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# Product datasheet for RC202909

## B4GALT3 (NM_003779) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | B4GALT3 (NM_003779) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | B4GALT3 |
| **Synonyms:** | beta4Gal-T3 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

>RC202909 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTTGCGGAGGCTGCTGGAGCGGCCTTGCACGCTGGCCCTGCTTGTGGGCTCCCAGCTGGCTGTCATGA
TGTACCTGTCACTGGGGGGCTTCCGAAGTCTCAGTGCCCTATTTGGCCGAGATCAGGGACCGACATTTGA
CTATTCTCACCCTCGTGATGTCTACAGTAACCTCAGTCACCTGCCTGGGGCCCCAGGGGGTCCTCCAGCT
CCTCAAGGTCTGCCCTACTGTCCAGAACGATCTCCTCTCTTAGTGGGTCCTGTGTCGGTGTCCTTTAGCC
CAGTGCCATCACTGGCAGAGATTGTGGAGCGGAATCCCCGGGTAGAACCAGGGGGCCGGTACCGCCCTGC
AGGTTGTGAGCCCCGCTCCCGAACAGCCATCATTGTGCCTCATCGTGCCCGGGAGCACCACCTGCGCCTG
CTGCTCTACCACCTGCACCCCTTCTTGCAGCGCCAGCAGCTTGCTTATGGCATCTATGTCATCCACCAGG
CTGGAAATGGAACATTTAACAGGGCAAAACTGTTGAACGTTGGGGTGCGAGAGGCCCTGCGTGATGAAGA
GTGGGACTGCCTGTTCTTGCACGATGTGGACCTCTTGCCAGAAAATGACCACAATCTGTATGTGTGTGAC
CCCCGGGGACCCCGCCATGTTGCCGTTGCTATGAACAAGTTTGGATACAGCCTCCCGTACCCCCAGTACT
TCGGAGGAGTCTCAGCACTTACTCCTGACCAGTACCTGAAGATGAATGGCTTCCCCAATGAATACTGGGG
CTGGGGTGGTGAGGATGACGACATTGCTACCAGGGTGCGCCTGGCTGGGATGAAGATCTCTCGGCCCCCC
ACATCTGTAGGACACTATAAGATGGTGAAGCACCGAGGAGATAAGGGCAATGAGGAAAATCCCCACAGAT
TTGACCTCCTGGTCCGTACCCAGAATTCCTGGACGCAAGATGGGATGAACTCACTGACATACCAGTTGCT
GGCTCGAGAGCTGGGGCCTCTTTATACCAACATCACAGCAGACATTGGGACTGACCCTCGGGGTCCTCGG
GCTCCTTCTGGGCCACGTTACCCACCTGGTTCCTCCCAAGCCTTCCGTCAAGAGATGCTGCAACGCCGGC
CCCCAGCCAGGCCTGGGCCTCTATCTACTGCCAACCACACAGCCCTCCGAGGTTCACAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:**

>RC202909 protein sequence
Red=Cloning site Green=Tags(s)

