

Product datasheet for **RG213341**

GPD2 (NM_001083112) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GPD2 (NM_001083112) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GPD2
Synonyms:	GDH2; GPDM; mGDH; mGPDH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide
Sequence:

>RG213341 representing NM_001083112
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCATTTCAAAAGGCAGTGAAAGGGACGATTCTTGTGGAGGAGGTGCTCTTGCAACTGTTTTAGGAC
TTTCTCAGTTTGCTCATTACAGAAGGAAACAAATGAACCTGGCCTATGTTAAAGCAGCAGACTGCATTTT
AGAACCAGTTAACAGGGAGCCTCCTCCAGAGAAGCTCAGCTACTGACTTTGCAAAAACACATCTGAATTT
GATATCCTTGTATTGGAGGAGGAGCAACAGGAAGTGGCTGTGCGCTAGATGCTGTACCAGAGGACTAA
AAACAGCCCTTGTAGAAAGAGATGATTTCTCATCAGGGACCAGCAGCAGAAGCACTAAATGATCCATGG
TGGTGTGAGATATCTGCAGAAGGCCATCATGAAGTTGGATATTGAGCAGTATAGGATGGTAAAAGAAGCC
CTTCATGAGCGTGCCACCTGCTAGAAATTGCTCCCCATTTATCAGCTCCATTGCCTATAATGCTCCAG
TTTACAAGTGGTGGCAGTTACCTTACTACTGGGTAGGAATCAAGCTGTATGATTTGGTTGCAGGAAGCAA
TTGCCTAAAAGCAGTTATGTCCTCAGCAAATCAAGAGCCCTTGAACATTTCCCAATGCTCCAGAAGGAC
AAACTGGTAGGAGCAATGTCTACTATGACGGACAACATAACGATGCACGGATGAACCTTGCCATTGCTC
TGACTGCTGCCAGGTATGGGGCTGCCACAGCCAATTACATGGAGGTAGTGAGCTTGTCAAGAAGACAGA
CCCCAGACAGGGAAAGTGCATGTGAGCGGCGCACGGTGAAGGATGTCCTCACAGGGCAGGAATTTGAC
GTGAGAGCCAAATGTGTTATCAATGCCACGGGACCTTTACAGGACTCTGTGCGCAAAATGGATGATAAAG
ACGCAGCAGCTATCTGCCAGCCAAGTGTGGTGTCCATATTGTGATGCCTGGTTATTACAGCCCAGAGAG
CATGGGACTTCTTGACCCAGCGACCAGTGTGGGCGAGTTATTTTCTTACCCTGGCAAAAGATGACG
ATCGTGGCACTACTGATACTCCAAGTGTGTTACACACCATCCAATTCCTTCAGAAGAAGATATCAACT
TCATTTTGAATGAAGTGGTAATTACCTGAGTTGTGATGTTGAAGTGAGAAGAGGGGATGTCCTGGCAGC
ATGGAGTGAATCCGTCCTCTTGTACAGACCCCAATCTGCAGATACTCAGTCTATCTCCGAAATCAT
GTTGTTGATATCAGTGAGAGTGGCCTTATTACTATAGCAGGTGGAAAGTGGACAACCTTATCGGTCTATGG
CAGAAGATACCATAAAATGCTGCTGTCAAAACTCATAATTTAAAAGCAGGACCAAGTAGAACAGTTGGGCT
TTTCCTTCAAGGGGGTAAAGATTGGAGCCCCACTCTACATTAGGCTTGTGCAGGATTATGGACTTGAA
AGCGAGGTGGCACAGCATCTTGCCGCCACCTATGGTGATAAGGCCTTTGAGGTGGCCAAATGGCAAGTG
TGACTGGCAAAAGGTGGCCTATTGTTGGAGTACGTCTTGTGTGAGAATTTCCATATATTGAAGCAGAGGT
GAAATATGGGATTAAGGAGTATGCCTGCACTGCTGTGGATATGATTTACGTCGACTCGCCTGGCCTTT
CTAAATGTCCAGGCAGCAGAGGAAGCCCTACCCAGGATTGTTGAACTGATGGGCAGGGAAGTGAATGGG
ATGATTATAAGAAGCAGGAACAACCTTGAACAGCCAGGAAGTTTCTATATTGAAATGGGCTATAAATC
TCGATCAGAACAGTTAACAGATCGCTCTGAAATTAGCCTACTGCCTTCAGACATTGACAGGTATAAGAAG
AGATTTTATAAGTTTGTGATGCAGACCAGAAAGGCTTTATTACCATTGTTGATGTTGAGCGTATTAGAGA
GTATCAATGTCCAAATGGATGAAATACACTCCATGAAATTTAAATGAAGTTGATTTGAAATAAAAATGG
ACAGGTTGAACTCAATGAATTTTGCAGCTGATGAGTGCATTTCAAAAAGGAAGGATCTGGAAGCCGG
CTTGCTATACTAATGAAAAGTGCAGAAGAGAACCTCGACAGAAGAGTTCCAATTCAGTGGACCGTAGTT
GTGGAGGATTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG213341 representing NM_001083112
 Red=Cloning site Green=Tags(s)

