

## Product datasheet for RN216171

### Gnas (NM\_001159656) Rat Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Gnas (NM_001159656) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Gnas
Synonyms:	ALEX; G-alpha-8; Gnas1; Gnpas; Nesp55; SCG6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>RN216171 representing NM_001159656 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGATCGCAGGTCCCGGGCTCATCAGTGGCGCCGAGCTCGCCATAATTACAACGACCTGTGCCCGCCCA  
TAGGCCGCGGGTGTACCGCTCTCCTGGCTCTCCTGCTCCATCGCTCTCCTCCGCGCCCTAGCCTC  
TTCCAACGCCCGCCAGCAGCGGGTGCCAGCGCCGAGCTTCCTTAACGCCACCACCGCTCCGCT  
GCCGCTGCAGCTGCCGCACAGTACTCCCCGAGTCTCTGAATCCGAATCTGATCAGGACGAGGAGG  
CTGAGCCTGAGCTGGCCCGCCCGAGTGCCTAGAGTACGATCAGGACGACTACGAGACCGAGACCGATT  
TGAGACCGAGCCTGAGTCCGATATCCAGTCCGAGACCGAATTCGAGACCGAGCCTGAGACCGAGCCTGAG  
ACCGCCCTACAACCTGAGCCTGAGACCGAACAGAGGACGAGCGCGGCCCGGGGCGCCACCTTCAACC  
AGTCACTCACTCAGCGTCTGCACGCTCTGAAGTTGCAGAGCGCCGACGCCTCCCCGAGACGTGCGCAGCC  
CACCACCTCAGGAGCCTGAGAGCGCAAGCGAGGGGAGGAGCCCCAGCGCGAGCCCTTAGACGAGGATCCT  
CGGGACCCCGAGGAGTCAAGGAGCTCAGGAGGCGAACAGGCAGCCCCGCGCTGCAAGACCAGGAGGC  
CAGCCCCCGTCCGACAGTCCCCGAGTCCCCAGAAAGGGGCCATCCCCATCCGGCGTCACTA  
A

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:	Sgfl-MluI
ACCN:	NM_001159656
Insert Size:	771 bp



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<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
<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>	<u>NM_001159656.1, NP_001153128.1</u>
<b>RefSeq Size:</b>	1654 bp
<b>RefSeq ORF:</b>	771 bp
<b>Locus ID:</b>	24896
<b>UniProt ID:</b>	<u>Q792G6</u>
<b>Cytogenetics:</b>	3q43
<b>Gene Summary:</b>	<p>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]</p> <p>Transcript Variant: This variant (5) is maternally expressed. It lacks several 3' exons and has alternate 5' and 3' exons, as compared to variant 3. Variants 4 and 5 both encode neuroendocrine secretory protein 55 (NESP55), which localizes to large secretory vesicles of endocrine cells and neurons. The coding regions of variants 4 and 5 do not overlap the coding regions used by other transcripts; thus NESP55 has no similarity to isoforms of the G-protein alpha subunit.</p>