

## Product datasheet for **RG216344**

### **BTN3A1 (NM\_007048) Human Tagged ORF Clone**

#### **Product data:**

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids                       |
| Product Name:             | BTN3A1 (NM_007048) Human Tagged ORF Clone |
| Tag:                      | TurboGFP                                  |
| Symbol:                   | BTN3A1                                    |
| Synonyms:                 | BT3.1; BTF5; BTN3.1; CD277                |
| Mammalian Cell Selection: | Neomycin                                  |
| Vector:                   | pCMV6-AC-GFP (PS100010)                   |
| E. coli Selection:        | Ampicillin (100 ug/mL)                    |



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**ORF Nucleotide Sequence:**

>RG216344 representing NM\_007048  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAAAATGGCAAGTTTCTGGCCTTCTTCTGCTCAACTTTCGTGTCTGCCTCCTTTTGCCTCAGCTGC  
 TCATGCCTCACTCAGCTCAGTTTTCTGTGCTTGGACCCTCTGGGCCATCCTGGCCATGGTGGTGAAGA  
 CGCTGATCTGCCCTGTCACTGTCCCGACCATGAGTGCAGAGACCATGGAGCTGAAGTGGGTGAGTTCC  
 AGCCTAAGGCAGGTGGTGAACGTGTATGCAGATGGAAAGGAAGTGAAGACAGGCAGAGTGCACCGTATC  
 GAGGGAGAAGTTCGATTCTGCGGGATGGCATCACTGCAGGGAAGGCTGCTCTCGAATACACAACGTAC  
 AGCCTCTGACAGTGAAGTACTTGTGTTATTTCCAAGATGGTGACTTCTATGAAAAAGCCTGGTGGAG  
 CTGAAGGTTGCAGCACTGGGTTCTGATCTTACGTTGATGTGAAGGTTACAAGGATGGAGGGATCCATC  
 TGGAGTGCAGGTCCACTGGTGTACCCCAACCCAAAACAGTGGAGCAACAACAGGGAGAGAAACAT  
 CCCGACTGTGGAAGCACCTGTGGTTGCAGACGGAGTGGGCTGTATGCAGTAGCAGCATCTGTGATCATG  
 AGAGGCAGCTCTGGGAGGGTGTATCCTGTACCATCAGAAGTTCCTCCTCGGCCGAAAGACAGCCA  
 GCATTTCCATCGCAGACCCCTTCTCAGGAGCGCCAGAGGTGGATCGCCGCCCTGGCAGGGACCCTGCC  
 TGTCTTGTCTGCTTCTTGGGGAGCCGGTACTTCTGTGGCAACAGCAGGAGGAAAAAAGACTCAG  
 TTCAGAAAAGAAAAGAGAGAGCAAGAGTTGAGAGAAATGGCATGGAGCACAATGAAGCAAGAACAAGCA  
 CAAGAGTGAAGCTCCTGGAGGAAGTCAAGTGGAGAAATCCAGTATGCATCTCGGGGAGAGAGACATTC  
 AGCCTATAATGAATGAAAAAGGCCCTCTCAAGCCTGCGGATGTGATTCTGGATCCAAAAACAGCAAAC  
 CCCATCCTCCTTGTCTGAGGACCAGAGGAGTGTGCAGCGTGCCAAGGAGCCCCAGGATCTGCCAGACA  
 ACCCTGAGAGATTAATTGGCATTATTGTCTCGGCTGTGAGAGCTTCATATCAGGGAGACATTAATG  
 GGAGGTGGAGGTAGGGGACAGGAAAGAGTGGCATATAGGGGTGTGCAGTAAGAATGTGCAGAGAAAAGGC  
 TGGGTCAAAATGACACCTGAGAATGGATTCTGGACTATGGGGCTGACTGATGGGAATAAGTATCGGACTC  
 TAACTGAGCCCAGAACCAACCTGAAACTTCTAAGACCCCTAAGAAAGTGGGGTCTTCTGGACTATGA  
 GACTGGAGATATCTATTCTACAATGCTGTGGATGGATCGCATATTCATACTTCTGGAGCTCTCCTTC  
 TCTGAGGCTCTATATCTGTTTTCAGAATTTTACCTTGGAGCCACGGCCCTGACTATTTGTCCAGCG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG216344 representing NM\_007048  
 Red=Cloning site Green=Tags(s)

MKMASFLAFLLLNFRVCLLLLQLLMPHSAQFVSLGSPGILAMVGEDADLPCHLPTMSAETMELKWVSS  
 SLRQVVVYADGKEVEDRQSAPYRGRSILRDGITAGKAALRIHNVASDSGKYLQYFDGDFYEKALVE  
 LKVAALGSDLHVDVKGKYGKDGDIHLECRSTGWYPQPIQWSNNKGENIPTVEAPVVADGVGLYAVAASVIM  
 RGSSGEGVSTIRSSLLGLEKTASISADPFVRSQRWIAALAGTLPVLLLLLGGAGYFLWQQEKKTKQ  
 FRKKKREQLREMAWSTMKQEQSTRVKLLEELRWSIQYASRGERHSAYNEWKALFKPADVILDPKTAN  
 PILLVSEDQRSVQRAKEPQDLPDNPERFNWHYCVLGCESFISGRHYWEVEVDRKEWHIGVCSKNVQRKG  
 WVKMTPENGFWMGLTDGNKYRTLTEPRTNLKLPKPKVGVFLDYETGDISFYNAVDGSHIHTFLDVSF  
 SEALYPVFRILTLEPTALTICPA

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_007048

**ORF Size:** 1539 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](mailto: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](#)

**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:**

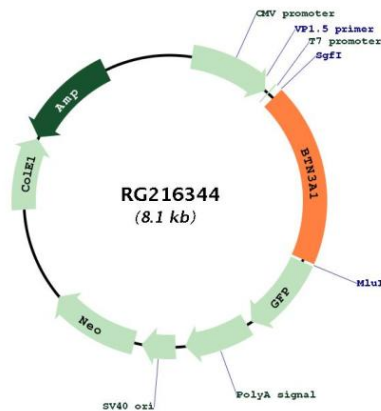
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store 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\\_007048.3](#), [NP\\_008979.3](#)

**RefSeq Size:** 3422 bp  
**RefSeq ORF:** 1542 bp  
**Locus ID:** 11119  
**UniProt ID:** [O00481](#)  
**Cytogenetics:** 6p22.2  
**Domains:** IGv, IG, SPRY, PRY  
**Protein Families:** Druggable Genome, Transmembrane

**Gene Summary:** The butyrophilin (BTN) genes are a group of major histocompatibility complex (MHC)-associated genes that encode type I membrane proteins with 2 extracellular immunoglobulin (Ig) domains and an intracellular B30.2 (PRYSPRY) domain. Three subfamilies of human BTN genes are located in the MHC class I region: the single-copy BTN1A1 gene (MIM 601610) and the BTN2 (e.g., BTN2A1; MIM 613590) and BTN3 (e.g., BNT3A1) genes, which have undergone tandem duplication, resulting in 3 copies of each (summary by Smith et al., 2010 [PubMed 20208008]).[supplied by OMIM, Nov 2010]

### Product images:



Circular map for RG216344