

## Product datasheet for **MR225826**

### Gnas (NM\_010309) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Gnas (NM\_010309) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Gnas  
**Synonyms:** 5530400H20Rik; A930027G11Rik; C130027O20Rik; G; Ga; Galphas; Gn; Gnas1; Gnasxl; GPSA; Gs-; Gs-alpha; Gsa; GSP; N; Nes; Nesp; Nesp55; NespI; Oed; Oed-Sml; Oedsml; P; P1; P2; P3; PHP1A; PHP1B; POH; SCG; SCG6; XL  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >MR225826 representing NM\_010309  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCCGATCGCC

ATGGGCATGTTCAACTGCCTCCACGGCAATAATATGTCAGGACAACACGATATCCCCCTGAAGTCGGGG  
AGCAGCCCGAGCAAGAACCTTTGGAAGCCCCAGGGCAGCTGCCCCCGGTGCTGGGGCTGGCCAGCCGA  
AGAAATGGCGACCGAACCAGGACTCCGAACCGTCTAACAAATGAGCCCGTCCCCGACGAGACTGGCAGTGAG  
ATCAGTGGACCCCGAAGACTCCTAAATCTGACATCCAAAGCCCTGCCAGGCCTTCGAGGAAGTCCGAG  
TGGGTGGAGACTACAGCCACCTCCGGAGGAAGCCATGCCATTCGAGACACAACAGCCAGCCTGGGAGA  
TTTCTGGCCACCTGGAGCAGCCAGGACCATCTGGGACCCATCAGGCCTCAAGCCTCAACCCAGCG  
ATTTTGGAGCCCGGGACCCCACTGGCGGAGCCAGGCCTGGGAGCCTATACCCCCACCAGAAGAAG  
CTATGCCATTTGAGTTCAACGAGCCTGCCAGGGAGACCATAGCCAGCCTCCCTTGAAGTCCCAGACCT  
TGCGCCAGGAGGTCCGGAAGCATTGGTCCCCAGAGCTTCTCCCGGAGCCCGGGAACATCAGATTTGAA  
AACGCTGGCTCCGAGAAGACTACAGCCCTCCCTGAAGAATCTGTGCCATTTAGGTGGTGGAGAAG  
AATTCGGGGGGGATAGCCACCCAGGACTCCCGGAGTCAATCCCAAAATCGGCATTGGCGGGAGTT  
CCCAGAGTCGCGGTCCCGAGTGCCTCTGCTCGCTCCCGCCGAGAACGCGCTCCCTCTGGTCCGA  
GGCGCCATTGACAGACCATTCGCGAGGCTGTGAGATCTCCTCCTAATTCGATGCGACAGCCCCCGA  
TGGAGATCACCAGACCCCTGCTTGAATGGCAGAGCCTCCATTGGGGTCGACGACGACCCGCTGTCAA  
TATGGACAGCCCCCAATCGCAAGTGTGGCCGCCCATCGAAGTCTCGGGAGCCCCAGATAAGAGCGAG  
TGCGCAGAGAGACCCCAAGTTGAGCGAGAAGCAGCCGAGATGGAAGGAAGCCCTACCACCGCCACTGCGG  
TGAAGGAAAAGTCCCTCTCCGGAGAGAGGGGACGGATCTTCCACCCAGCCTGAAGCAATGGATGCCAA  
GCCAGCCCTGCTGCCAAGCCGTCTCTACCGATCTGATGCTGGAGCTCCTACGGATTCGCGATGCTC  
ACAGATAGCCAGAGCGATGCCGGAAGACGGGACAGCCCGAAGCCCTTCAGATCTCCAGTCGGATC  
CTGAAGAACTCGAAGAAGCCCAAGCTGTCCGCGCCATCTGACGGAGGGCAGCCCAAGTCGCCCCAGC



[View online »](#)

