

## Product datasheet for **RC206538**

### 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:	Myc-DDK
Symbol:	Glycerol 3 Phosphate Dehydrogenase
Synonyms:	GPD-C; GPDH-C; HTGTI
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC206538 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTAGCAAGAAAGTCTGCATTGTAGGCTCCGGAACTGGGGCTCAGCCATCGCCAAGATCGTGGGTG  
GCAATGCAGCCCAGCTGGCACAGTTTGACCCACGGGTGACCATGTGGGTATTTGAGGAAGACATTGGAGG  
CAAAAAGCTGACTGAGATCATCAACACGCAGCATGAGAATGTCAAATACCTGCCAGGGCACAAGTTGCC  
CCAAATGTGGTGGCTGTCCAGATGTGGTCCAGGCTGCAGAGGATGCTGACATCCTGATCTTTGTGGTGC  
CCCATCAGTTCATCGGCAAGATCTGTGACCAGCTCAAGGGCCATCTGAAGCAAACGCCACTGGCATATC  
TCTTATTAAGGGGTAGACGAGGGCCCAATGGGCTGAAGCTCATCTCGGAAGTGATTGGGGAGCGCCTC  
GGCATCCCCATGAGTGTGCTGATGGGGCCAACATTGCCAGCGAGGTGGCTGATGAGAAGTTCTGTGAGA  
CAACCATTGGCTGCAAGGACCCGGCCAGGGACAACCTCCTGAAAGAGCTGATGCAGACACAAACTCCG  
TATCACAGTGGTGAAGAGGTGGACACAGTAGAGATCTGTGGAGCCTAAAGAATGTAGTGGCCGTGGGG  
GCTGGCTTCTGTGATGGCCTGGGCTTTGGCGACAACCAAGGCGGCAAGTATCCGGCTGGGACTCATGG  
AGATGATAGCCTCGCCAAGCTCTTCTGCAGTGGCCCTGTGTCTCTGCCACCTTCTGGAGAGCTGTGG  
TGTTGCTGACCTGATCACTACCTGCTATGGAGGGCGGAACCGAAAGTGGCTGAGGCCTTTGCCCGTACA  
GGAAAGTCCATTGAGCAGCTGGAGAAAGAGTTGCTGAATGGGCAGAACTGCAGGGGCCGAGACAGCCC  
GGGAGCTATACAGCATCCTCCAGCACAAGGGCCTGGTAGACAAGTTTCCCTTGTTTCATGGCTGTGTACAA  
GGTGTGCTACGAGGGCCAGCCAGTGGGTGAATTCATCCACTGCCTGCAGAATCATCCAGAACATATG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**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\\_005276.4](#)

**RefSeq Size:** 3083 bp

**RefSeq ORF:** 1050 bp

**Locus ID:** 2819

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

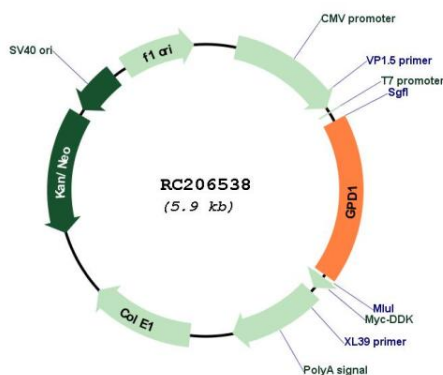
**Cytogenetics:** 12q13.12

**Protein Pathways:** Glycerophospholipid metabolism

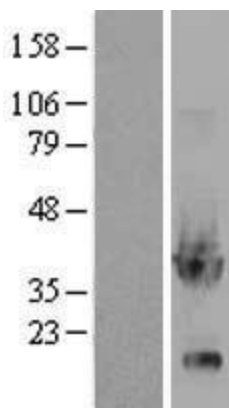
**MW:** 37.6 kDa

**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]

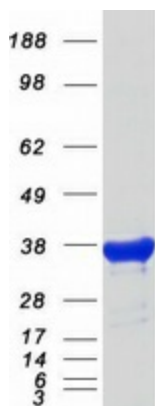
## Product images:



Circular map for RC206538



Western blot validation of overexpression lysate (Cat# [LY417409]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206538 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GPD1 protein (Cat# [TP306538]). The protein was produced from HEK293T cells transfected with GPD1 cDNA clone (Cat# RC206538) using MegaTran 2.0 (Cat# [TT210002]).