

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)

TTTGTGAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGCATCGCC

ATGGGCTGCACATTGAGCGCTGAGGACAAGGCGGCCGTGGAGCGCAGCAAGATGATCGACCGCAACCTCC
GGGAGGACGGCGAGAAGGCGGCCGCGGAGGTCAAGCTGCTGCTGGGTGCTGGGAATCTGGAAGAG
TACCATTGTGAAGCAGATGAAGATTATCCACGAAGCCGGCTACTCGGAAGAGGAGTGAAGCAGTACAAG
GCAGTGGTCTACAGCAACACTATCCAGTCCATCATTGCCATCATTAGAGCCATGGGGAGGTTGAAAATCG
ACTTCGGAGACTCTGCTCGGGCGGATGATGCTCGCCAACCTTTTCGTGCTTGTGGGGCTGCAGAAGAAGG
CTTTATGACTGCAGAGCTCGCCGGTGTCATAAAGAGACTGTGAAAGACAGTGGTGTGCAAGCCTGCTTC
AACAGATCCCGGGAGTACCAGCTGAACGATTCGGCAGCGTACTATCTGAATGACTTGGACAGAATAGCAC
AGCCAAATTACATCCCAACTCAGCAGGATGTCCTCAGAACCAGAGTGAAGACCACAGGGATTGTGGAAGC
CCACTTTACCTTCAAAGATCTTCATTTTAAATGTTTGACGTGGGAGGTCAGAGGTCAGAGCGGAAGAAG
TGGATCCACTGCTTTGAAGGGTGACCGCCATCATCTTCTGTGTGGCCCTGAGTGACTATGACCTGGTTC
TTGCTGAAGATGAAGAAATGAACCGTATGCACGAGAGCATGAAGCTGTTTCGATAGCATCTGTAACAACAA
GTGGTTTACAGACACGTCCATCATCCTTTTCTCAACAAGAAGGACCTCTTCAAGAAAAATAAAAAAG
AGCCCCCTCACGATATGCTACCCAGAATATGCAGGCTCAAACACATATGAAGAAGCGGCCGCGTATATTC
AGTGTCAGTTTGAAGACCTCAATAAAGGAAGGACACAAAGGAATTTACACCCACTTCACGTGCGCCAC
AGATACGAAGAACGTGCAGTTCGTGTTTCGATGCTGTAAACAGACGTCATCATAAAGAATAACCTAAAGAC
TGTGGTCTCTTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA


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Protein Sequence: >MG221647 representing NM_010305
 Red=Cloning site Green=Tags(s)

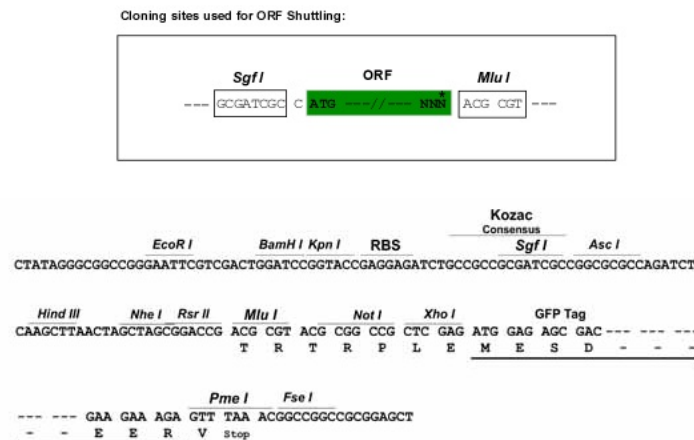
MGCTLSAEDKAAVERSKMIDRNLRDGEKAAREVKLLLLGAGESGKSTIVQMKIIEAGYSEEECKQYK
 AVVYSNTIQSIIAIIRAMGRLKIDFGDSARADDARQLFVLGAAEEGFMATAELAGVIKRLWKDSGVQACF
 NRSREYQLNDSAAYYLNDLDRIAQPNYIPTQDVLRTVKTGTGIVETHFTFKDLHFKMFDVGGQRSEK
 WIHCFEGVTAIIFCVALSDYDLVLADEEMNRMHESMKLFDSICNNKWFDTSSIILFLNKKDLFEKIKK
 SPLTICYPEYAGSNTYEEAAAYIQCFEDLNKRKDTKEIYTHFTCATDTKNVQFVFDVTDVVIKNNLKD
 CGLF

TRTRPLE – GFP Tag – V

Chromatograms: https://cdn.origene.com/chromatograms/ja2360_f03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_010305

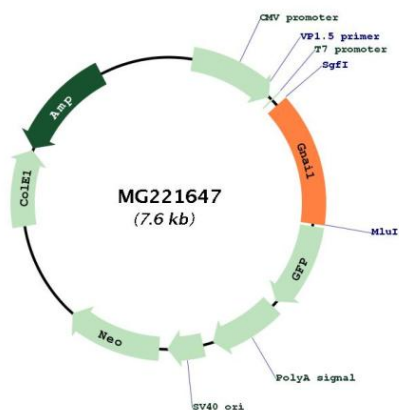
ORF Size: 1062 bp

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 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:	<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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	<u>NM_010305.1, NP_034435.1</u>
RefSeq Size:	3193 bp
RefSeq ORF:	1065 bp
Locus ID:	14677
UniProt ID:	<u>B2RSH2</u>
Cytogenetics:	5 8.16 cM
Gene Summary:	<p>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]</p>

Product images:



Circular map for MG221647