

Product datasheet for **RG207226**

GAD67 (GAD1) (NM_000817) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GAD67 (GAD1) (NM_000817) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GAD67
Synonyms:	CPSQ1; DEE89; GAD; SCP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG207226 representing NM_000817
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGTCTTCGACCCCATCTTCGTCGCAACCTCCTCGAACCGGGAGCGGACCCCAATACCACTAAC
 TCGCCCCACAACGTACGATACCTGGTGCGGCGTGGCCCATGGATGCACCAGAAAACCTGGGGCTCAAGAT
 CTGCGGCTTCTTGCAAAAGGACCAACAGCCTGGAAGAGAAGAGTCGCCCTTGAGTGCCTTCAAGGAGAGG
 CAATCCTCCAAGAACCTGCTTCTGTGAAAACAGCGACCGGGATGCCCGCTTCGGCGCACAGAGACTG
 ACTTCTCTAATCTGTTTCTAGAGATCTGCTTCCGGCTAAGAACGGTGAGGAGCAAACCTGCAATTCT
 CCTGGAAGTGGTGACATACTCCTCAACTATGTCCGCAAGACATTTGATCGCTCCACCAAGGTGCTGGAC
 TTTTCATCACCCACACCAGTTGCTGGAAGGCATGGAGGGCTTCAACTGGAGCTCTCTGACCACCCCGAGT
 CCCTGGAGCAGATCCTGGTTGACTGCAGAGACACCTTGAAGTATGGGGTTCGCACAGGTCATCCTCGATT
 TTTCAACCAGCTCTCCACTGGATTGGATATTATTGGCCTAGCTGGAGAATGGCTGACATCAACGGCCAAT
 ACCAACATGTTTACATATGAAATTGCACCAGTGTTCCTCATGGAACAAATAACACTTAAAGAAGATGA
 GAGAGATAGTTGGATGGTCAAGTAAAGATGGTGATGGGATATTTCTCCTGGGGCGCCATATCCAACAT
 GTACAGCATCATGGCTGCTCGCTACAAGTACTCCCGGAAGTTAAGACAAAGGGCATGGCGGCTGTGCC
 AAAGTGGTCTTCCACTCAGAACAGAGTCGCTATTCATAAAGAAAGCTGGGGCTGCACTTGGCTTTG
 GAAGTACAATGTGATTTTGATAAAGTGAATGAAAGGGGGAAATAATTCCAGCTGATTTTGAGGCAAA
 AATTCTGAAGCCAAACAGAAGGATATGTTCCCTTTATGTCAATGCAACTGCTGGCACGACTGTTTAT
 GGAGCTTTTGATCCGATACAAGAGATTGCAGATATATGTGAGAAATAACCTTTGGTTGCATGTCGATG
 CTGCCTGGGAGGTGGGCTGCTCATGTCCAGGAAGCACCACCAATAACCTCAACGGCATAGAAGGGCCAA
 CTCAGTCACCTGGAACCCCTCACAAGATGATGGGGTGTGTTGCAGTGTCTGCCATTCTCGTCAAGGAA
 AAGGGTATACTCAAGGATGCAACCAGATGTGTGCAGGATACCTCTTCCAGCCAGACAAGCAGTATGATG
 TCTCTACGACACCGGGACAAGGCAATTCAGTGTGGCCGCCACGTGGATATCTTCAAGTTCTGGCTGAT
 GTGAAAGCAAAGGGCACAGTGGGATTTGAAAACCAGATCAACAAATGCCTGGAAGTGGCTGAATACCTC
 TATGCCAAGATTAACAAAGCAGAGAAGATTTGAGATGGTTTTCAATGGCGAGCCTGAGCACACAAACGCT
 GTTTTTGGTATATCCACAAAGCCTCAGGGGTGTCCAGACAGCCCTCAACGACGGGAAAAGCTACACAA
 GGTGGCTCAAAAATCAAAGCCCTGATGATGGAGTCAGGTACGACCATGGTTGGCTACCAGCCCCAAGGG
 GACAAGGCCAACTTCTCCGGATGGTCATCTCAACCCAGCCGCTACCCAGTCTGACATTGACTTCTCA
 TTGAGGAGATAGAAAGACTGGGCCAGGATCTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG207226 representing NM_000817
 Red=Cloning site Green=Tags(s)

MASSTPSSSATSSNAGADPNTTLRPTTYDTCWGVAHGCTRKLGLKICGFLQRTNSLEEKSRLLVSAFKER
 QSSKNLLSCENSRRDARFRRTETDFSNLFARDLLPAKNGEEQTVQFLLEVVDILLNYVRKTFDRSTKVL
 FHHPHQLLEGMEGFNLELSDHPESLEQILVDCRDTLKYGVRTGHPRFNQLSTGLDIIIGLAGEWLSTAN
 TNMFTYEIAPVFLMEQITLKKMREIVGWSSKDGDFSPGGAINMYSIMAARYKYFPEVKTGMMAVP
 KLVLFTSEQSRYSIKKAGAALGFGTDNVLKICNERGEIIPADFEAKILEAKQKGYVPFYVNATAGTTVY
 GAFDPIQEIADICEKYNLWLVDAAWGGLLMSRKHRLKNGIERANSVTWPNHKMMGVLLQCSAILVKE
 KGILQGCNQMCAGYLFQPDQYDVSYDTGDKAIQCGRHVDIFKFWLMWKAKGTGVGFENQINKCLELAEYL
 YAKIKNREEFEMVFNGEPEHTNVCFWYIPQSLRGVPDSPQRREKLHKVAPKIKALMMESGTTMVGYQPQG
 DKANFFRMVISNPAATQSDIDFLIEEIERLQDL

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_000817

ORF Size: 1782 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.

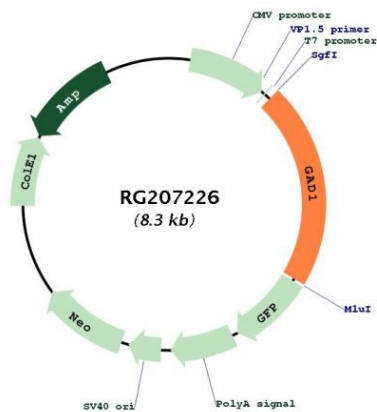
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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_000817.2, NP_000808.2](#)
RefSeq Size: 3488 bp
RefSeq ORF: 1785 bp
Locus ID: 2571
UniProt ID: [Q99259](#)
Cytogenetics: 2q31.1
Domains: pyridoxal_deC
Protein Families: Druggable Genome
Protein Pathways: Alanine, aspartate and glutamate metabolism, beta-Alanine metabolism, Butanoate metabolism, Metabolic pathways, Taurine and hypotaurine metabolism, Type I diabetes mellitus

Gene Summary: This gene encodes one of several forms of glutamic acid decarboxylase, identified as a major autoantigen in insulin-dependent diabetes. The enzyme encoded is responsible for catalyzing the production of gamma-aminobutyric acid from L-glutamic acid. A pathogenic role for this enzyme has been identified in the human pancreas since it has been identified as an autoantigen and an autoreactive T cell target in insulin-dependent diabetes. This gene may also play a role in the stiff man syndrome. Deficiency in this enzyme has been shown to lead to pyridoxine dependency with seizures. Alternative splicing of this gene results in two products, the predominant 67-kD form and a less-frequent 25-kD form. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG207226