CACTCCTGCCGAGTCCGAGTCTGAAGGCAGCAGAGATCCAGCCGCCGAGCCAGCCTCCGAGGCAGTCCCT  
 GCCACCACGGCCGAGTCTGCCTCCGGGGCAGCCCTGTACCCAGGTGGAGCCCGCAGCCGCGGCAGTCT  
 CTGCCACCCTGGCGGAGCCTGCCGCCGGGCAGCCCTATCACCCCAAGGAGCCCACTACCCGGGCAGT  
 CCCCTCTGCTAGAGCCCATCCGGCCGCTGGAGCAGTCCCTGGCGCCCAGCAATGTCAGCCTCTGCTAGG  
 GCAGCTGCCGCTAGGGCAGCCTATGCAGTCCACTGGTCTGGGGAGCCAGGTACTCTCAGTACTCCCG  
 CCGCTCGGGCATCCCTTCTGCCGCCAGCAGCTGCCGCCGGGCAGCCTCTGCTGCCCGGCAGTCGC  
 TGCTGGCCGGTCAGCCTCTGCCGCCAGCAGGGGCCATCTTAGACCCCCAGCCCCGAGATCCAGGTT  
 GCTGACCCGCCTACTCCGCGCCCTCTCCGCGGCCGACTGCCTGGCCTGACAAGTACGAGCGGGCCGAA  
 GCTGCTCAGGTACGAGGCATCGTCTGGCATCTGCGAGATCGAGTCTCCAGTGTAGTTCGGAAGAAGG  
 GGCCACCGGCTGCTTCCAGTGGCTTCTGCGGCGAAACCGCCCTGGCCTGCCCGGAGCCACACGGTC  
 GGGAGCAACCCAGTCCGCAACTTCTCACCCGAGCCTTCGGAAGCTGCTTCGGTCTATCCGAGTGTACCC  
 GATCACGATCCCTCAGCCCGGGAAGGCCAAGGATCCTATGGAGGAGAGGCGCAAACAGATGCGCAAAGA  
 AGCCATTGAGATGCGAGAGCAGAAGCGCGCAGATAAGAAACGCAGCAAGCTCATCGACAAGCAACTGGAG  
 GAGGAGAAGATGACTACATGTGTACACACCGCCTGCTGCTTCTAGTGCTGGAGAGTCTGGCAAAGCA  
 CCATTGTAAGCAGATGAGGATCTGCATGTTAATGGGTTTAAACGGAGAGGGCGGCGAAGAGGACCCGCA  
 GGCTGCAAGGAGCAACAGCGATGGTGAGAAGGCCACTAAAGTGCAGGACATCAAAAAACACCTGAAGGAG  
 GCCATTGAAACATTGTGGCCGCCATGAGCAACCTGGTGCCCTGTGGAGCTGGCCAACCTGAGAACC  
 AGTTGAGAGTGGACTACATTCTGAGCGTGATGAACGTGCCGAACCTTGGACTTCCACCTGAATTCTATGA  
 GCATGCCAAGGCTCTGTGGGAGGATGAGGGAGTGCCTGCTACGAGCGCTCAATGAGTACCAGCTG  
 ATTGACTGTGCCAGTACTTCTTGACAAGATTGATGTGATCAAGCAGGCCGACTACGTGCCAAGTGACC  
 AGGACCTGCTTCGCTGCCGTGCTGACCTCTGGAATCTTTGAGACCAAGTTCAGGTGGACAAAGTCAA  
 CTTCCACATGTTGATGTGGCGGCCAGCGGATGAGCGCCGCAAGTGGATCCAGTGTTCATGATGTG  
 ACTGCCATCATTTCTGTTGGCCAGCAGCAGTACAACATGGTCAATTCGGGAGGACAACCAGACTAAC  
 GCCTGCAGGAGGCTCTGAACCTTTCAAGAGCATCTGGAACAACAGATGGCTGCGCACCATCTCTGTGAT  
 TCTTTCTCAACAAGCAAGACCTGCTTGTGAGAAAGTCTCGCTGGCAAATCGAAGATTGAGGACTAC  
 TTTCCAGAGTTGCTCGCTACACCCTCTGAGGATGCGACTCCCGAGCCGGGAGAGGCCACGCGTGA  
 CCCGGGCCAAGTACTTATTGCGGATGAGTTTCTGAGAATCAGCACTGCTAGTGGAGATGGGCGCCACTA  
 CTGCTACCCTCACTTTACCTGCGCCGTGGACACTGAGAACATCCGCCGTGCTTCAACGACTGCCGTGAC  
 ATCATCCAGCGCATGCATCTCCGCAATACGAGCTGCTC

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGATAAGGTTTAA

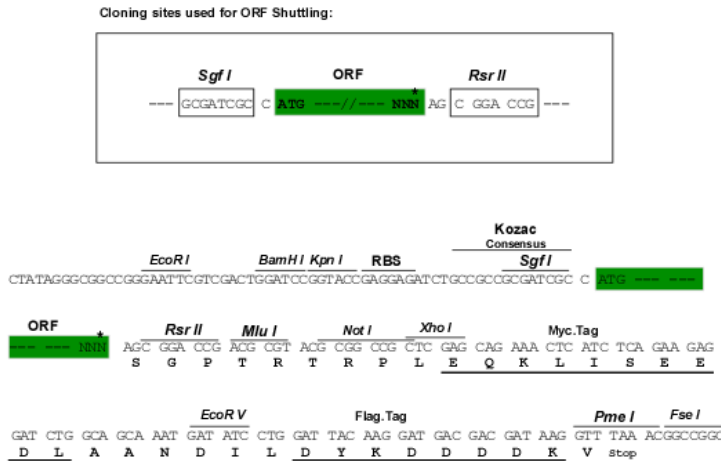
**Protein Sequence:** >MR225826 representing NM\_010309  
 Red=Cloning site Green=Tags(s)

