

## Product datasheet for **RG206538**

### Glycerol 3 Phosphate Dehydrogenase (GPD1) (NM\_005276) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Glycerol 3 Phosphate Dehydrogenase (GPD1) (NM_005276) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Glycerol 3 Phosphate Dehydrogenase
Synonyms:	GPD-C; GPDH-C; HTGTI
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG206538 representing NM_005276 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTAGCAAGAAAGTCTGCATTGTAGGCTCCGGAACTGGGGCTCAGCCATCGCCAAGATCGTGGGTG  
GCAATGCAGCCCAGCTGGCACAGTTTGACCCACGGGTGACCATGTGGGTATTTGAGGAAGACATTGGAGG  
CAAAAAGCTGACTGAGATCATCAACACGCAGCATGAGAATGTCAAATACCTGCCAGGGCACAAGTTGCC  
CCAAATGTGGTGGCTGTCCAGATGTGGTCCAGGCTGCAGAGGATGCTGACATCCTGATCTTTGTGGTGC  
CCCATCAGTTCATCGGCAAGATCTGTGACCAGCTCAAGGGCCATCTGAAGGCAAACGCCACTGGCATATC  
TCTTATTAAGGGGTAGACGAGGGCCCAATGGGCTGAAGCTCATCTCGGAAGTGATTGGGGAGCGCCTC  
GGCATCCCCATGAGTGTGCTGATGGGGCCAACATTGCCAGCGAGGTGGCTGATGAGAAGTTCTGTGAGA  
CAACCATTTGGCTGCAAGGACCCGGCCAGGGACAACCTCCTGAAAGAGCTGATGCAGACACAAACTCCG  
TATCACAGTGGTGAAGAGGTGGACACAGTAGAGATCTGTGGAGCCTAAAGAATGTAGTGGCCGTGGGG  
GCTGGCTTCTGTGATGGCTGGGCTTTGGCGACAACCAAGGCGGCAAGTATCCGGCTGGGACTCATGG  
AGATGATAGCCTCGCCAAGCTCTTCTGCAGTGGCCCTGTGTCTCTGCCACCTTCTGGAGAGCTGTGG  
TGTTGCTGACCTGACTACCTGCTATGGAGGGCGGAACCGAAAGTGGCTGAGGCCTTTGCCCGTACA  
GGAAAGTCCATTGAGCAGCTGGAGAAAGAGTTGCTGAATGGCAGAACTGCAGGGGCCGAGACAGCCC  
GGGAGCTATACAGCATCCTCCAGCACAAGGGCCTGGTAGACAAGTTTCCCTTGTTTCATGGCTGTGTACAA  
GGTGTGCTACGAGGGCCAGCCAGTGGGTGAATTCATCCACTGCCTGCAGAATCATCCAGAACATATG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG206538 representing NM\_005276  
 Red=Cloning site Green=Tags(s)

MASKKVCIVGSGNWGSAIAKIVGGNAAQLAQFDPRVTMWVFEEDIGGKKLTEIINTQHENVKYLPGHKLP  
 PNVVAVPDVVQAEDADILIFVVPHQFIGKICDQLKGHLKANATGISLIKGVDEGPNGLKLISEVIGERL  
 GIPMSVLMGANIASEVADEKFCETTIGCKDPAQGQLLKELMQTPNFRITVVQEVDTVEICGALKNVVAVG  
 AGFCDGLGFGDNTKAAVIRLGLMEMIAFAKLFCSGPVSSATFLESCGVADLITTCYGGRNRKVAEAFART  
 GKSlEQLEKELLNGQKLQGPETARELYSILQHKGLVDKFLFMAVYKVCYEGQPVGFEFIHCLQNHPEHM

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_005276

**ORF Size:** 1047 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:**

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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_005276.4](#)

**RefSeq Size:** 2909 bp

**RefSeq ORF:** 1050 bp

**Locus ID:** 2819

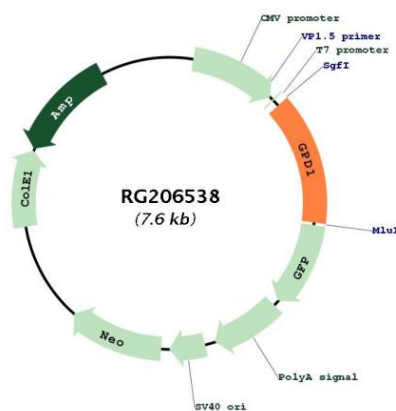
**UniProt ID:** [P21695](#)

**Cytogenetics:** 12q13.12

**Protein Pathways:** Glycerophospholipid metabolism

**Gene Summary:** This gene encodes a member of the NAD-dependent glycerol-3-phosphate dehydrogenase family. The encoded protein plays a critical role in carbohydrate and lipid metabolism by catalyzing the reversible conversion of dihydroxyacetone phosphate (DHAP) and reduced nicotinic adenine dinucleotide (NADH) to glycerol-3-phosphate (G3P) and NAD<sup>+</sup>. The encoded cytosolic protein and mitochondrial glycerol-3-phosphate dehydrogenase also form a glycerol phosphate shuttle that facilitates the transfer of reducing equivalents from the cytosol to mitochondria. Mutations in this gene are a cause of transient infantile hypertriglyceridemia. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, Mar 2012]

### Product images:



Circular map for RG206538

