

Product datasheet for SC116002

G protein alpha 13 (GNA13) (NM_006572) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	G protein alpha 13 (GNA13) (NM_006572) Human Untagged Clone
Tag:	Tag Free
Symbol:	G protein alpha 13
Synonyms:	G13
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC116002 sequence for NM_006572 edited (data generated by NextGen Sequencing)

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ATGGCGGACTTCCTGCCGTCGCGGTCCGTGCTGTCCGTGTGCTTCCCGGCTGCCTGCTG
ACGAGTGGCGAGGCCGAGCAGCAACGCAAGTCCAAGGAGATCGACAAATGCCTGTCTCGG
GAAAAGACCTATGTGAAGCGGCTGGTGAAGATCCTGCTGCTGGGCGCGGGCAGAGCGGC
AAGTCCACCTTCTGAAGCAGATGCGGATCATCCACGGGAGGACTTCGACCAGCNCGG
CGCGAGGAGTTCCGCCCCACCATCTACAGCAACGTGATCAAAGGTATGAGGGTGTGTT
GATGCTCGAGAGAAGCTTCATATTCCTGGGGAGACAACCTCAAACCAACAACATGGAGAT
AAGATGATGTCGTTTGATACCCGGGCCCCATGGCAGCCCAAGGAATGGTGAAACAAGG
GTTTTCTTACAATATCTTCTGTATAAGAGCATTATGGGCAGACAGCGGCATACAGAAT
GCCTATGACCGGCGTCGAGAATTTCAACTGGGTGAATCTGTAAAAATTTTCTGGATAAC
TTGGATAAACTTGAGAACCCAGATTATATTCATCACAACAAGATATTCTGCTTGCCAGA
AGACCCACCAAAGGCATCCATGAATACGACTTTGAAATAAAAAATGTTTCCTTTCAAATG
GTTGATGTAGGTGGTCAGAGATCAGAAAGGAAACGTTGGTTTGAATGTTTCGACAGTGTG
ACATCAATACTTTTCTTGTTCCTCAAGTGAATTTGACCAGGTGCTTATGGAAGATCGA
CTGACCAATCGCCTTACAGAGTCTCTGAACATTTTGAACAATCGTCAATAACCGGTT
TTCAGCAATGTCTCCATAATTCTGTTCTTAAACAAGACAGACTTGCTTGAGGAGAAGGTG
CAAATTTGTGAGCATCAAAGACTATTTCTAGAAATTTGAAGGGGATCCCCACTGCTTAAGA
GACGTCCAAAAATTCCTGGTGGAAATGTTTCCGGAACAAACGCCGGGACCAGCAACAAG
CCCTTATACCACCACTTACCAGTCTATCAACACGGAGAACATCCGCCTTGTTCCTCGT
GACGTGAAGGATACTATTCTGCATGACAACCTCAAGCAGCTTATGCTACAGTGA

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Clone variation with respect to NM_006572.4
236 g=>n



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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_006572 unedited
 CGCCCTGCGAGTCAGTTCGCTGGTTCCTCCCTCCCTGGGCGCGCTCGGGCCGCCGCCG
 GCTCCCCGCCCTCGAGCCTCGGTGCCGGAGCCGCCGCCGGAGGAGGAGGTGGAGGG
 AGCCGGAGGGGCCCGCCGAGGCGGCGGCGGCGGCAAGATGGCGGACTTCTGCCGTC
 GCGGTCCGTGCTGTCCTGTGCTTCCCCGGCTGCCTGCTGACGAGTGGCGAGGCCGAGCA
 GCAACGCAAGTCCAAGGAGATCGACAAATGCCTGTCTCGGAAAAAGACCTATGTGAAGCG
 GCTGGTGAAGATCCTGCTGCTGGGCGCGGCGAGAGCGCAAGTCCACCTTCTGAAGCA
 GATGCGGATCATCCACGGGCAGGACTTCGACCAGCCGCGCGGAGGAGTTCGCCCCACC
 ATCTACAGCAACGTGATCAAAGGTATGAGGGTGTGGTTGATGCTCGAGAGAAGCTTCAT
 ATTCCTGGGAGACAACCTCAAACCAACACATGGAGATAAGATGATGTCGTTTGATACC
 CGGGCCCCCATGGCAGCCCAAGGAATGGTGAAACAAAGGTTTTCTTACAATATCTTCC
 TGCTATAAGAGCATTATGGGCAGACAGCGGCATACAGAATGCCTATGACCCGGCGTCGAG
 AATTTCAACTGGGTGAATCTGTAAAATATTTNCTGGATAAAGTTGGGATNAAGTTGGGAG
 AACCAGATTATNTNCATCACAACAAGATATTTCTGCTTGNCAAAAGACCCNCCAAAGGC
 ATNCATGAATACCACTTTTGAATAAAAAATGGTNTTTCAAATGGGTGTGNGNGNGGGGG
 GCAAAAAATANAAGNAACTTTGGTTTTGAATGTTTC