MGMFNCLHGNMMSGQHDIPPEVGEQPEQEPLEAPGAAAPGAGAGPAEEMATEPDSEPSNNEPVPDETGSE  
 ISGPPEDSKSDIQSPCQAFEEVVRVGGDYSPPEEAMPFETQQPSLGDFWPTLEQPGPSGTPSGLQAFNPA  
 ILEPGTPTGASPLGAYTPPPEEAMPFEFNEPAQGDHSQPPLQVPDLAPGGPEALVPRALPAEPGNIRFE  
 NAGFREDYSPPEESVFPVQVGGEEFGDSSPPGLPRVIPQIGIGGEFPTVAVPSALCLAPAEAPPLWVR  
 GAIDRPFREAVRSPPNFACDSSPMEITRPLLEIGRASIGVDDDTAVNMDSPPIASDGPPIEVSGAPDKSE  
 CAERPPVEREAAEMEGSPTTATAVEGKVPSPERGDGSSTQPEAMDAPKAPAAQAVSTGSDAGAPTD SAML  
 TDSQSDAGEDGTAPGTPSDLQSDPEELEEA PAVRADPDGGAAPVAPATPAESESESGRDPAAEPASEAVP  
 ATTAESASGAAPVTQVEPAAAAVSATLAEPAARAAPITPKEPTTRAVPSARAHPAAGAVPGAPAMSASAR  
 AAAARAAYAGPLVWGARSLSATPAARASLPARAAAAARAASAARAVAAGRSASAAPSRAHLRPPSPETQV  
 ADPPTPRPPRPTAWPKYERGRSCCRYEASSGICEIESSDSEEGATGCFQWLLRRNRRLPRSHTV  
 GSNPVRNFFTRAFGSCFGLSECTRSRSLSPGKAKDPMEERRKQMRKEA IEMREQRADKKRSLIDKQLE  
 EEKMDYMCTHRLLLL GAGESGKSTIVKQMRILHVNGFNGEGGEDPQAARSNSDGEKATKVQDIKNNLKE  
 AIETIVAAMSNLVPVELANPENQFRVDYILSVNVPNFDFPPEFYEHAKALWEDEGVRACYERSNEYQL  
 IDCAQYFLDKIDVIKQADYVPSQDQLLRCRVL TSGIFETKFQVDKVNFMFDVGGQORDERRKWIQCFNDV  
 TAIIFVVAASSYNMVIREDNQTNRQLQEALNLFKSIWNNRWLRTISVILFLNKQDLLAEKVLGAKSKIETY  
 FPEFARYTTPEDATPEPGEDPRVTRAKYFIRDEFRLRISTASGDGRHYCYPHFTCAVDTENIRRVFNDCRD  
 IIQRMHLRQYELL

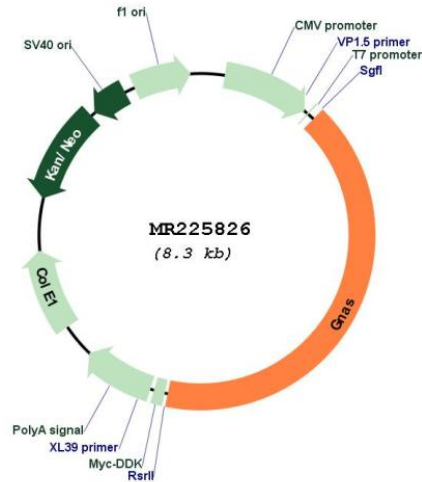
SGP TRTRRLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-RsrII

**Cloning Scheme:**



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_010309

**ORF Size:** 3399 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\\_010309.4](#), [NP\\_034439.2](#)

**RefSeq Size:** 3775 bp

**RefSeq ORF:** 3402 bp

**Locus ID:** 14683

**UniProt ID:** [Q6R0H7](#)

**Cytogenetics:** 2 97.89 cM

**MW:** 122 kDa

**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 reponses. 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]