

## Product datasheet for **RG210937**

### **B3GALT1 (NM\_020981) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	B3GALT1 (NM_020981) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	B3GALT1
Synonyms:	beta3Gal-T1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG210937 representing NM_020981 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGCTCAAAGGTCTCCTGTTTGTATGTTTTGACAGTTGTGTGCTGGCCAGCGCTCTCTGGTACTTGA  
GTATAACTCGCCCTACTTCTTACACTGGCTCAAACCATTACGCCACCTAACAGTTGCCAGGAAAA  
CTTCACCTTTGGCAACATAAGAAGCTCGACCTATCAACCCACATTCTTTGAATTTCTTATCAACGAGCCC  
AATAAATGTGAGAAAAACATTCTTTTCTGTTATCCTCATCAGCACCCTCACAAAGGAATTTGATGCC  
GTCAGGCAATCAGAGAGACGTGGGGGATGAGAACAACCTTAAGGGGATCAAGATAGCCACCTGTTCT  
CCTGGGCAAGAATGCTGATCCTGTTCTCAATCAGATGGTGGAGCAAGAGAGCCAAATCTTCCATGATATC  
ATCGTGGAGGACTTTATTGACTCCTACCATAACCTTACCCTCAAAACATTAATGGGGATGAGATGGTGG  
CCACTTTTGTTCAAAAGCCAAGTATGTCATGAAAACAGACAGCGACATTTTGTAAACATGGACAATCT  
TATTTATAAATTAAGTAAACCTCCACCAAGCCACGAAGAAGGTATTTTACTGGCTATGTCATTAATGGA  
GGACCGATTGGGATGTCGCAGTAAGTGGTATATGCCAGGGATTTGTACCCAGACAGTAACTACCCAC  
CTTTCTGTTGGGGACTGGCTACATCTTTTCAGCCGATGTAGCTGAACCTATTTACAAGACCTCACTCCA  
CACAAGGCTGCTTCACTTGAAGACGTATATGTGGGACTGTGTCTCGAAAGCTGGGCATACATCCTTTC  
CAGAACAGTGGCTCAATCACTGAAAAATGGCCTACAGTTTGTGTAGGTATCGCCGAGTTATCACTGTGC  
ATCAGATCTCTCAGAAGAAATGCACAGAATCTGGAATGACATGTCAAGCAAGAAACATCTCAGATGT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG210937 representing NM\_020981  
 Red=Cloning site Green=Tags(s)

MASKVSCLYVLTVVCWASALWYLSITRPTSSYTGSKPFSHLTVARKNFTFGNIRTRPINPHSFEFLINEP  
 NKCEKNIPFLVILISTTHKEFDARQAIRETWGDENNFKGKIATLFLGKNADPVLNQMQVEQESQIFHDI  
 IVEFDIDSYHNLTKLTMGMRWVATFCSKAKYVMKTDSDIFVNMDNLIYKLLKPKSTKPRRRYFTGYVING  
 GPIRDVRSKWYMPRDLYPDSNYPPFCSGTGYIFSADVAELIYKTSLHTRLLHLEDVYVGLCLRKLGIHFP  
 QNSGFNHWKMAYSLCRYRRVITVHQISPEEMHRIWDMSSKKHLRC

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_020981

**ORF Size:** 978 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.
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\\_020981.4](#)

**RefSeq Size:** 2168 bp

**RefSeq ORF:** 981 bp

**Locus ID:** 8708

**UniProt ID:** [Q9Y5Z6](#)

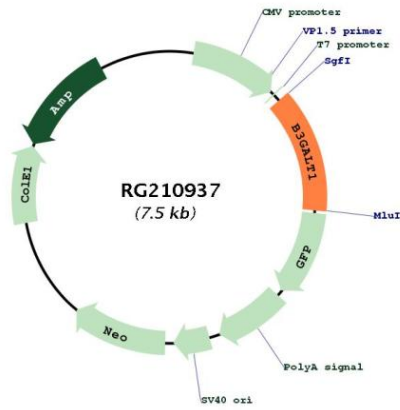
**Cytogenetics:** 2q24.3

**Protein Families:** Transmembrane

**Protein Pathways:** Glycosphingolipid biosynthesis - lacto and neolacto series, Metabolic pathways

**Gene Summary:** This gene is a member of the beta-1,3-galactosyltransferase (beta3GalT) gene family. This family encodes type II membrane-bound glycoproteins with diverse enzymatic functions using different donor substrates (UDP-galactose and UDP-N-acetylglucosamine) and different acceptor sugars (N-acetylglucosamine, galactose, N-acetylgalactosamine). The beta3GalT genes are distantly related to the Drosophila Brainiac gene and have the protein coding sequence contained in a single exon. The beta3GalT proteins also contain conserved sequences not found in the beta4GalT or alpha3GalT proteins. The carbohydrate chains synthesized by these enzymes are designated as type 1, whereas beta4GalT enzymes synthesize type 2 carbohydrate chains. The ratio of type 1:type 2 chains changes during embryogenesis. By sequence similarity, the beta3GalT genes fall into at least two groups: beta3GalT4 and 4 other beta3GalT genes (beta3GalT1-3, beta3GalT5). This gene is expressed exclusively in the brain. The encoded protein shows strict donor substrate specificity for UDP-galactose. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG210937