

## Product datasheet for **MG225832**

### Gnas (NM\_201618) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Gnas (NM_201618) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Gnas
Synonyms:	5530400H20Rik; A930027G11Rik; C130027O20Rik; G; Ga; Galphas; Gn; Gnas1; Gnasxl; GPSA; Gs-; Gs-alpha; Gsa; GSP; N; Nes; Nesp; Nesp55; Nespl; Oed; Oed-Sml; Oedsml; P; P1; P2; P3; PHP1A; PHP1B; POH; SCG; SCG6; XL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide  
Sequence:

>MG225832 representing NM\_201618  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAGCCCGTCCCGACGAGACTGGCAGTGGATCAGTGGACCCCAAGAAGACTCCAATCTGACATCCA  
 AAGCCCTGCCAGGCCTTCGAGGAAGTCCGAGTGGGTGGAGACTACAGCCACCTCCGGAGGAAGCCATG  
 CCATTCGAGACACAACAGCCAGCCTGGGAGATTTCTGGCCACCTGGAGCAGCCAGGACCATCTGGGA  
 CCCCATCAGGCCTCAAGCCTTCAACCCAGCGATTTTGGAGCCCGGGACCCCACTGGCGCAGCCAGG  
 CCTGGGAGCCTATACCCCCACCAGAAGAAGCTATGCCATTTGAGTTCAACGAGCCTGCCAGGGAGAC  
 CATAGCCAGCCTCCCTTGAAGTCCAGACCTTGCGCCAGGAGTCCGGAAGCATTGGTCCCGAGGCTC  
 TTCCCGCGGAGCCCGGAACATCAGATTTGAAAACGCTGGCTTCCGAGAAGACTACAGCCCTCCCTCTGA  
 AGAATCTGTGCCATTTCCAGGTGGTGGAGAAGAATTCGGGGCGATAGCCACCCCAAGGACTCCCGGA  
 GTCATCCACAAAATCGGCATTGGCGGCGAGTCCCGACAGTCCGGTCCCGAGTGGCTCTGCCTCGCTC  
 CCGCCGAGAACCGCCTCCCTCTGGGTCCGAGGCGCCATTGACAGACCATTCCGCGAGGCTGTGAGATC  
 TCTCCTAACTTCGATGCGACAGCCCCCGATGGAGATCACCAGACCCCTGCTTGGATTGGCAGAGCC  
 TCCATTGGGGTCGACGACGACCCGCTGTCAATATGGACAGCCCCCAATCGCAAGTGTGGCCCGCCCA  
 TCGAAGTCTCGGGAGCCCGAGATAAGAGCGAGTGGCAGAGAGACCCCAAGTGGAGCAGAGAAGCAGCCGA  
 GATGGAAGGAAGCCCTACCACCGCCACTGCGGTGGAAGGAAAAGTCCCTCTCCGGAGAGAGGGGACGGA  
 TCTTCCACCCAGCCTGAAGCAATGGATGCCAAGCCAGCCCTGCTGCCAAGCCGCTCTACCGGATCTG  
 ATGCTGGAGCTCCTACGGATTCCGCGATGCTCACAGATAGCCAGAGCGATGCCGGAGAAGACGGGACAGC  
 CCCAGGAACGCCCTCAGATCTCCAGTCGGATCCTGAAGAACTCGAAGAAGCCCAAGTGTCCCGCCGAT  
 CCTGACGGAGGGGACGCCCCAGTCGCCCCAGCCACTCCTGCCGAGTCCGAGTCTGAAGGCAGCAGAGATC  
 CAGCCCGCAGCCAGCCTCCGAGGAGTCCCTGCCACCACGGCCGAGTCTGCCTCCGGGGACGCCCTGT  
 CACCCAGGTGGAGCCCGCAGCCGCGCAGTCTCTGCCACCCTGGCGGAGCCTGCCGCCGGGACGCCCT  
 ATCACCCCAAGGAGCCCACTACCCGGGAGTCCCTCTGCTAGAGCCCATCCGGCCGCTGGAGCAGTCC  
 CTGGCGCCCGCAGCAATGTCAGCCTCTGCTAGGGCAGTGGCGCTAGGGCAGCCTATGCAGGTCCACTGGT  
 CTGGGGAGCCAGGTCCTCAGCTACTCCCGCCGCTCGGGCATCCCTTCTGCCCGCAGCAGCTGCC  
 GCCCGGGCAGCCTCTGCTGCCCGCAGTCCGCTGCTGGCCGTCAGCCTCTGCCCGCCCGCAGGGGCC  
 ATCTTAGACCCCGCAGCCCGAGATCCAGTTGCTGACCCGCTACTCCCGGCCCTCTCCGCGCCGAC  
 TGCTGGCCTGACAAGTACGAGCGGGGCCGAAGCTGCTGCAGGTACGAGGCATCGTCTGGCATCTGCGAG  
 ATCGAGTCTCCAGTGTGAGTCGGAAGAAGGGGCCACCGGCTGCTTCCAGTGGCTTCTGCGCGAAACC  
 GCCGCCCTGGCCTGCCCGGAGCCACACGGTCCGGAGCAACCCAGTCCGCAACTTCTTACCCGAGCCTT  
 CGGAAGCTGCTTCGGTCTATCCGAGTGTACCCGATCACGATCCCTCAGCCCGGGGAAAGGCCAAGGATCT  
 ATGGAGGAGAGGCGAAACAGATGCGCAAAGAAGCCATTGAGATGCGAGAGCAGAAGCGCGCAGATAAGA  
 AACGCAGCAAGCTCATCGACAAGCAACTGGAGGAGGAGAAGATGGACTACATGTGTACACACCCGCTGCT  
 GCTTC

