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Product datasheet for RN200466

Gnas (NM_021845) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gnas (NM_021845) 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

Fully Sequenced ORF:

>RN200466 representing NM_021845
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGCATGCTCAACTGCCTCCACGGCAATAATATGTCAGGACAACACGATATCCCCCCTGAAGTCGGGG
ACCAGCCCGAGCAAGAACCTTTGGAAGCCCAAGGGGCCGCTGCCCCCGGTGCTGGGGTTGGCCCAGCCGA
AGAAATGGAGACCGAACCGTCTAACAATGAGCCCATCCCCGACGAGACTGACAGTGAGGTCTGTGGACCC
CCTGAAGACTCCAAATCTGACATCCAGAGCCCCAGTCAGGCCTTCGAGGAAGTCCAAGTGGGCGGAGACT
ACAGCCCACCTCCAGAGGAAGCCATGCCATTCGAGATCCAACAGCCCAGCCTGGGAGATTTCTGGCCCAC
CCTGGAGCAGCCTGGACCATCTGGGACCCCATCAGGCATCAAAGCCTTCAACCCAGCGATTTTGGAGCCC
GGGACCCCCACTGGTGCACACCCAGGCCTGGGAGCCTATAGCCCCCCACCAGAAGAAGCTATGCCATTTG
AGTTCAATGAGCCTGCCCAGGAAGACCGTTGCCAGCCTCCCTTGCAAGTCCCAGACCTTGCGCCAGGGGG
TCCGGAAGCATGGGTCTCCAGAGCTCTTCCCGCGGAGCCCGGGAACCTCGGATTTGAAAACACTGGCTTC
CGAGAAGACTACAGCCCTCCACCTGAAGAATCTGTGCCATTTCAGCTCGATGGAGAAGAATTCGGGGGCG
ATAGCCCACCCCCAGGACTCCCGCGAGTCACGCCACAAATCGGCATTGGCGGCGAGTTCCCGACAGTCGC
GGTCCCGAGTACGCTCTGCCTCGCTCCCGCCGCGAACGCGCCTCCCCTCTGGGTCCAGGGCGCCATTGGC
AGACCATTCCGCGAGGCTGTCAGATCTCCTAACTTCGCATACGACATTTCCCCAATGGAGATCACCAGAC
CCCTGCTTGAGATTGGCAGAGCCTCCACTGGGGTCGACGACGACACCGCTGTCAATATGGACAGCCCCCC
AATCGCAAGTGATGGCCCGCCCATCGAAGTCTCGGGAGCCCCAGTTAAGAGCGAGCACGCAAAGAGACCC
CCACTTGAGCGACAAGCAGCCGAGACAGGAAACAGCCCTATCAGCAGCACCACTGCAGAGGAGGCAAAAG
TCCCCTCCCTCGAGCGAGGAGAAGGATCCCCCACCCAACCTGAAACAGTGCATATCAAGCCAGCTCCTGT
TGCGGAGTCCGGAACGGACTCTTCCAAAGCCGATCCGGACTCAGCTACACACGCAGTTCTTCAGATCGGT
CCTGAGGAAGTCGGAGGAGTCCCAACCATGCCCACCGATCTTCCGCCTGCTTCTGAAGATGCGGGCCCAG
ATGTCCGGGCAGAACCAGACGGAGGGACAGCCCCAGCCACCCCTGCCGAGTCCGAAGACAACAGAGAACC
AGCCGCCGCCGCCGCCGCCGAGCCAGCCGCCGAGCCAGCCGCTGAGCCAGCCGCCGAGCCAGCCGCCGAG
CCAGCCGCCGAGCCAGCTGCCGAGGCAGTCCCTGACACCGAAGCCGAGTCTGCCTCCGGGGCAGTCCCCG

