

Product datasheet for RC216201

GAD67 (GAD1) (NM_013445) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: GAD67 (GAD1) (NM_013445) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: GAD1
Synonyms: CPSQ1; DEE89; GAD; SCP
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RC216201 representing NM_013445
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGTCTTCGACCCCATCTTCGTCGCCAACCTCCTCGAACCGGGAGCGGACCCCAATACCACTAACC
TGC GCCCACAACGTACGATACCTGGTGC GGCGTGGCCCATGGATGCACCAGAAAAGTGGGGCTCAAGT
CTGCGGCTTCTTGCAAAGGACCAACAGCCTGGAAGAGAAGAGTCGCCTTGTGAGTGCCTCAAGGAGAGG
CAATCCTCCAAGAACCTGCTTTCCTGTGAAAACAGCGACCGGGATGCCCGCTCCGGCGCACAGAGACTG
ACTTCTCTAATCTGTTTGCTAGAGATCTGCTTCCGGCTAAGAACGGTGAGGAGCAAACCGTGCAATTCCT
CCTGGAAGTGGTGGACATACTCCTCAACTATGTCCGCAAGACATTTGATCGCTCCACCAAGGTGCTGGAC
TTTCATCACCCACACCAGTTGCTGGAAGGCATGGAGGGCTTCAACTTGGAGCTCTCTGACCACCCCGAGT
CCCTGGAGCAGATCCTGGTTGACTGCAGAGACACCTTGAAGTATGGGGTTCGCACAGGTCATCCTCGATT
TTTCAACCAGCTCCTCACTGGATTGGATATTATTGGCCTAGCTGGAGAATGGCTGACATCAACGGCCAAT
ACCAACATGCCATCAGACATGAGGGAGTGTGGTTGCTACGG

ACGCGTACGCGGCCGCTCGAGCAGAAAAGTCACTCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC216201 representing NM_013445
 Red=Cloning site Green=Tags(s)

MASSTPSSSATSSNAGADPNTTTLRPTTYDTCWGVAHGCTRKLGLKICGFLQRTNSLEEKSRVLSAFKER
 QSSKNLLSCNSDRDARFRRTETDFSNLFARDLLPAKNGEEQTVQFLLEVVDILLNYVRKTFDRSTKVLD
 FHHPHQLLEGMEGFNLELSDHPESLEQILVDCRDTLKYGVRTGHPRFFNQLSTGLDIIAGLAGEWLTSTAN
 TNMPSDMRECWLLR

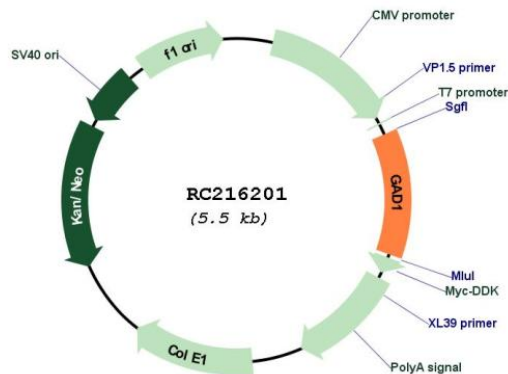
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_013445

ORF Size: 672 bp

OTI Disclaimer:	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.
RefSeq:	NM_013445.3 , NP_038473.2
RefSeq Size:	1272 bp
RefSeq ORF:	675 bp
Locus ID:	2571
UniProt ID:	Q99259
Cytogenetics:	2q31.1
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:	25.1 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]