

Product datasheet for **SC126032**

Glycerol 3 Phosphate Dehydrogenase (GPD1) (NM_005276) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Glycerol 3 Phosphate Dehydrogenase (GPD1) (NM_005276) Human Untagged Clone
Tag:	Tag Free
Symbol:	Glycerol 3 Phosphate Dehydrogenase
Synonyms:	GPD-C; GPDH-C; HTGTI
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

>OriGene sequence for NM_005276 edited
 GCACTGAGCCGGCTCAGGCAGAGACGCGCACCATGGCTAGCAAGAAAGTCTGCATTGTA
 GGCTCCGGGAAGTGGGGCTCAGCCATCGCCAAGATCGTGGGTGGCAATGCAGCCCAGCTG
 GCACAGTTTGACCCACGGGTGACCATGTGGTATTTGAGGAAGACATTGGAGGCAAAAAG
 CTGACTGAGATCATCAACACGCAGCATGAGAATGTCAAATACCTGCCAGGGCACAAGTTG
 CCCCCAAATGTGGTGGCTGTCCCAGATGTGGTCCAGGCTGCAGAGGATGCTGACATCCTG
 ATCTTTTGGTGGCCCCATCAGTTTCATCGGCAAGATCTGTGACCAGCTCAAGGGCCATCTG
 AAGGCAAACGCCACTGGCATATCTTTATTAAGGGGTAGACGAGGGCCCAATGGGCTG
 AAGCTCATCTCGGAAGTATTGGGGAGCGCCTCGGCATCCCCATGAGTGTGCTGATGGGG
 GCCAACATTGCCAGCGAGGTGGCTGATGAGAAGTTCTGTGAGACAACCATTGGCTGCAAG
 GACCCGGCCAGGGACAACCTCTGAAAGAGCTGATGCAGACACCAAACTTCCGTATCACA
 GTGGTGAAGAGGTGGACACAGTAGAGATCTGTGGAGCCTTAAAGAAATGAGTGGCCGTG
 GGGGCTGGCTTCTGTGATGGCTGGGCTTTGGCGACAACACCAAGCGGCAGTATCCGG
 CTGGGACTCATGGAGATGATAGCCTTCGCCAAGCTCTTCTGAGTGGCCCTGTGCTCTCT
 GCCACCTTCTGGAGAGTGTGGTGTGCTGACCTGATCACTACCTGCTATGGAGGGCGG
 AACCGAAAGTGGCTGAGGCCTTTGCGCGTACAGGAAAGTCCATTGAGCAGCTGGAGAAA
 GAGTTGCTGAATGGGCAGAACTGCAGGGGCCGAGACAGCCCGGAGCTATACAGCATC
 CTCCAGACAAGGGCCTGGTAGACAAGTTTCCCTTGTTTCATGGCTGTGTACAAGGTGTGC
 TACGAGGGCCAGCCAGTGGGTGAATTCACCTGCCTGCAGAATCATCCAGAACATATG
 TGAGTGGGGCCAGGGCCAGGCCAGGCCCTTTTTACCCAGCGGAGACCAGCAGAAGC
 CTGGGGTACCTAGTACCAGGATCTCCAGGACTCCAGGGAGCAGAGTCTTCTCATCTTT
 TCACTGGAGGACAGGAGGCTATGGGGCCAGCTACGCACCTGGAGATCCTGAACTGTCAA
 GCCACTGGCAGCCTCATGCCACCACATTTGCCAGAAATGCAGTTGCCCTGTCCCTTCCA
 GATGTGGGGCTTTCTCCATATCCTCTGGGAGGGGTGGAATCAAGCCCCAGTGTGCTGCTGC
 TTGGTGGCGGGGTGATGTATGTGGAGAAGGGTTGGGGGAGAGGCCGGTAGGGCAGGGGC
 TGCTAGTGGCTGTCTCACATACACCAGTAATCCTGTTAAAGGGCTGAAGAAGTATCTTAG
 CCACAGGAGCGATGAGGCAAGGATTGTCAGGGAGGGGTCTGGGCTTCTGAGCTGATGCAG
 GCCCAAGGACCCCTTTGCTGACCTCTGCCAGGACCCACACAGCTTCGATGGATCTCAGT
 GTTTGTTAAACAAAATACAAAGATCTCAAACAACCCCTTTTAGCTTCTCCTAGCAACATC
 TGTGCTCTCAGAAACCTCTGGTTCTCCCCCTCCCCCTCCCCAGGCTGCCCTGGCACCC
 AAATTGCTGCCATGCTGGCATCTGTAGCTCGGTGGCTTGACATTCTCCCAGGGACTTCC
 CGGTTCTAGTTCTTTGCCAGCTCTCCCACTCTGTGCGACCTTCCAAGCCTTCCCTC
 ACCCTCCCCGCCAGCACCTCTTTGGGGAGCAGGAACTAATCTGCTGACAGAGCTACAC
 CTTTCATAACAGGCTCAGATCACTCAGCTCCCTGTGACCTTTGTATTACCCAGGCTTCC
 TTCTCAGTAGCTTAGCTGGGGAGGTGTGAGCTGGGCCCTCCTGTGCTATCTCCCCAG
 AGGACATCCCTGACTCCACCCCTTTCTTCTCCAAACTCTGCACCTTCTCTCAGCTGC
 TCCAGACCGGCCAGGGTAACCAGCTAACCATGCCTGGCATCTGGAAGCCAGCAGGCCAGA
 GGGTGGCCCAAAGGCTGATGAACGGTAGGGAAGGGTGAAGCAGATTCCATGTTGGTGGGC
 ACCAATATTCCAAGGGCAGCTCTTTGCTGAATGAGGGCCTTCTCGTGAGGTACTGACA
 ACACCAGCAACTCGAGAGCTGGGAAACTCAAGGAGGAGGAAGAAAATCAAACACCCTTA
 CTCCCTGGGGTAGGAAAAGAACAGGAGGGAGGAGGAGGAGTGTGCTCTGCACTTGCCTT
 GCTCCAGCATGGGGTGGCAGCAGAGGAATGTCACAGGTCAGCAGCCTAGGCCCTCAGCTA
 TAAATAGTCCGGAGGGCCGAGAGGCTCCCGCCGTCCAGCAGGGCTGTCAGTTCCTGT
 GTGGCAGCACCTGGCACACTGGCTCTGGCCAGCATTATGCTAAAACCCTGTACTCTCCA
 ATGAACCAGGGAGGGGCTCCTCTCTGCGCCTATCCCTTGAGAATTCTGTCTTACCAGT
 GAAGGGTGGGGCTGCCAGATCAGGCAGCAGGAGTGAAGGGCACAGTACCCAGGCCTT
 GCTGAGCCAGGTCTGGGTACTGAGTGTCCAGAGCTGCCTCCCCAGGAGGTTAAGGTGGG
 GGCAAAGGGGAAGCTTCAAGCACTTTGCCTACTTTTGTACTCCCCAGTGCAGTGTGAC
 TCAGGCCTTCCATCAGGCCTATTTGTCTACCAATAAAGCGTGTTTTTTCCAGAAAAAA
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

