

Product datasheet for **RG232487**

Glycerol 3 Phosphate Dehydrogenase (GPD1) (NM_001257199) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glycerol 3 Phosphate Dehydrogenase (GPD1) (NM_001257199) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GPD1
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:	>RG232487 representing NM_001257199 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCTAGCAAGAAAGTCTGCATTGTAGGCTCCGGAACTGGGGCTCAGCCATCGCCAAGATCGTGGGTG
GCAATGCAGCCCAGCTGGCACAGTTTGACCCACGGGTGACCATGTGGGTATTTGAGGAAGACATTGGAGG
CAAAAAGCTGACTGAGATCATCAACACGCAGCATGAGAATGTCAAATACCTGCCAGGGCACAAGTTGCC
CCAAATGTGTTTCATCGCAAGATCTGTGACCAGCTCAAGGGCCATCTGAAGGCAAACGCCACTGGCATAT
CTCTTATTAAGGGGTAGACGAGGGCCCAATGGGCTGAAGCTCATCTCGGAAGTGATTGGGGAGCGCCT
CGGCATCCCCATGAGTGTGCTGATGGGGCCAACATTGCCAGCGAGGTGGCTGATGAGAAGTTCTGTGAG
ACAACCATTGGCTGCAAGGACCCGGCCAGGGACAACCTCTGAAAGAGCTGATGCAGACACCAAACCTCC
GTATCACAGTGGTGCAAGAGGTGGACACAGTAGAGATCTGTGGAGCCTTAAAGAATGTAGTGGCCGTGGG
GGCTGGCTTCTGTGATGGCCTGGGCTTTGGCGACAACACCAAGGCGGCAGTGATCCGGCTGGGACTCATG
GAGATGATAGCCTTCGCCAAGCTCTTCTGCAGTGGCCCTGTGTCTCTGCCACCTTCTGGAGAGCTGTG
GTGTTGCTGACCTGATCACTACCTGCTATGGAGGGCGGAACCGGAAAGTGGCTGAGGCCTTTGCGCGTAC
AGGAAAGTCCATTGAGCAGCTGGAGAAAGATTGCTGAATGGGCAGAACTGCAGGGGCCGAGACAGCC
CGGGAGCTATACAGCATCCTCCAGCACAAGGGCCTGGTAGACAAGTTCCCTTGTTCATGGCTGTGTACA
AGGTGTGCTACGAGGGCCAGCCAGTGGGTGAATTCATCCACTGCCTGCAGAATCATCCAGAACATATG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG232487 representing NM_001257199
Red=Cloning site Green=Tags(s)

MASKKVCIVGSGNWGSAIAKIVGGNAAQLAQFDPRVTMWVFEEDIGGKKLTEIINTQHENVKYLPGHKLP
 PNVFIGIKICDQLKGLKANATGISLIKVDGPNGLKLI SEVIGERLGIPIMSVLMGANIASEVADEKFCE
 TTIGCKDPAQGGQLLKMQTNPFRITVVQEVDTVEICGALKNNVAVGAGFCDFGLGFDNTKAAVIRLGLM
 EMIAFAKLFCSGPVSSATFLESCGVADLITTCYGGRRNKVAEAFARTGKSIEQLEKELLNGQKLQGPETA
 RELYSILQHKGLVDFPLFMAVYKVCYEGQPVGEFIHCLQNHPEHM

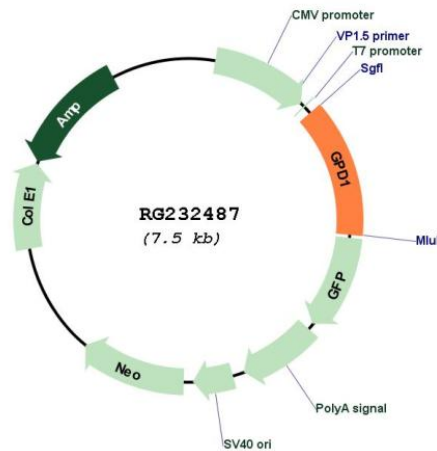
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001257199

ORF Size: 978 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:	<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_001257199.2
RefSeq Size:	3014 bp
RefSeq ORF:	981 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 nicotine adenine dinucleotide (NADH) to glycerol-3-phosphate (G3P) and NAD ⁺ . 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]