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:** >MG225832 representing NM\_201618  
Red=Cloning site Green=Tags(s)

MSPSPTRLAVRSVDPQKTPNLTSKAPARPSRKSEWVETTAHLRRKPCHSRHNSPAWEISGPPWSSQDHLG  
 PHQASKPSTQRFWSPGPPLARAQAWEP IPPHQKLC HLSSTSLPRETIASLPCKSQTLRQEVRKHWSP  
 FPRSPGTSDLKTLASEKTALPLKNLCHFRSVEKNSGAI AHPQDSRESSHK SALAASSRQSRSRVRSASL  
 PPRTRLPSGSEAPLTDHSARLSDLLL TSHATAPRWRSPDCLRLAEPPLGSTTTPLSIWAPQSQVMAR  
 SKSREPQIRASAQRPDLSEKQPRWKEALPPPLRWKEKSPLRREGTDLPPSLKQWMP SQPLL PKPSLPDL  
 MLELLRIPRCSQIARAMPEKTGQPQERLQISSRILKNSKPKQLSAPILTEGQPQSPQPLLPSPSLKAAEI  
 QPPSQPPRQSLPPRPSLPPGQPLSPRWSQPQRQSLPPWRS LPPGQPLSPPRSPLPGQSPLLEPIRPLEQS  
 LAPQQCPLLGLPLGQPMQVHWSGEPGHSQLLPPLGHPFLPAQQLPPGQPLLPQAQSLLAGQPLPPPAGP  
 ILDPPAPRSRLRLRLRGLLRGRLPGLTSTSGAEAAAGTRHRLASARSSPPVMSRKKGPPAASSGFCGET  
 AALACPGATRSGATQSATSSPEPSEASVYPSVPDHDPSAPGRPRILWRRGANRCAKPLRCESRSAQIR  
 NAASSSTSNWRRRRWTTTCVHTACCF

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_201618

**ORF Size:** 2175 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\\_201618.2](#)

**RefSeq Size:** 3775 bp

**RefSeq ORF:** 2178 bp

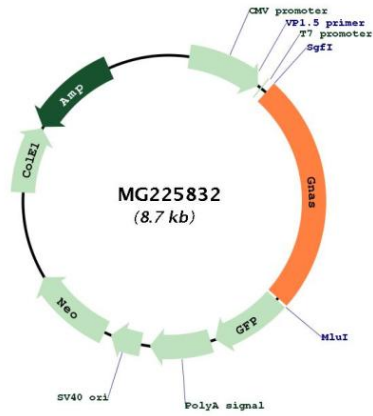
**Locus ID:** 14683

**UniProt ID:** [Q6R0H6](#)

**Cytogenetics:** 2 97.89 cM

**Gene Summary:** This locus has a highly complex imprinted expression pattern. It gives rise to maternally, paternally, and biallelically expressed transcripts that are derived from four alternative promoters and 5' exons. Some transcripts contain a differentially methylated region (DMR) at their 5' exons, which is commonly found in imprinted genes and correlates with transcript expression. This gene has an antisense transcript. One of the transcripts produced from this locus, and the antisense transcript, are both paternally expressed noncoding RNAs, and may regulate imprinting in this region. In addition, one of the transcripts contains a second overlapping ORF, which encodes a structurally unrelated protein - Alex. Alternative splicing of downstream exons is also observed, which results in different forms of the stimulatory G-protein alpha subunit, a key element of the classical signal transduction pathway linking receptor-ligand interactions with the activation of adenylyl cyclase and a variety of cellular responses. Additional transcript variants have been found for this gene, but the full-length nature and/or biological validity of some variants have not been determined. [provided by RefSeq, Jun 2015]

Product images:



Circular map for MG225832