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ACACCCAAGAGGAGCCCGCAGCCGCGGCAGCCTCTGCCACGCCGGCGGAGCCTGCCGCCCGGGCAGCCCC
CGTCACCCCTACGGAGCCCGCTACCCGGGCTGTCCCTTCTGCCAGAGCCCATCCAGCCGCCGGGGCTGTC
CCTGGAGCCTCAGCGATGTCAGCCGCTGCTAGGGCAGCCGCCGCTAGAGCAGCCTATGCAGGTCCTCTGG
TCTGGGGAGCCAGGTCACTCTCGGCTACTCCAGCCGCTCGGGCATCCCTCCCTGCCCGCGCAGCAGCTGC
CGCCCGAGCAGCCTCTGCTGCCCGCGCAGTCGCTGCCGGCCGGTCAGCCTCTGCCGCCCCAAGCAGGGCC
CATCTTAGACCCCCCAGCCCGGAGATCCAGGTTGCTGACCCGCCTACTCCGCGGCCTGCTCCGCGGCCGA
GTGCCTGGCCTGACAAATACGAACGTGGCCGAAGCTGCTGCAGGTATGAGGCTGCGTCCGGCATCTGCGA
GATCGAGTCCTCCAGCGATGAGTCGGAAGAAGGGGCCACTGGCTGCTTCCAGTGGCTTCTGCGGCGAAAC
CGCCGCCCTGGCCAGCCCCGGAGCCACACAGTCGGGAGCAACCCGGTCCGCAACTTCTTCGCCCGAGCCT
TCGGAAGCTGCTTCGGTCTATCTGAGTGTACCCGATCACGATCCCTCAGCCCCGGGAAGGCCAAGGATCC
TATGGAAGAGAGGCGCAAACAGATGCGCAAAGAAGCCATGGAGATGCGAGAGCAGAAGCGCGCAGATAAG
AAACGCAGCAAGCTCATCGACAAGCAACTGGAGGAGGAGAAGATGGACTACATGTGTACACACCGCCTGC
TGCTTCTAGGTGCTGGAGAGTCTGGCAAAAGCACCATTGTGAAGCAGATGAGGATCCTACATGTTAATGG
GTTTAACGGAGAGGGCGGCGAAGAGGACCCGCAGGCTGCAAGGAGCAACAGCGATGGTGAGAAGGCCACC
AAAGTGCAGGACATCAAAAACAACCTGAAGGAGGCCATTGAAACCATTGTGGCCGCCATGAGCAACCTGG
TGCCCCCCGTGGAGCTGGCCAACCCTGAGAACCAGTTCAGAGTGGACTACATTCTGAGCGTGATGAACGT
GCCAAACTTTGACTTCCCACCTGAATTCTATGAGCATGCCAAGGCTCTGTGGGAGGATGAGGGAGTTCGT
GCCTGCTACGAGCGCTCCAACGAGTACCAGCTGATCGACTGTGCCCAGTACTTCCTGGACAAGATTGATG
TGATCAAGCAGGCCGACTACGTGCCAAGTGACCAGGACCTGCTTCGCTGCCGCGTCCTGACCTCTGGAAT
CTTTGAGACCAAGTTCCAGGTGGACAAAGTCAACTTCCACATGTTCGATGTGGGCGGCCAGCGCGATGAA
CGCCGCAAGTGGATCCAGTGCTTCAATGATGTGACTGCCATCATCTTCGTGGTGGCCAGCAGCAGCTACA
ACATGGTCATCCGGGAGGACAACCAGACCAACCGTCTGCAGGAGGCTCTGAACCTCTTCAAGAGCATCTG
GAACAACAGATGGCTGCGTACCATCTCTGTGATCCTCTTCCTCAACAAGCAAGATCTGCTTGCTGAGAAG
GTCCTCGCTGGGAAATCGAAGATTGAGGACTACTTTCCAGAGTTCGCTCGCTACACCACTCCTGAGGATG
CGACTCCCGAGCCCGGAGAGGACCCACGCGTGACCCGGGCCAAGTACTTCATCCGGGATGAGTTTCTGAG
AATCAGCACTGCTAGTGGAGATGGACGTCACTACTGCTACCCTCACTTTACCTGCGCCGTGGACACTGAG
AACATCCGCCGTGTCTTCAACGACTGCCGTGACATCATCCAGCGCATGCATCTTCGCCAATACGAGCTGC
TCTAA

ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGA
TTACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-NotI

ACCN: NM_021845

Insert Size: 3435 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).

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_021845.5, NP_068617.6

RefSeq Size: 3826 bp

RefSeq ORF: 3435 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]
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 XLas, also known as alpha s XXL, which is a neuroendocrine-specific G-protein alpha subunit; it has a distinct and much longer N-terminus, as compared to isoform GNASL. 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.