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_006572 unedited
 TTAGCTTGGACCCGCGCCGCAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTGACTTTC
 TCTAAATTTATTAGGAGTTTGTACAAATGTTTGGGCTTTACAGGCATGATTTACAGGA
 TTCAAACAAGAAATTAACACTGATATTTAGCCTTCTCATGACATACACAGAAATAACATT
 GCTACAACTGCAATGGAGAGAATCTTGTTCAAATGGCTTAGTTTGGGTTTTGTCTAA
 ATGTATCATTATATAATGAAAGCACCAATTTGAGGGTTTCTCAAATAGTGATTTGAATTT
 TAGGACATAACAGTATAACATGGTAACCTTATTCTTCATATATAAATAAGGCATAATCGG
 ATGTGTATTAATGCTGAAAATACATTTTATCAAAGCATAAAATACAAGTATTTGGGTACA
 CATTGAAAGTTAGGACTTAACCAATTTCTTCTTACAAAAATGATAAGGACATATGGTAN
 TTTGTTGAATCTAAATCAGCACTTCTAATCATTCTGGTATTAAGGCGATCTTATTTCT
 TCTACTTTAAACCAACCACTGCCACCAACTGAATAAGGATTTCCCTAAACAGCCTCAATT
 TGAGAGACTAACCAGAGGACCTTCTCTATGCAAATTACATGCCAATACACCTTANAAGAA
 AAATAGACAAAAGTGAATGAGTTTTTTCATTCCATATTGCTTTCTTTGGTTGCAGAGCAA
 TCCAGTGCCCTTTCCAGATATAAAATGAAATGGAAGATTTCAATTTAATATTTTGGCA
 GACAGCACCAATGCAGGTTATTAATAATTAAGGGGCAGAGGCATGCTTTGAATACTCA
 GATTTTCAGAAACATTTGCAAACCCCTTTCTTAAAAGNTATGGCTAAATATAGGTGGTTA
 TAGGGACTGAATACATTCCTCAAGCCATGAGCACCTTGGGGGATTCCTCAAATAATGAA
 AGCCTCCGATTAGACA

Restriction Sites:

NotI-NotI

ACCN:

NM_006572

Insert Size:

5090 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

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_006572.3](#), [NP_006563.2](#)

RefSeq Size: 4744 bp

RefSeq ORF: 1134 bp

Locus ID: 10672

UniProt ID: [Q14344](#)

Cytogenetics: 17q24.1

Domains: G-alpha

Protein Families: Druggable Genome

Protein Pathways: Long-term depression, Regulation of actin cytoskeleton, Vascular smooth muscle contraction

Gene Summary:

Guanine nucleotide-binding proteins (G proteins) are involved as modulators or transducers in various transmembrane signaling systems (PubMed:15240885, PubMed:16787920, PubMed:16705036, PubMed:27084452). Activates effector molecule RhoA by binding and activating RhoGEFs (ARHGEF1/p115RhoGEF, ARHGEF11/PDZ-RhoGEF and ARHGEF12/LARG) (PubMed:15240885, PubMed:12515866). GNA13-dependent Rho signaling subsequently regulates transcription factor AP-1 (activating protein-1) (By similarity). Promotes tumor cell invasion and metastasis by activating RhoA/ROCK signaling pathway (PubMed:16787920, PubMed:16705036, PubMed:27084452). Inhibits CDH1-mediated cell adhesion in process independent from Rho activation (PubMed:11976333).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1). 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.