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# Product datasheet for RC208226

## GNAL (NM_182978) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | GNAL (NM_182978) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | GNAL |
| **Synonyms:** | DYT25 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

>RC208226 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGTCTGTGCTACAGTCTGCGGCCGCTGCTTTTCGGGGGCCCAGGGGACGACCCCTGCGCGGCCTCGG
AGCCGCCGGTGGAGGACGCGCAGCCCGCCCCGGCCCCGGCCCTGGCCCCAGTCCGGGCGGCCGCAAGGGA
CACGGCCCGGACCCTGCTCCCTCGGGGCGGCGAAGGGAGCCCGGCATGCGCTCGGCCCAAAGCAGACAAG
CCGAAGGAGAAGCGGCAGCGCACCGAGCAGCTTAGTGCCGAGGAGCGCGAGGCGGCCAAGGAGCGCGAGG
CGGTCAAGGAGGCGAGGAAAGTGAGCCGGGGCATCGACCGCATGCTGCGCGACCAGAAGCGCGACCTGCA
GCAGACGCACCGGCTCCTGCTGCTCGGGGCTGGTGAGTCTGGGAAAAGCACTATCGTCAAACAGATGAGG
ATCCTGCACGTCAATGGGTTTAATCCCGAGGAAAAGAAACAGAAAATTCTGGACATCCGGAAAAATGTTA
AAGATGCTATCGTGACAATTGTTTCAGCAATGAGTACTATAATACCTCCAGTTCCGCTGGCCAACCCTGA
AAACCAATTTCGATCAGACTACATCAAGAGCATAGCCCCTATCACTGACTTTGAATATTCCCAGGAATTC
TTTGACCATGTGAAAAAACTTTGGGACGATGAAGGCGTGAAGGCATGCTTTGAGAGATCCAACGAATACC
AGCTGATTGACTGTGCACAATACTTCCTGGAAAGAATCGACAGCGTCAGCTTGGTTGACTACACACCCAC
AGACCAGGACCTCCTCAGATGCAGAGTTCTGACATCTGGGATTTTTGAGACACGATTCCAAGTGGACAAA
GTAAACTTCCACATGTTTGATGTTGGTGGCCAGAGGGATGAGAGGAGAAAATGGATCCAGTGCTTTAACG
ATGTCACAGCTATCATTTACGTCGCAGCCTGCAGTAGCTACAACATGGTGATTCGAGAAGATAACAACAC
CAACAGGCTGAGAGAGTCCCTGGATCTTTTTGAAAGCATCTGGAACAACAGGTGGTTACGGACCATTTCT
ATCATCTTGTTCTTGAACAAACAAGATATGCTGGCAGAAAAAGTCTTGGCAGGGAAATCAAAAATTGAAG
ACTATTTCCCAGAATATGCAAATTATACTGTTCCTGAAGACGCAACACCAGATGCAGGAGAAGATCCCAA
AGTTACAAGAGCCAAGTTCTTTATCCGGGACCTGTTTTTGAGGATCAGCACGGCCACCGGTGACGGCAAA
CATTACTGCTACCCGCACTTCACCTGCGCCGTGGACACAGAGAACATCCGCAGGGTGTTCAACGACTGCC
GCGACATCATCCAGCGGATGCACCTCAAGCAGTATGAGCTCTTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC208226 protein sequence
Red=Cloning site Green=Tags(s)

