

## Product datasheet for **TR312682**

### Glycerol 3 Phosphate Dehydrogenase (GPD1) Human shRNA Plasmid Kit (Locus ID 2819)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	Glycerol 3 Phosphate Dehydrogenase (GPD1) Human shRNA Plasmid Kit (Locus ID 2819)
Locus ID:	2819
Synonyms:	GPD-C; GPDH-C; HTGTI
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	GPD1 - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 2819). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	<a href="#">NM_001257199</a> , <a href="#">NM_005276</a> , <a href="#">NM_005276.1</a> , <a href="#">NM_005276.2</a> , <a href="#">NM_005276.3</a> , <a href="#">NM_001257199.1</a> , <a href="#">BC032234</a> , <a href="#">BC032234.1</a> , <a href="#">BC017429</a> , <a href="#">NM_001257199.2</a> , <a href="#">NM_005276.4</a>
UniProt ID:	<a href="#">P21695</a>
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]
shRNA Design:	These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact <a href="mailto:techsupport@origene.com">techsupport@origene.com</a> . If you need a special design or shRNA sequence, please utilize our <a href="#">custom shRNA service</a> .



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**Performance  
Guaranteed:**

OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.

For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at [techsupport@origene.com](mailto:techsupport@origene.com). Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).