

## Product datasheet for **RG231048**

### GDNF (NM\_001190469) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** GDNF (NM\_001190469) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** GDNF  
**Synonyms:** ATF; ATF1; ATF2; HFB1-GDNF; HSCR3  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG231048 representing NM\_001190469  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGCAGCTTTGCCTAACAGCAATGGTGCCGCCGCGGACGGGACTTTAAGATGAAGTTATGGGATGTCG  
 TGGCTGTCTGCCTGGTGTCTCCACACCGCTCCGCCTCCCGCTGCCCGCCGAAATATGCCAGAGGA  
 TTATCCTGATCAGTTCGATGATGTCATGGATTTTATTCAAGCCACCATAAAAGACTGAAAAGGTCACCA  
 GATAAACAAATGGCAGTCTTCTAGAAGAGAGCGGAATCGGCAGGCTGCAGCTGCCAACCCAGAGAATT  
 CCAGAGGAAAAGGTCGGAGAGGCCAGAGGGGCAAAAACCGGGTTGTGTCTTAAGTCAATACATTTAAA  
 TGTCACTGACTTGGGCTGGGCTATGAAACCAAGGAGGAAGTATTTTTAGGTAAGTGCAGCGGCTTTGC  
 GATGCAGCTGAGACAACGTACGACAAAATATTGAAAACTTATCCAGAAATAGAAGGCTGGTGAAGTACA  
 AAGTAGGGCAGGCATGTTGCAGACCCATCGCCTTTGATGATGACCTGTCTGTTTTAGATGATAACCTGGT  
 TTACCATATTCTAAGAAAGCATTCCGCTAAAAGGTGTGGATGTATC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >RG231048 representing NM\_001190469  
 Red=Cloning site Green=Tags(s)

MQSLPNSNGAAAGRDFKMKLWDVVAVCLVLLHTASAFPLPAANMPEDYDPDQFDDVMDFIQATIKRLKRSP  
 DKQMAVLP RRERNRQAAAANPENSRRGKRRGQRGKNRGCVLTAIHLNVTDLGLGYETKEELIFRYCSGSC  
 DAAETTYDKILKNLSRNRLVSDKVGQACCRPIAFDDDL SFLDDNLVYHILRKHS AKRCGCI

**TRTRPLE** - GFP Tag - V

**Restriction Sites:** Sgfl-MluI

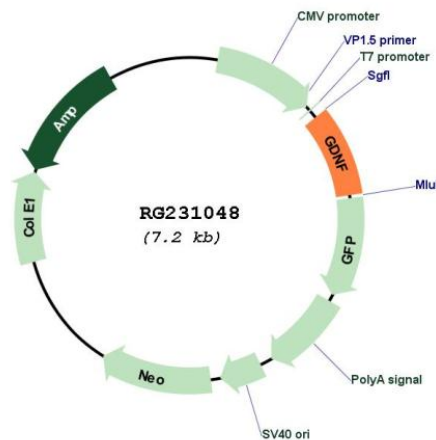


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**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_001190469

**ORF Size:** 606 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\\_001190469.1](#), [NP\\_001177398.1](#)

**RefSeq Size:** 3752 bp

**RefSeq ORF:** 609 bp

**Locus ID:** 2668

**UniProt ID:** [P39905](#)

**Cytogenetics:** 5p13.2

**Protein Families:** Druggable Genome, Secreted Protein, Transmembrane

**Gene Summary:** This gene encodes a secreted ligand of the TGF-beta (transforming growth factor-beta) superfamily of proteins. Ligands of this family bind various TGF-beta receptors leading to recruitment and activation of SMAD family transcription factors that regulate gene expression. The encoded preproprotein is proteolytically processed to generate each subunit of the disulfide-linked homodimer. The recombinant form of this protein, a highly conserved neurotrophic factor, was shown to promote the survival and differentiation of dopaminergic neurons in culture, and was able to prevent apoptosis of motor neurons induced by axotomy. This protein is a ligand for the product of the RET (rearranged during transfection) protooncogene. Mutations in this gene may be associated with Hirschsprung disease and Tourette syndrome. This gene encodes multiple protein isoforms that may undergo similar proteolytic processing. [provided by RefSeq, Aug 2016]