

Product datasheet for **RG223464**

GAD65 (GAD2) (NM_000818) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GAD65 (GAD2) (NM_000818) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GAD65
Synonyms:	GAD65
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG223464 representing NM_000818
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCATCTCCGGCTCTGGCTTTTGGTCTTTCCGGTTCGGAAGATGGCTCTGGGATTCCGAGAATCCCG
 GCACAGCGCAGCCTGGTGCCAAGTGGCTCAGAAGTTCACGGGCGGCATCGGAAACAAACTGTGCGCCCT
 GCTCTACGGAGACGCGGAGAAGCCGCGGAGAGCGGCGGAGCCAACCCCGCGGCCGCGCCCGGAAG
 GCCGCTGCGCCTGCGACCAGAAGCCCTGCAGCTGCTCCAAAGTGGATGTCAACTACGCGTTTCTCCATG
 CAACAGACCTGCTGCCGGCGTGTGATGGAGAAAGGCCACTTTGGCGTTTCTGCAAGATGTTATGAACAT
 TTTACTTCAGTATGTGGTAAAAGTTTCGATAGATCAACCAAAGTATTGATTTCATTATCCTAATGAG
 CTTCTCCAAGAATAAATTGGGAATTGGCAGCAACCAAAAATTTGGAGGAAATTTGATGCATTGCC
 AAACAACCTAAAATATGCAATTAACAGGGCATCTAGATACTCAATCAACTTTCTACTGGTTTGGAT
 TATGGTTGGATTAGCAGCAGACTGGCTGACATCAACAGCAAATACTAACATGTTACCTATGAAATTGCT
 CCAGTATTTGTGCTTTTGGAAATATGTCACACTAAAGAAAATGAGAGAAATCATTGGCTGGCCAGGGGGCT
 CTGGCGATGGGATATTTCTCCCGTGGCGCCATATCTAACATGTATGCCATGATGATCGCACGCTTTAA
 GATGTTCCAGAAGTCAAGGAGAAAGGAATGGCTGCTCTTCCAGGCTCATTGCCTTACGTCTGAACAT
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 GTGATGAGAGAGGGAAAATGATTCCATCTGATCTTGAAGAAGGATTCTGAAGCCAAACAGAAAGGTT
 TGTTCCCTTCTCGTGAAGTGCACAGCTGGAACACCGTGTACGGAGCATTGACCCCTCTTAGCTGTC
 GCTGACATTTGCAAAAAGTATAAGATCTGGATGCATGTGGATGCAGCTTGGGTGGGGGATTACTGATG
 CCCGAAAACACAAGTGGAAACTGAGTGGCGTGGAGAGGGCCAACCTGTGACGTGGAATCCACAAAGAT
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 TGAAGCGCATGTTGATAAATGTTTGGAGTTGGCAGAGTATTTATAACAACATCAAAAAACCGAGAAGGA
 TATGAGATGGTGTGTTGTTGGAGCCTCAGCACACAAATGTCTGCTTCTGGTACATTCTCCAAGCTTGC
 GTACTCTGGAAGACAATGAAGAGAGAATGAGTCGCCTCTCGAAGGTGGCTCCAGTGATTAAGCCAGAAT
 GATGGAGTATGGAACCACAATGGTCAGCTACCAACCTTGGGAGACAAGGTCAATTTCTCCGCATGGTC
 ATCTCAAACCCAGCGGCAACTACCAAGACATTGACTTCTGATTGAAGAAATAGAACGCCTTGGACAAG
 ATTTA

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

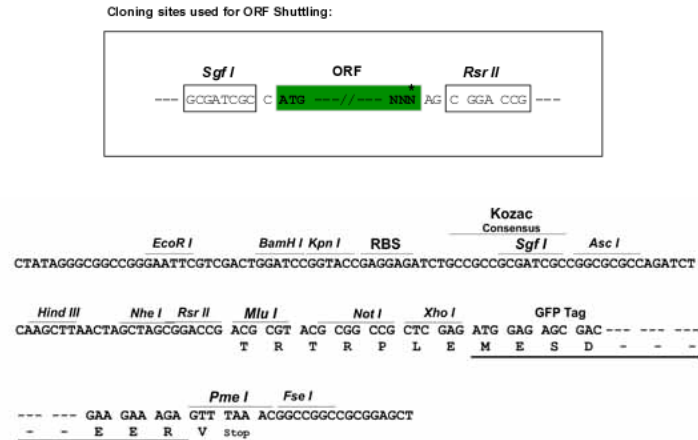
>RG223464 representing NM_000818
 Red=Cloning site Green=Tags(s)

MASPGSGFWSFGSEDGSGDSENPGTARAWCQVAQKFTGGIGNKLCALLYGDAEKPAESGGSQPPRAARK
 AACACDQKPCSCSKVDVNYAFLHATDLLPACDGERPTLAFQDVMNILLQYVVKSFDRSTKVIDFHYPNE
 LLQEYNWELADQPQNLEEILMHCQTTLKYAIKTHPRYFNQLSTGLDMVGLAADWLTSTANTNMFTYEIA
 PVFVLLLEVYTLKKMREIIGWPGSGDGI FSPGGAI SNMYAMMIARFKMFPEVKEKGMALPRLIAFTSEH
 SHFSLKKGAAALGIGTDSVILIKCDERGMIPSDLERRILEAKQKGFVPLVSATAGTTVYGAFDPLLAV
 ADICCKYKIWMHVDAAWGGLLMSRKHKWL SGVERANSVTWNPHKMMGVPLQCSALLVREEGLMQNCNQ
 MHASYLFQQDKHYDL SYDTGDKALQCGRHVDVFKLWLMWRAKGTTFEAEHVDKLELAEYLYNI IKNREG
 YEMVFDGKPKHTNVCFWYIPPSLRTLEDNEERMSRLSKVAPVIKARMEYGTMMVSYQPLGDKVNFIRMV
 ISNPAATHQDIDFLIEEIERLGQDL

SGP**TRRRLE** - GFP Tag - V

Restriction Sites:

Sgfl-RsrII

Cloning Scheme:


ACCN: NM_000818

ORF Size: 1755 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.

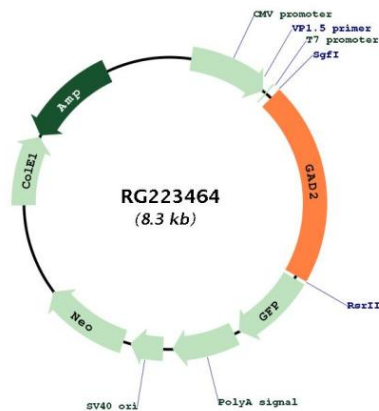
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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_000818.2](#)
RefSeq Size: 2457 bp
RefSeq ORF: 1758 bp
Locus ID: 2572
UniProt ID: [Q05329](#)
Cytogenetics: 10p12.1
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 autoantibody and an autoreactive T cell target in insulin-dependent diabetes. This gene may also play a role in the stiff man syndrome. Alternative splicing results in multiple transcript variants that encode the same protein. [provided by RefSeq, Oct 2008]

Product images:



Circular map for RG223464