

Product datasheet for **RC223464**

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:	Myc-DDK
Symbol:	GAD65
Synonyms:	GAD65
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC223464 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCATCTCCGGCTCTGGCTTTTGGTCTTCGGGTCGGAAGATGGCTCTGGGATTCCGAGAATCCCG
 GCACAGCGGAGCCTGGTGCCAAGTGGCTCAGAAGTTCACGGGCGGCATCGGAAACAACTGTGCGCCCT
 GCTCTACGGAGACCGGAGAAGCCGGCGGAGAGCGGGGAGCCAACCCCGCGGCCCGCCCGGAAG
 GCCGCTGCGCCTGCGACCAGAAGCCCTGCAGCTGCTCCAAAGTGGATGTCAACTACGCGTTTCTCCATG
 CAACAGACCTGCTGCCGGCGTGTGATGGAGAAAGGCCACTTTGGCGTTTCTGCAAGATGTTATGAACAT
 TTTACTTCAGTATGTGGTAAAAGTTTCGATAGATCAACCAAAGTATTGATTTCATTATCCTAATGAG
 CTTCTCCAAGAATAAATTGGGAATTGGCAGCAACCAAAAATTTGGAGGAAATTTGATGCATTGCC
 AAACAACCTAAAATATGCAATTAACAGGGCATCTAGATACTCAATCAACTTTCTACTGGTTTGA
 TATGGTTGGATTAGCAGCAGACTGGCTGACATCAACAGCAAATACTAACATGTTACCTATGAAATTGCT
 CCAGTATTTGTGCTTTTGGAAATATGTCACACTAAAGAAAATGAGAGAAATCATTGGCTGGCCAGGGGGCT
 CTGGCGATGGGATATTTCTCCCGTGGCGCCATATCTAACATGTATGCCATGATGATCGCACGCTTTAA
 GATGTTCCAGAAGTCAAGGAGAAAGGAATGGCTGCTCTTCCAGGCTCATTGCCTTACGTCTGAACAT
 AGTCATTTTTCTCTAAGAAGGGAGCTGCAGCCTTAGGGATTGGAACAGACAGCGTGATTCTGATTAAT
 GTGATGAGAGAGGGAAAATGATTCCATCTGATCTTGAAGAAGGATTCTGAAGCCAAACAGAAAGGTT
 TGTTCCCTTCTCGTGAAGTGCACAGCTGGAACACCGTGTACGGAGCATTGACCCCTCTTAGCTGTC
 GCTGACATTTGCAAAAAGTATAAGATCTGGATGCATGTGGATGCAGCTTGGGTGGGGGATTACTGATG
 CCCGAAAACACAAGTGGAAACTGAGTGGCGTGGAGAGGGCCAACCTGTGACGTGGAATCCACACAAGAT
 GATGGGAGTCCCTTTGCAGTGTCTGCTCTCTGGTTAGAGAAGAGGGATTGATGCAGAATTGCAACCAA
 ATGCATGCCTCCTACCTTTTCAGCAAGATAAACATTATGACCTGTCTATGACACTGGAGACAAGGCCCT
 TACAGTGCAGCACCCACGTTGATGTTTTTAACTATGGCTGATGTGGAGGGCAAAGGGGACTACCGGTT
 TGAAGCGCATGTTGATAAATGTTTGGAGTTGGCAGAGTATTTATAACAACATCAAAAAACCGAGAAGGA
 TATGAGATGGTGTGATGGGAAGCCTCAGCACACAAATGTCTGCTTCTGGTACATTCTCCAAGCTTGC
 GTACTCTGGAAGACAATGAAGAGAGAATGAGTCGCCTCTCGAAGGTGGCTCCAGTGATTAAGCCAGAAT
 GATGGAGTATGGAACCACAATGGTCAGTACCAACCTTGGGAGACAAGGTCAATTTCTCCGCATGGTC
 ATCTCAAACCCAGCGGCAACTACCAAGACATTGACTTCTGATTGAAGAAATAGAACGCCTTGGACAAG
 ATTTA

AG**GACCG**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC223464 protein sequence
 Red=Cloning site Green=Tags(s)