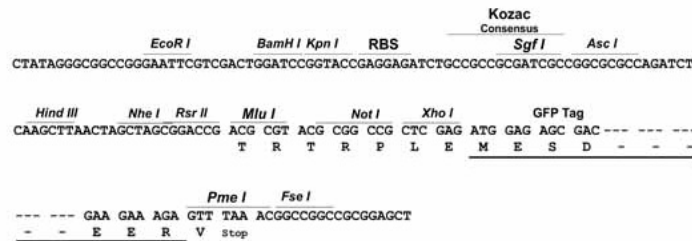
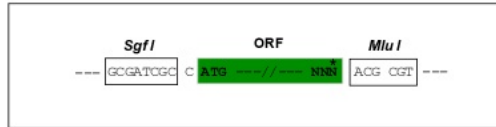
MAFQKAVKGTILVGGALATVLGLSQFAHYRRKQMNLAYVKAADCISEPVNREPPSREAQLLTLQNTSEF
 DILVIGGGATGSGCALDAVTRGLKTALVERDDFSSGTSSRSTKL IHGGVRYLQKAIMKLDIEQYRMVKEA
 LHERANLLEIAPHL SAPLPIMLPVYKWWQLPYWVGIKLYDLVAGSNCLKSSYVLSKSRAL EHF PMLQKD
 KLVGAIVYYDGGHNDARMNLAIALTAARYGAATANYMEVVSLLKKTD PQTGKVHVS GARCKDVL TGQEFD
 VRAKCVINATGPF TDSVRKMDDKDA AAI CQPSAGVHI VMPGYSPESMGLLD PATSDGRVIFFLPWQKMT
 IAGTTDPTDVTHTHPIPSEEDINFILNEVRNYLSCDVEVRRGDVLA AWSGIRPLVTDPKSADTQSI SRNH
 VVDISESLITIAGGKWT TYRSM AEDTINA AVKTHNLKAGPSRTVGLFLQGGKDWSP TLYIRLVQDYGLE
 SEVAQHLAATYGDKA FEVAKMASVTGKRWPIVGVRLVSEFPYIEAEVKYGIKEYACTAVDMI SRRTLAF
 LNVQAAEEALPRIVELMGRELNWDDYKQEQLETARKFLYEMGYKSRSEQLTDRSEISLLPSDIDRYKK
 RFHKFDADQKGFITIVDQVRVLESINVQMDENTLHEILNEVDLNKNGQVELNEFLQLMSAIQKGRVSGSR
 LAILMKTAENLDRRVP I PVD RSCGGL

TRTRPLE - GFP Tag - V

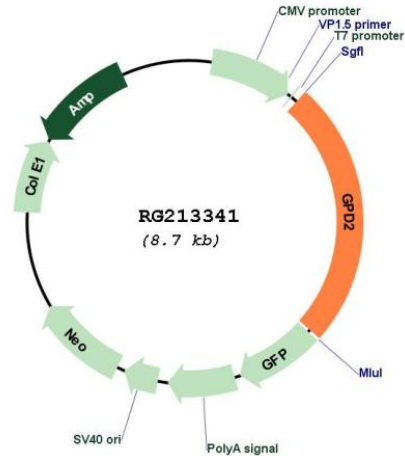
Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_001083112

ORF Size: 2181 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:	<u>NM_001083112.1</u> , <u>NP_001076581.1</u>
RefSeq Size:	6046 bp
RefSeq ORF:	2184 bp
Locus ID:	2820
UniProt ID:	<u>P43304</u>
Cytogenetics:	2q24.1
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Glycerophospholipid metabolism
Gene Summary:	The protein encoded by this gene localizes to the inner mitochondrial membrane and catalyzes the conversion of glycerol-3-phosphate to dihydroxyacetone phosphate, using FAD as a cofactor. Along with GDP1, the encoded protein constitutes the glycerol phosphate shuttle, which reoxidizes NADH formed during glycolysis. Two transcript variants encoding the same protein have been found for this gene.[provided by RefSeq, Jan 2010]