

## Product datasheet for SC117761

### B4GALT3 (B4GALT2) (NM\_003780) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	B4GALT3 (B4GALT2) (NM_003780) Human Untagged Clone
Tag:	Tag Free
Symbol:	B4GALT3
Synonyms:	B4Gal-T2; B4Gal-T3; beta4Gal-T2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC117761 sequence for NM_003780 edited (data generated by NextGen Sequencing)

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ATGAGCAGACTGCTGGGGGGACGCTGGAGCGCTCTGCAAGGCTGTGCTCCTTCTCTGC
CTGCTGCACTTCCCTCGTGGCCGTATCCTCTACTTTGACGTCTACGCCACGACCTGGCC
TTCTTCAGCCGCTTCAGTGCCCGAGGCCCTGCCATGCCCTCCACCCAGCTGCTAGCAGC
AGCAGCAGCAGCAACTGCTCCCGGCCAACGCCACCGCCTCTAGCTCCGGGCTCCCT
GAGGTCCCAGTGCCTGCCCGTCCCACGGCTCCCACGCTGCCACCCTGTCTGACTCG
CCACCTGGTCTTGTGGGCAGACTGCTGATCGAGTTCACCTCACCCATGCCCTGGAGCGG
GTGCACAGGGAGAACCAGGCGTCTCATGGGCGGCCGATACACACCGCCGACTGCACC
CCAGCCCAGACGGTGGCGGTATCATCCCCTTTAGACACCGGGAACACCCTGCGCTAC
TGGCTCCACTATCTACACCCATCTTGAGCGGCGAGCGGCTGCGCTACGGCGTCTATGTC
ATCAACCAGCATGGTGGAGACACCTTCAACCGGCCAAGCTGCTTAACGTGGGCTTCCTA
GAGGCGCTGAAGGAGGATGCCGCTATGACTGCTTCTCAGCGATGTGGACCTGGTC
CCCATGGATGACCGCAACCTATACCGCTGCGGCGACCAACCCCGCCACTTTGCCATTGCC
ATGGACAAGTTTGGCTTCCGGCTTCCCTATGCTGGCTACTTTGGAGGTGTGTCAGGCCTG
AGTAAGGCTCAGTTTCTGAGAATCAATGGCTTCCCAATGAGTACTGGGGCTGGGGTGGC
GAGGATGATGACATCTTCAACCGGATCTCCCTGACTGGGATGAAGATCTCAGCCAGAC
ATCCGAATTGGCCGCTACCGCATGATCAAGCACGACCGGACAAGCATAACGAACCTAAC
CCTCAGAGGTTTACCAAGATTCAAACACGAAGCTGACCATGAAGCGGGACGGCATTGGG
TCAGTGCCGTACCAGGTCTTGGAGGTGTCTCGGCAACCACTCTTACCAATATCACAGTG
GACATTGGGCGGCTCCGTCGTGCCCCCTCGGGGCTGA

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Clone variation with respect to NM\_003780.4  
366 g=>c;909 c=>t