MASPGSGFWSFGSEDGSGDSENPGTARAWCQVAQKFTGGIGNKLCALLYGDAEKPAESGGSQPPRAAARK
 AACACDQKPCSCSKVDVNYAFLHATDLLPACDGERPTLAFLQDVMNILLQYVVKSFDRSTKVIDFHYPNE
 LLQEYNWELADQPQNLEEILMHCQTTLKYAIKTGHPRYFNQLSTGLDMVGLAADWLTSTANTNMFTYEIA
 PVFVLLLEYVTLKKMREIIGWPGSGDGIIFSPGGATSNMYAMMIARFKMFPEVKEKGMAALPRLIAFTSEH
 SHFSLKKGAAALGIGTDSVILIKCDERGMIPSDLERRILEAKQKGFVFPFLVSATAGTTVYGAFDPLLAV
 ADICCKKYKIWMHVDAAWGGLLMSRKHKWKLSGVERANSVTWNPHKMMGVPLQCSALLVREEGLMQNCNQ
 MHASYLFQQDKHYDLSDYTDGKALQCGRHVDVFKLWLMWRAGKTTGFEAHVDKCLELAEYLYNI IKNREG
 YEMVFDGKQPHTNVCFWYIPPSLRITLEDNEERMSRLSKVAPVIKARMEYGTMTMSYQPLGDKVNFVFRM
 YISNPAATHQDIDFLIEEIERLGQDL

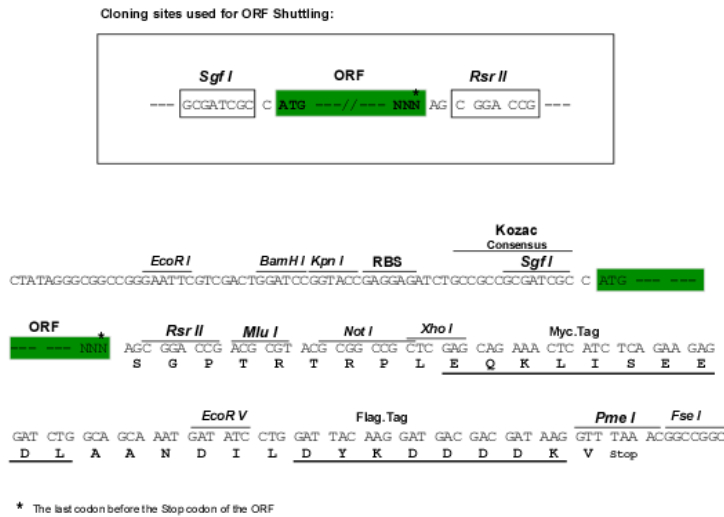
SGP**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6617_g03.zip

Restriction Sites: SgfI-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.

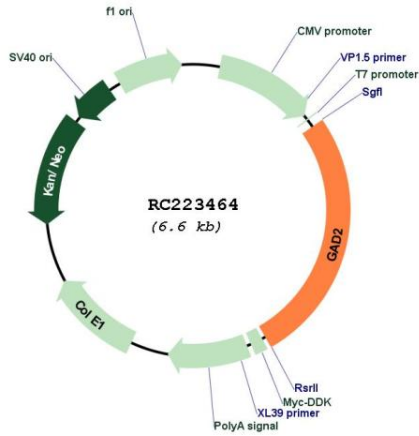
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in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

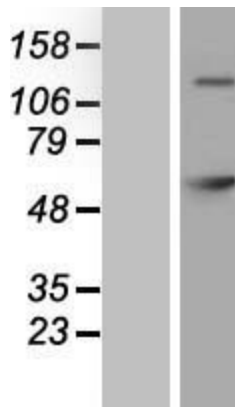
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	<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_000818.2
RefSeq Size:	2824 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
MW:	65.4 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 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]

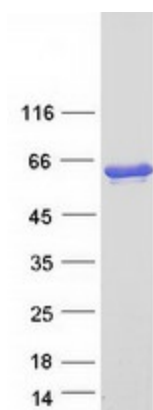
Product images:



Circular map for RC223464



Western blot validation of overexpression lysate (Cat# [LY427399]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC225984] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GAD2 protein (Cat# [TP323464]). The protein was produced from HEK293T cells transfected with GAD2 cDNA clone (Cat# RC223464) using MegaTran 2.0 (Cat# [TT210002]).