

## Product datasheet for **MG221647**

### Gnai1 (NM\_010305) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Gnai1 (NM_010305) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Gnai1
Synonyms:	AU046200; Gialpha1; Gnai-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG221647 representing NM_010305 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGCTGCACATTGAGCGCTGAGGACAAGGCGGCCGTGGAGCGCAGCAAGATGATCGACCGCAACCTCC  
GGGAGGACGGCGAGAAGGCGGCCGGGAGGTCAAGCTGCTGCTGGTGTGGGAATCTGGAAAGAG  
TACCATTGTGAAGCAGATGAAGATTATCCACGAAGCCGGCTACTCGGAAGAGGAGTGAAGCAGTACAAG  
GCAGTGGTCTACAGCAACTATCCAGTCCATCATTGCCATCATTAGAGCCATGGGGAGGTTGAAAAATCG  
ACTTCGGAGACTCTGCTCGGGCGGATGATGCTCGCCAACCTTTTCGTGCTTGTGGGGCTGCAGAAGAAGG  
CTTTATGACTGCAGAGCTCGCCGGTGCATAAAGAGACTGTGAAAGACAGTGGTGTGCAAGCCTGCTTC  
AACAGATCCCGGGAGTACCAGCTGAACGATTTCGGCAGCGTACTATCTGAATGACTTGGACAGAATAGCAC  
AGCCAAATTACATCCCAACTCAGCAGGATGTCCTCAGAACCAGAGTGAAGACCACAGGGATTGTGGAAAC  
CCACTTTACCTTCAAAGATCTTCATTTTAAAAATGTTTGACGTGGGAGGTCAGAGGTCAGAGCGGAAGAAG  
TGGATCCACTGCTTTGAAGGGGTGACCGCCATCATCTTCTGTGTGGCCCTGAGTGACTATGACCTGGTTC  
TTGCTGAAGATGAAGAAATGAACCGTATGCACGAGAGCATGAAGCTGTTTCGATAGCATCTGTAACAACAA  
GTGGTTTACAGACACGTCCATCATCCTTTTCTCAACAAGAAGGACCTCTTCAAGAAAAAATAAAAAAG  
AGCCCCCTCACGATATGCTACCCAGAATATGCAGGCTCAAACACATATGAAGAAGCGGCCGCTATATTC  
AGTGTGAGTTTGAAGACCTCAATAAAAAGGAAGGACACAAAGGAAATTTACACCCACTTCAGTGCGCCAC  
AGATACGAAGAACGTGCAGTTCGTGTTTCGATGCTGTAACAGACGTCATCATAAAGAATAACCTAAAAGAC  
TGTGGTCTCTTC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >MG221647 representing NM\_010305  
 Red=Cloning site Green=Tags(s)

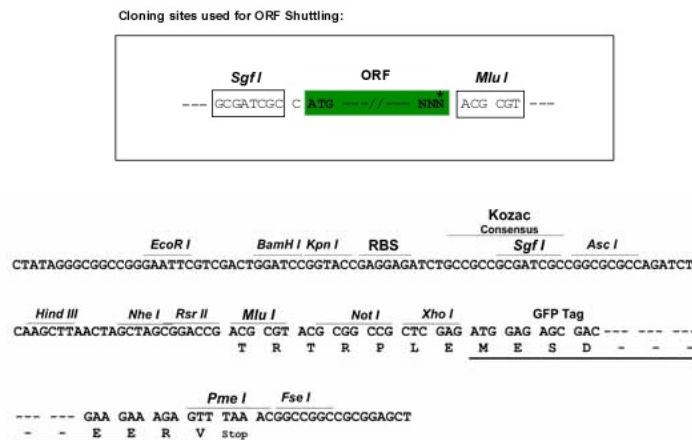
MGCTLSAEDKAAVERSKMIDRNLRDGEKAAREVKLLLLGAGESGKSTIVQMKIIEAGYSEEECKQYK  
 AVVYSNTIQSIIAIIIRAMGRLKIDFGDSARADDARQLFVLGAAEEGFMTELAGVIKRLWKDSGVQACF  
 NRSREYQLNDSAAYYLNDLDRIAQPNYIPTQDVLRTVKTGTGIVETHFTFKDLHFKMFDVGGQSRERKK  
 WIHCFEGVTAIIFCVALSVDYDLVLAEDEEMNRMHESMKLFDSICNNKWF TDTSIILFLNKKDLFEKIKK  
 SPLTICYPEYAGSNTYEEAAAYIQCFEDLNKRKDTKEIYTHFTCATDTKNVQFVFDVAVTDVVIKNNLKD  
 CGLF

TRTRPLE - GFP Tag - V

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja2360\\_f03.zip](https://cdn.origene.com/chromatograms/ja2360_f03.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_010305

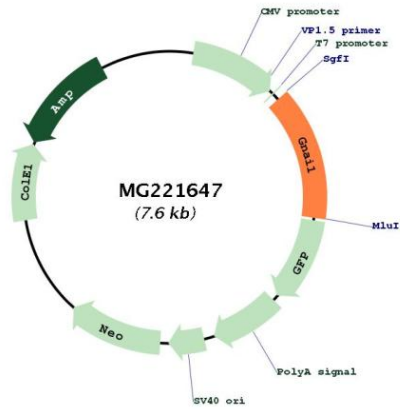
**ORF Size:** 1062 bp

**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](#)

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_010305.1</a> , <a href="#">NP_034435.1</a>
<b>RefSeq Size:</b>	3193 bp
<b>RefSeq ORF:</b>	1065 bp
<b>Locus ID:</b>	14677
<b>UniProt ID:</b>	<a href="#">B2RSH2</a>
<b>Cytogenetics:</b>	5 8.16 cM
<b>Gene Summary:</b>	Guanine nucleotide-binding proteins (G proteins) function as transducers downstream of G protein-coupled receptors (GPCRs) in numerous signaling cascades. The alpha chain contains the guanine nucleotide binding site and alternates between an active, GTP-bound state and an inactive, GDP-bound state. Signaling by an activated GPCR promotes GDP release and GTP binding. The alpha subunit has a low GTPase activity that converts bound GTP to GDP, thereby terminating the signal. Both GDP release and GTP hydrolysis are modulated by numerous regulatory proteins (By similarity). Signaling is mediated via effector proteins, such as adenylate cyclase. Inhibits adenylate cyclase activity, leading to decreased intracellular cAMP levels (By similarity). The inactive GDP-bound form prevents the association of RGS14 with centrosomes and is required for the translocation of RGS14 from the cytoplasm to the plasma membrane. Required for normal cytokinesis during mitosis. Required for cortical dynein-dynactin complex recruitment during metaphase (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG221647