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<b>5' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 5' read for NM_003780 unedited</p> <pre>TTGTATACGACTTACTATAGGGCGGCCGGAATTCGGCACGAGGCAGCCCGGAGCCGG GAGCCCTGCCAAGTCGGAGCGGCGTCCCCTGCTGAGCCCGAGCGCCGGGCCAGCAGCC GGATGCCCGGGCCCACTGGGCGGGCCAGTGGCCGCTGCGGGATGAGCAGACTGCTGGGG GGGACGCTGGAGCGCGTCTGCAAGGCTGTGCTCCTTCTGCTGCTGCACTTCCCTGTCG GCCGTACCTCTACTTTGACGTCTACGCCAGCACCTGGCCTTCTTCAGCCGCTTCAGT GCCCGAGGCCCTGCCATGCCCTCCACCCAGCTGCTAGCAGCAGCAGCAGCAGCAGCAAC TGCTCCCGGCCAACGCCACCGCCTCTAGCTCCGGGCTCCCTGAGGTCCCAAGTGCCTG CCCGGTCCACGCTCCACGCTGCCACCTGTCTGACTCGCCACCTGGTCTTGTGGGC AGACTGCTGATCGAGTTCACCTACCCATGCCCTGGAGCGGGTGCACAGGGAGAACCCA GGCGTGTCTATGGGCGGCCGATACACACCGCCGACTGCACCCAGCCAGCCAGCGTGGCG GTCATCATCCCCTTTAGACACCGGGAACACCACCTGCGCTACTGGCTCCACTATCTACAC CCCATCTTGAGGCGGCAGCGGCTGCGCTACGGCGTCTATGTCATCAACCAGCATGGTGAG GACACCTTTCACCGGCCAAGCTGCTTAACTGGGCTTCCANAGGCGCTGAAGGGAGAT GCCGNCTATGACTGCTTCTCAGCGATGTGGACCTGGTCCCATGGATGNNACGCAC CTATACCCTGCGGCGACCAACCCCGCCACTTTGCCATTGNCATGGNACAGTTNGNCTT NCGGCTTNCCTCATGCTGCTACNTTGGNNAGGGGC</pre>
<b>3' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 3' read for NM_003780 unedited</p> <pre>TTTTTACTACANCACTCCACAAGTTTCTGTGCAATGTACAAACACAAGCCGGCCCTGG GGCTCCTGCCTCCTCTCTCAGACAGGGAGGCGGGAACCAGACTTACTGATCCAAGCCCA CCTGCCTCCCATGCAAAGGCCAACCCCAAGATCCAGGCAGCGACACAGCATCCCCTCTG GTCCCCTCCTGGGCTGCTCCTCAGCAGGGGGCGACCAAAGCTTGCCCCCTACAATGTT GAATGAAAAGGTTTCCCCTCCCCTGGGAGCAAGGGGTTCCCAAGAGCTGAGAATCCC CCTGGAAGAGACTGCCCCCTAGACATACCTCCACCCCTCCAGGCCCTAGGGGACTCA AGGGGGGAAACTGAGGCACAGAGAGGTGGAGTGACCTAGCCCAGGCCACTCTGCGAGGC AGTGCAGGGGCTGGCCCGACCCTGACAGTGACTGGGGCTGGGCTAGGGGGAGGGGGTCGG GAAGGAGGGTTGACTCCAAAGAGGGCCACACTTGAAGAGCCTGCCAGGCAGGAGGCCCC CCAAAGTGGGTTCTGAACTTCCAGGTGTAGCTAGGGGGCCTAGTGAAGACCCTTGAAA ACAGAGCCAGTCTCAGTCTGGAGTCTCCACAGAGCAGCTGCCAGCCAGGCTGTGGT CAGTCTCTGGCAGGCAATCTTCGGCACCAGAGCCTCTGTCCATTAGTGTGACCCCGA GGGGGCCACGACGAGGCGCCNCCAATGTCCACTGTGATTTGGTGAAGAAGTGGTGCCGA GACACCTCCAAGACTGGTACCGNACTGACCCAATGCCGTCCNGTNCATGGGTGAGCTC GTGTTTNGAAATCTTGGTAACCCCTCTGAGGNNTANGNTCGTTATGCTTGTGCGGTCGTG CTTGATCCATGCGTAGCGGCCAATTCGGATGTCTGGCGTGAGATCTCCATCCATCAGGGA GACCCGNNTGAGATGTANATNCTNGCACCCAGCCAGACTATTGGGAAGCCATGATCTAA ACTGAGCTACTA</pre>
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_003780
<b>Insert Size:</b>	2000 bp
<b>OTI Disclaimer:</b>	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).
<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).

**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\\_003780.3](#), [NP\\_003771.1](#)

**RefSeq Size:** 2227 bp

**RefSeq ORF:** 1119 bp

**Locus ID:** 8704

**UniProt ID:** [O60909](#)

**Cytogenetics:** 1p34.1

**Domains:** Galactosyl\_T\_2

**Protein Families:** Transmembrane

**Protein Pathways:** Galactose metabolism, Glycosphingolipid biosynthesis - lacto and neolacto series, Keratan sulfate biosynthesis, Metabolic pathways, N-Glycan biosynthesis

**Gene Summary:** This gene is one of seven beta-1,4-galactosyltransferase (beta4GalT) genes. They encode type II membrane-bound glycoproteins that appear to have exclusive specificity for the donor substrate UDP-galactose; all transfer galactose in a beta1,4 linkage to similar acceptor sugars: GlcNAc, Glc, and Xyl. Each beta4GalT has a distinct function in the biosynthesis of different glycoconjugates and saccharide structures. As type II membrane proteins, they have an N-terminal hydrophobic signal sequence that directs the protein to the Golgi apparatus and which then remains uncleaved to function as a transmembrane anchor. By sequence similarity, the beta4GalTs form four groups: beta4GalT1 and beta4GalT2, beta4GalT3 and beta4GalT4, beta4GalT5 and beta4GalT6, and beta4GalT7. The enzyme encoded by this gene synthesizes N-acetyllactosamine in glycolipids and glycoproteins. Its substrate specificity is affected by alpha-lactalbumin but it is not expressed in lactating mammary tissue. Three transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Jul 2011]

Transcript Variant: This variant (2) differs in the 5' UTR and coding sequence compared to variant 1. The resulting isoform (b) is shorter at the N-terminus compared to isoform a. Variants 2 and 3 both encode isoform b.