

Product datasheet for **RG211753**

B4GALT3 (B4GALT2) (NM_001005417) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	B4GALT3 (B4GALT2) (NM_001005417) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	B4GALT2
Synonyms:	B4Gal-T2; B4Gal-T3; beta4Gal-T2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG211753 representing NM_001005417 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGCAGACTGCTGGGGGGACGCTGGAGCGCTGCAAGGCTGTGCTCCTTCTGCTGCTGCACT
TCCTCGTGGCCGTCATCCTCTACTTTGACGTCTACGCCAGCACCTGGCCTTCTCAGCCGCTTCAGTGC
CCGAGGCCCTGCCATGCCCTCCACCCAGCTGCTAGCAGCAGCAGCAGCAGCAGCAACTGCTCCCGGCC
AACGCCACCGCTCTAGCTCCGGCTCCCTGAGGTCCCAGTCCCCTGCCCGTCCCACGGCTCCCACGC
TGCCACCCTGTCTGACTCGCCACCTGGTCTTGTGGGCAGACTGCTGATCGAGTTCACCTACCCATGCC
CCTGGAGCGGGTGCAGAGGGAGAACCAGGCGTGCCTATGGGCGGCCGATACACACCGCCCGACTGCACC
CCAGCCCAGACGGTGGCGGTATCATCCCCTTTAGACACCGGGAACACCCTGCGCTACTGGCTCCACT
ATCTACACCCCATCTTGAGGCGGCAGCGGCTGCGCTACGGCGTCTATGTCATCAACCAGCATGGTGAGGA
CACCTTCAACCGGGCAAGCTGCTTAACGTGGGCTTCTAGAGGCGCTGAAGGAGGATGCCGCTATGAC
TGCTTCATCTTCAGCGATGTGGACCTGGTCCCCATGGATGACCGCAACCTATACCCTGCGGCGACCAAC
CCCGCCACTTTGCCATTGCCATGGACAAGTTTGGCTTCCGGCTTCCCTATGCTGGCTACTTTGGAGGTGT
GTCAGGCTGAGTAAGGCTCAGTTTCTGAGAATCAATGGCTTCCCAATGAGTACTGGGGCTGGGGTGGC
GAGGATGATGACATCTTCAACCGGATCTCCCTGACTGGGATGAAGATCTACGCCAGACATCCGAATCG
GCCGCTACCGCATGATCAAGCAGCAGCCGACAAGCATAACGAACCTAACCCCTCAGAGGTTTACCAAGAT
TCAAAACACGAAGCTGACCATGAAGCGGACGGCATTGGGTGAGTGGGTTACCAGGCTTGGAGGTGTCT
CGGCAACCACTCTTACCAATATCACAGTGGACATTGGGCGCCCTCCGTCGTGGCCCCCTCGGGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG211753 representing NM_001005417
 Red=Cloning site Green=Tags(s)

MSRLGGTLERVCKAVLLLCLLHFLVAVILYFDVYAQHLAFFSRFSARGPAHALHPAASSSSSSSSNCSRP
 NATASSSGLPEVPSALPGPTAPTLPPCPDSPPLVGRLLIEFTSPMLERVQRENPGVLMGGRYTPPDC
 PAQTVAVIIPFRHREHLRYWLHYPILRRQRLRYGVYVINQHGEDTFNRAKLLNVGFLEALKEDAAYD
 CFIFSDVDLVPMDRNL YRCGDQPRHFAIAMDKFGFRLPYAGYFGVSGLSKAQFLRINGFPNEYWGWGG
 EDDDI FNRI SLTGMKISRPIRIGRYRM IKHDRDKHNEPNPQRF TKIQNTKLTMKRDGIGSVRYQVLEVS
 RQPLFTNITVDIGRPPSWPPRG

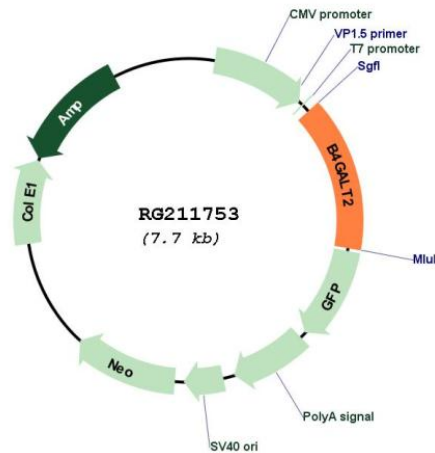
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001005417

ORF Size:	1116 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:	<ol style="list-style-type: none">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_001005417.2 , NP_001005417.1
RefSeq Size:	2013 bp
RefSeq ORF:	1119 bp
Locus ID:	8704
UniProt ID:	O60909
Cytogenetics:	1p34.1
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]