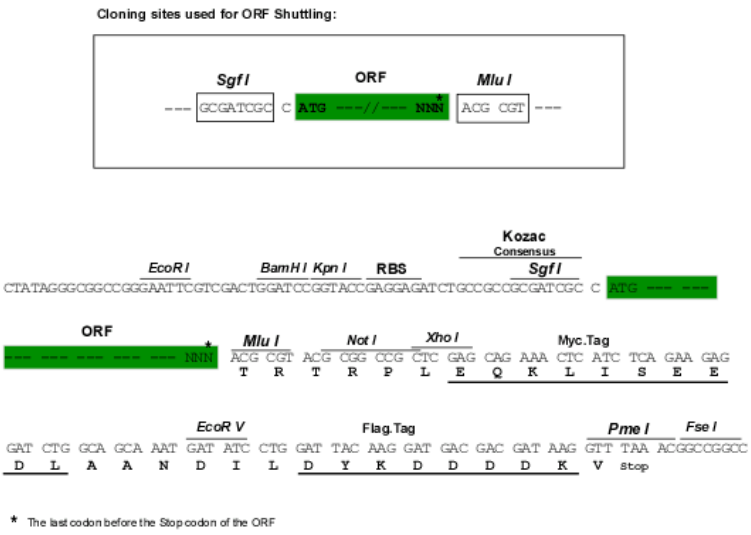
MGLCYSLRPLLFGGPGDDPCAASEPPVEDAQPAPAPALAPVRAAARDTARTLLPRGGEGSPACARPKADK
PKEKRQRTEQLSAEEREAAKEREAVKEARKVSRGIDRMLRDQKRDLQQTHRLLLLGAGESGKSTIVKQMR
ILHVNGFNPEEKKQKILDIRKNVKDAIVTIVSAMSTIIPPVPLANPENQFRSDYIKSIAPITDFEYSQEF
FDHVKKLWDDEGVKACFERSNEYQLIDCAQYFLERIDSVSLVDYTPTDQDLLRCRVLTSGIFETRFQVDK
VNFHMFDVGGQRDERRKWIQCFNDVTAIIYVAACSSYNMVIREDNNTNRLRESLDLFESIWNNRWLRTIS
IILFLNKQDMLAEKVLAGKSKIEDYFPEYANYTVPEDATPDAGEDPKVTRAKFFIRDLFLRISTATGDGK
HYCYPHFTCAVDTENIRRVFNDCRDIIQRMHLKQYELL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mk6862_a01.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**ACCN:** NM_182978

**ORF Size:** 1374 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

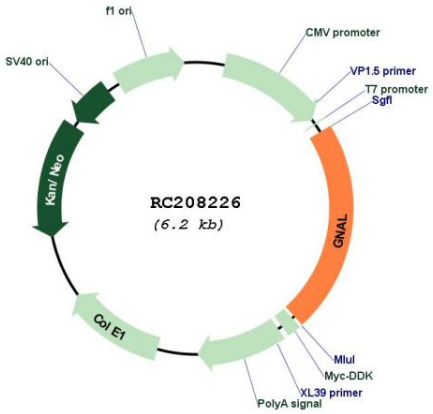
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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).

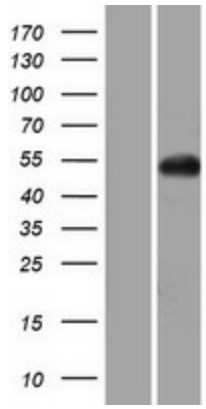
**Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid 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_182978.1, NP_892023.1 |
| **RefSeq Size:** | 6491 bp |
| **RefSeq ORF:** | 1377 bp |
| **Locus ID:** | 2774 |
| **UniProt ID:** | P38405 |
| **Cytogenetics:** | 18p11.21 |
| **Protein Families:** | Druggable Genome |
| **Protein Pathways:** | Calcium signaling pathway, Olfactory transduction |
| **MW:** | 52.5 kDa |
| **Gene Summary:** | This gene encodes a stimulatory G protein alpha subunit which mediates odorant signaling in the olfactory epithelium. This protein couples dopamine type 1 receptors and adenosine A2A receptors and is widely expressed in the central nervous system. Mutations in this gene have been associated with dystonia 25 and this gene is located in a susceptibility region for bipolar disorder and schizophrenia. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Dec 2013] |

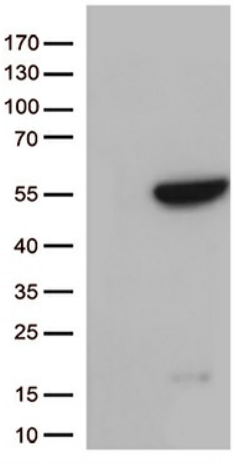
## Product images:




Circular map for RC208226




Western blot validation of overexpression lysate (Cat# [LY405293]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208226 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).




HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY GNAL (Cat# RC208226, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-GNAL (Cat# [TA812969])(1:500).