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# Product datasheet for RN200464

## Gnas (NM_001024823) Rat Untagged Clone

### Product data:

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| **Product Type:** | Expression Plasmids |
| **Product Name:** | Gnas (NM_001024823) Rat Untagged Clone |
| **Tag:** | Tag Free |
| **Symbol:** | Gnas |
| **Synonyms:** | ALEX; G-alpha-8; Gnas1; Gnpas; Nesp55; SCG6 |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |
| **Cell Selection:** | Neomycin |

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**Fully Sequenced ORF:**

>RN200464 representing NM_001024823
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAGCCCATCCCCGACGAGACTGACAGTGAGGTCTGTGGACCCCCTGAAGACTCCAAATCTGACATCCA
GAGCCCCAGTCAGGCCTTCGAGGAAGTCCAAGTGGGCGGAGACTACAGCCCACCTCCAGAGGAAGCCATG
CCATTCGAGATCCAACAGCCCAGCCTGGGAGATTTCTGGCCCACCCTGGAGCAGCCTGGACCATCTGGGA
CCCCATCAGGCATCAAAGCCTTCAACCCAGCGATTTTGGAGCCCGGGACCCCCACTGGTGCACACCCAGG
CCTGGGAGCCTATAGCCCCCCACCAGAAGAAGCTATGCCATTTGAGTTCAATGAGCCTGCCCAGGAAGAC
CGTTGCCAGCCTCCCTTGCAAGTCCCAGACCTTGCGCCAGGGGGTCCGGAAGCATGGGTCTCCAGAGCTC
TTCCCGCGGAGCCCGGGAACCTCGGATTTGAAAACACTGGCTTCCGAGAAGACTACAGCCCTCCACCTGA
AGAATCTGTGCCATTTCAGCTCGATGGAGAAGAATTCGGGGGCGATAGCCCACCCCCAGGACTCCCGCGA
GTCACGCCACAAATCGGCATTGGCGGCGAGTTCCCGACAGTCGCGGTCCCGAGTACGCTCTGCCTCGCTC
CCGCCGCGAACGCGCCTCCCCTCTGGGTCCAGGGCGCCATTGGCAGACCATTCCGCGAGGCTGTCAGATC
TCCTAACTTCGCATACGACATTTCCCCAATGGAGATCACCAGACCCCTGCTTGAGATTGGCAGAGCCTCC
ACTGGGGTCGACGACGACACCGCTGTCAATATGGACAGCCCCCCAATCGCAAGTGATGGCCCGCCCATCG
AAGTCTCGGGAGCCCCAGTTAAGAGCGAGCACGCAAAGAGACCCCCACTTGAGCGACAAGCAGCCGAGAC
AGGAAACAGCCCTATCAGCAGCACCACTGCAGAGGAGGCAAAAGTCCCCTCCCTCGAGCGAGGAGAAGGA
TCCCCCACCCAACCTGAAACAGTGCATATCAAGCCAGCTCCTGTTGCGGAGTCCGGAACGGACTCTTCCA
AAGCCGATCCGGACTCAGCTACACACGCAGTTCTTCAGATCGGTCCTGAGGAAGTCGGAGGAGTCCCAAC
CATGCCCACCGATCTTCCGCCTGCTTCTGAAGATGCGGGCCCAGATGTCCGGGCAGAACCAGACGGAGGG
ACAGCCCCAGCCACCCCTGCCGAGTCCGAAGACAACAGAGAACCAGCCGCCGCCGCCGCCGAGCCAG
CCGCCGAGCCAGCCGCTGAGCCAGCCGCCGAGCCAGCCGCCGAGCCAGCCGCCGAGCCAGCTGCCGAGGC
AGTCCCTGACACCGAAGCCGAGTCTGCCTCCGGGGCAGTCCCCGACACCCAAGAGGAGCCCGCAGCCGCG
GCAGCCTCTGCCACGCCGGCGGAGCCTGCCGCCCGGGCAGCCCCCGTCACCCCTACGGAGCCCGCTACCC
GGGCTGTCCCTTCTGCCAGAGCCCATCCAGCCGCCGGGGCTGTCCCTGGAGCCTCAGCGATGTCAGCCGC
TGCTAGGGCAGCCGCCGCTAGAGCAGCCTATGCAGGTCCTCTGGTCTGGGGAGCCAGGTCACTCTCGGCT
ACTCCAGCCGCTCGGGCATCCCTCCCTGCCCGCGCAGCAGCTGCCGCCCGAGCAGCCTCTGCTGCCCGCG
CAGTCGCTGCCGGCCGGTCAGCCTCTGCCGCCCCAAGCAGGGCCCATCTTAGACCCCCCAGCCCGGAGAT
CCAGGTTGCTGACCCGCCTACTCCGCGGCCTGCTCCGCGGCCGAGTGCCTGGCCTGACAAATACGAACGT
GGCCGAAGCTGCTGCAGGTATGAGGCTGCGTCCGGCATCTGCGAGATCGAGTCCTCCAGCGATGAGTCGG
AAGAAGGGGCCACTGGCTGCTTCCAGTGGCTTCTGCGGCGAAACCGCCGCCCTGGCCAGCCCCGGAGCCA
CACAGTCGGGAGCAACCCGGTCCGCAACTTCTTCGCCCGAGCCTTCGGAAGCTGCTTCGGTCTATCTGAG
TGTACCCGATCACGATCCCTCAGCCCCGGGAAGGCCAAGGATCCTATGGAAGAGAGGCGCAAACAGATGC
GCAAAGAAGCCATGGAGATGCGAGAGCAGAAGCGCGCAGATAAGAAACGCAGCAAGCTCATCGACAAGCA
ACTGGAGGAGGAGAAGATGGACTACATGTGTACACACCGCCTGCTGCTTCTAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

**ACCN:** NM_001024823

**Insert Size:** 2223 bp

**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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| **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.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_001024823.4, NP_001019994.4 |
| **RefSeq Size:** | 3826 bp |
| **RefSeq ORF:** | 2223 bp |
| **Locus ID:** | 24896 |
| **Cytogenetics:** | 3q43 |
| **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, and this DMR is commonly found in imprinted genes and correlates with transcript expression. 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. Multiple transcript variants have been found for this gene. [provided by RefSeq, Apr 2009]<br>Transcript Variant: This variant (1, also known as GNASXL) is paternally expressed. It includes an alternate 5' exon, as compared to variant 3. This variant includes two overlapping open reading frames encoding XLas and Alex, respectively. This RefSeq represents Alex, also known as alexX, which has no similarity to other isoforms encoded by this gene. It interacts with XLas, and their interaction is essential for G-protein signaling in neuroendocrine cells. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments. |