAAATTAC
 ACCTCTATAATGTTTTGTTTTAAAAAATATTAGATACATCAGCTGGAAATCACTTGGTTTT
 AACAAAAAATTTCTCTGTAATCTTATTTATTCTAACACTTTTCTGTCTTTAAAAGCAA
 TGCAAAACTTCACTGTAGCTAAGCCCATGTTAACTCTTACAAATTCCTACATAGTAGAA
 CTAGTTCAATGAGTAATTCTAAAAAAAATTTAGATTTACTTTAACCTCATGGATAACTG
 ATTTGCTACCTAGAGCCCATTAATGCGTTAGATAAACCTTACCCAGGTGAACATGCTC
 ACGCTTATTAATAAATAAACACTTTTTGACTCTAACAAGAACCCACCCCTAAGGAGAGAA
 CCCATCCCGTGGAGTTACAAAAAGGCGCAATGGCTCCCTCTTTCCCAACCAAGGGACA
 AAAAAGCTCTCTTATCTGGGTGAACTCGTTACCACCGCCACCGGGAGGCACCACCCCAA
 GCCCGGCGCAGAGGCCTGGGACAN

Restriction Sites:

NotI-NotI

ACCN:

NM_000153

Insert Size:

3870 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 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](#)

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_000153.1](#), [NP_000144.1](#)

RefSeq Size: 3897 bp

RefSeq ORF: 3897 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]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (a). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.