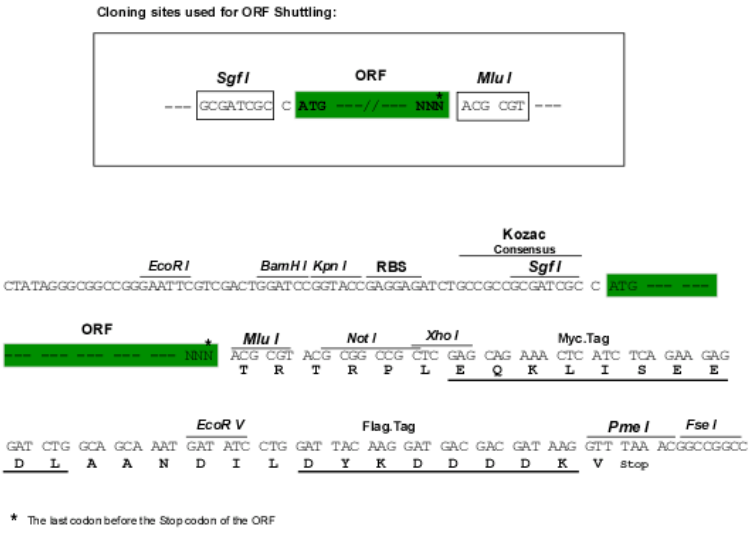
MLRRLLERPCTLALLVGSQLAVMMYLSLGGFRSLSALFGRDQGPTFDYSHPRDVYSNLSHLPGAPGGPPA
PQGLPYCPERSPLLVGPVSVSFSPVPSLAEIVERNPRVEPGGRYRPAGCEPRSRTAIIVPHRAREHHLRL
LLYHLHPFLQRQQLAYGIYVIHQAGNGTFNRAKLLNVGVREALRDEEWDCLFLHDVDLLPENDHNLYVCD
PRGPRHVAVAMNKFGYSLPYPQYFGGVSALTPDQYLKMNGFPNEYWGWGGEDDDIATRVRLAGMKISRPP
TSVGHYKMVKHRGDKGNEENPHRFDLLVRTQNSWTQDGMNSLTYQLLARELGPLYTNITADIGTDPRGPR
APSGPRYPPGSSQAFRQEMLQRRPPARPGPLSTANHTALRGSH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mk6152_b12.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**ACCN:** NM_003779

**ORF Size:** 1179 bp

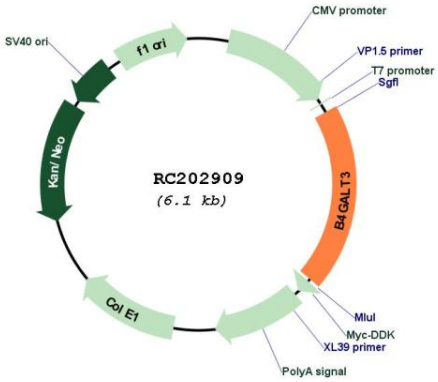
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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.

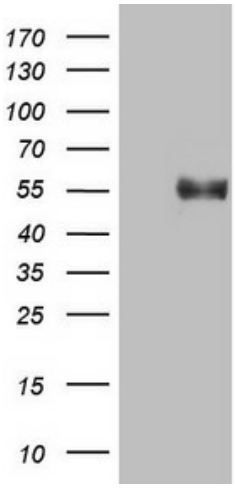
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

| | |
|---|---|
| **Reconstitution Method:** | 1. Centrifuge at 5,000xg for 5min.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_003779.4 |
| **RefSeq Size:** | 2417 bp |
| **RefSeq ORF:** | 1182 bp |
| **Locus ID:** | 8703 |
| **UniProt ID:** | O60512 |
| **Cytogenetics:** | 1q23.3 |
| **Domains:** | Galactosyl_T_2 |
| **Protein Families:** | Transmembrane |
| **Protein Pathways:** | Glycosphingolipid biosynthesis - lacto and neolacto series, Keratan sulfate biosynthesis, Metabolic pathways, N-Glycan biosynthesis |
| **MW:** | 43.9 kDa |
| **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. This gene encodes an enzyme that may be mainly involved in the synthesis of the first N-acetyllactosamine unit of poly-N-acetyllactosamine chains. Multiple alternatively spliced transcript variants encoding the same protein have been found for this gene. [provided by RefSeq, Dec 2010] |

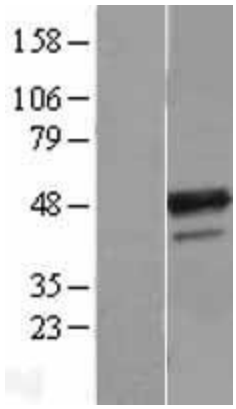
## Product images:




Circular map for RC202909




HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY B4GALT3 (Cat# RC202909, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-B4GALT3 (Cat# [TA808622])(1:2000). Positive lysates [LY401244] (100ug) and [LC401244] (20ug) can be purchased separately from OriGene.




Western blot validation of overexpression lysate (Cat# [LY401244]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202909 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).