

Product datasheet for **RG216201**

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: TurboGFP
Symbol: GAD1
Synonyms: CPSQ1; DEE89; GAD; SCP
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG216201 representing NM_013445
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGTCTTCGACCCCATCTTCGTCCGCAACCTCCTCGAACGCGGGAGCGGACCCCAATACCACTAACC
TGCGCCCCACAACGTACGATACCTGGTGCGGCGTGGCCCATGGATGCACCAGAAAAGTGGGGCTCAAGT
CTGCGGCTTCTTGCAAAGGACCAACAGCCTGGAAGAGAAGAGTCGCCTTGTGAGTGCCTTCAAGGAGAGG
CAATCCTCAAGAACCTGCTTCTGTGAAAACAGCGACCGGGATGCCCGCTTCCGGCGCACAGAGACTG
ACTTCTCTAATCTGTTTGTAGAGATCTGCTTCCGGCTAAGAACGGTGAAGGCAAAACCGTGAATTCTT
CCTGGAAGTGGTGGACATACTCCTCAACTATGTCCGCAAGACATTTGATCGCTCCACCAAGTGTGGAC
TTTCATACCCACACAGTTGCTGGAAGGCATGGAGGGCTTCAACTTGGAGCTCTCTGACCACCCCGAGT
CCCTGGAGCAGATCCTGGTTGACTGCAGAGACACCTTGAAGTATGGGGTTCGCACAGGTCATCCTCGATT
TTTCAACCAGCTCCTCACTGGATTGGATATTATTGGCCTAGCTGGAGAATGGCTGACATCAACGGCCAAT
ACCAACATGCCATCAGACATGAGGGAGTGTGGTTGCTACGG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG216201 representing NM_013445
 Red=Cloning site Green=Tags(s)

MASSTPSSSATSSNAGADPNTTTLRPTTYDTWCGVAHGCTRKLGLKICGFLQRTNSLEEKSRVLSAFKER
 QSSKNLLSCENSDRDARFRRTETDFSNLFAFDLLPAKNGEEQTVQFLLEVVDILLNYVRKTFDRSTKVLDD
 FHHPHQLLEGMEGFNLELSDHPESLEQILVDCRDTLKYGVRTGHPRFFNQLSTGLDIIAGLAGEWLTSTAN
 TNMPSDMRECWLLR

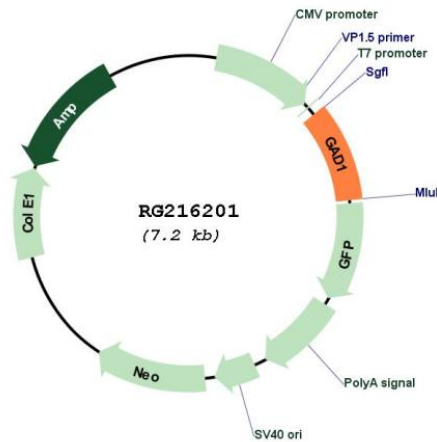
TRTRPLE - GFP Tag - V

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
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]