5' Read Nucleotide Sequence:	>OriGene 5' read for NM_005276 unedited GTTCAGGGTTATTATTTGTCAATACGACTCACTATAGGCGCCGCGTAAATCAGATCTG GTACCGGCTCCGTAATCCCGGGATGCACTGAGCCGGCTCAGGCAGAGACGCGGCACCAT GGCTAGCAAGAAAGTCTGATTGTAGGCTCCGGAACTGGGGCTCAGCCATCGCCAAGAT CGTGGGTGGCAATGCAGCCCAGCTGGCACAGTTTGACCCACGGGTGACCATGTGGGTATT TGAGGAAGACATTGGAGGCAAAAAGCTGACTGAGATCATCAACACGCAGCATGAGAATGT CAAATACCTGCCAGGGCACAAGTTGCCCCAAATGTGGTGGCTGTCCAGATGTGGTCCA GGCTGCAGAGGATGCTGACATCCTGATCTTTGTGGTGCCCATCAGTTCATCGGCAAGAT CTGTGACCAGCTCAAGGGCCATCTGAAGGCAAACGCCACTGGCATATCTCTTATTAAGGG GGTAGACGAGGGCCCAATGGGCTGAAGCTCATCTCGAAAGTGATTGGGGAGCGCCTCGG CATCCCCATGAGTGTGCTGATGGGGCCAAATTGCCAGCGAGGTGGCTGATGAGAAGTT CTGTGAGACAACCATTGGCTGCAAGGACCCGGCCAGGGACAACCTCTGAAAGAGCTGAT GCAGACACCAAACCTCCGTATCACAGTGGTGAAGAGGTGGACACAGTAGAGATCTGTGG AGCCTTAAAGATGTAGTGGCCGTGGGGGCTGGCTTCTGGGATGGCCCGGGCTTTGGGGAC AACACCCAGGCGGCAGGTGATCCGGCTGGGACTCAGGGAGATGAATACCTTCGCCAAGC TCTTTCTGCAGGGGCCCGTGTCTCTGGCACCTCTTGAAAGG
Restriction Sites:	Please inquire
ACCN:	NM_005276
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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_005276.2 , NP_005267.2
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⁺. 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]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).