

Product datasheet for **RC207226**

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:	Myc-DDK
Symbol:	GAD67
Synonyms:	CPSQ1; DEE89; GAD; SCP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC207226 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGTCTTCGACCCCATCTTCGTCGCAACCTCCTCGAACCGGGAGCGGACCCCAATACCACTAAC
 TCGCCCCACAACGTACGATACCTGGTGCGGCGTGGCCATGGATGCACCAGAAAACCTGGGGCTCAAGAT
 CTGCGGCTTCTTCAAAGGACCAACAGCCTGGAAGAGAAGAGTCGCCCTTGAGTGCCTTCAAGGAGAGG
 CAATCCTCCAAGAACCTGCTTCTGTGAAAACAGCGACCGGGATGCCCGCTTCCGGCGCACAGAGACTG
 ACTTCTCTAATCTGTTTCTAGAGATCTGCTTCCGGCTAAGAACGGTGAAGGAGCAAAACCTGCAATTCT
 CCTGGAAGTGGTGGACATACTCCTCAACTATGTCCGCAAGACATTTGATCGCTCCACCAAGGTGCTGGAC
 TTTTCATCACCCACACCAGTTGCTGGAAGGCATGGAGGGCTCAACTTGGAGCTCTCTGACCACCCCGAGT
 CCCTGGAGCAGATCCTGGTTGACTGCAGAGACACCTTGAAGTATGGGGTTCGCACAGGTCATCCTCGATT
 TTTCAACCAGCTCTCCACTGGATTGGATATTATTGGCCTAGCTGGAGAATGGCTGACATCAACGGCCAAT
 ACCAACATGTTTACATATGAAATTGCACCAGTGTTCCTCATGGAACAAATAACACTTAAAGAAGATGA
 GAGAGATAGTTGGATGGTCAAGTAAAGATGGTGTGGGATATTTCTCCTGGGGCGCCATATCCACAT
 GTACAGCATATGGCTGCTCGTACAAGTACTCCCGGAAGTTAAGACAAAGGGCATGGCGGCTGTGCCT
 AAAGTGGTCTTACCTCAGAACAGAGTCGCTATCCATAAAGAAAGCTGGGGCTGCACTTGGCTTTG
 GAACTGACAATGTGATTTGATAAAGTGAATGAAAGGGGGGAAATAATTCCAGCTGATTTTGAGGCAAA
 AATTCTGAAGCCAAACAGAAGGATATGTTCCCTTTATGTCAATGCAACTGCTGGCAGACTGTTTAT
 GGAGCTTTTATCCGATACAAGAGATTGCAGATATATGTGAGAAATATAACCTTTGGTTGCATGCGATG
 TGCCTGGGAGGTGGGCTGCTCATGTCCAGGAAGCACCACCAAACTCAACGGCATAGAAGGGCCAA
 CTCAGTCACCTGGAACCCCTCACAAGATGATGGGGTGTGTTGCAGTGTCTGCCATTCTCGTCAAGGAA
 AAGGGTATACTCAAGGATGCAACCAGATGTGTGCAAGGATACCTCTTCCAGCCAGACAAGCAGTATGATG
 TCTCTACGACACCGGGGACAAGGCAATTCAGTGTGGCCGCCACGTGGATATCTTCAAGTTCTGGCTGAT
 GTGAAAGCAAAGGGCACAGTGGGATTTGAAAACCAGATCAACAAATGCCTGGAAGTGGCTGAATACCTC
 TATGCCAAGATTAACAAACAGAGAAGATTTGAGATGGTTTTCAATGGCGAGCCTGAGCACACAAACGCT
 GTTTTTGGTATATTCCACAAAGCCTCAGGGGTGTCCAGACAGCCCTCAACGACGGGAAAAGCTACACAA
 GGTGGCTCAAAAATCAAAGCCCTGATGATGGAGTCAGGTACGACCATGGTTGGCTACCAGCCCCAAGGG
 GACAAGGCCAACTTCTCCGGATGGTCATCTCAACCCAGCCGCTACCCAGTCTGACATTGACTTCTCTCA
 TTGAGGAGATAGAAAGACTGGGCCAGGATCTG

ACGCGTACGCGGCGGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC207226 protein sequence
 Red=Cloning site Green=Tags(s)

MASSTPSSSATSSNAGADPNTTTLRPTTYDTCWGVAHGCTRKLGLKICGFLQRTNSLEEKSRVLSAFKER
 QSSKNLLSCENS DRDARFRRETDFSNL FARDLLPAKNGEEQTVQFLLEVVDILLNYVRKTFDRSTKVL D
 FHHPHQLLEGMEGFNLELSDHPESLEQILVDCRDTLKYGVRTGHPRFNQLSTGLDIIGLAGEWL TSTAN
 TNMFTYEIAPVFLMEQITLKKMREIVGWSSKDGDFSPGGAINMYSIMAARYKYFPEVKTKGMAAVP
 KLVLFTSEQSRYSIKKAGAALGFGTDNVLIKNERGEIIPADFEAKILEAKQKGYVPFVYNATAGTTVY
 GAFDPIQEIADICEKYNLWLHVDAAWGGLLMSRKHHRKLNGLIERANSVTWNPHKMMGVLLQCSAILVKE
 KGILQGCNQMCAGYLFQPDKQYDVSYDTGDKAIQCGRHVDIFKFLMWKAKGTGVGFENQINKCLELAEYL
 YAKIKNREEFEMVFNGEPEHTNVCFWYIPQSLRGVDPSPQRREKLHKVAPKIKALMMESGTTMVGYQPQG
 DKANFFRMVISNPAATQSDIDFLIEEIERLQDL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6134_d12.zip

Restriction Sites: SgfI-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.

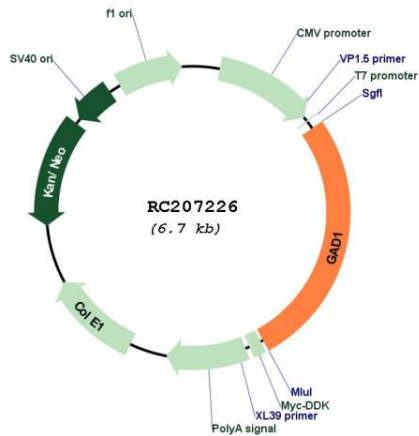
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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.

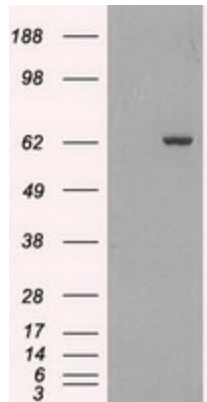
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	<ol style="list-style-type: none">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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_000817.3
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
MW:	66.9 kDa
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]

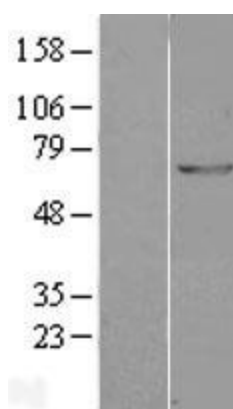
Product images:



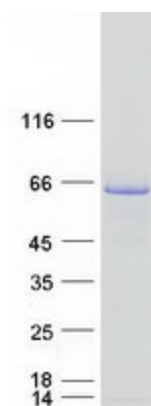
Circular map for RC207226



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY GAD1 (Cat# RC207226, 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-GAD1 (Cat# [TA500329]). Positive lysates [LY400290] (100ug) and [LC400290] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400290]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207226 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GAD1 protein (Cat# [TP307226]). The protein was produced from HEK293T cells transfected with GAD1 cDNA clone (Cat# RC207226) using MegaTran 2.0 (Cat# [TT210002]).