

## Product datasheet for **TR304380**

### Glucokinase (GCK) Human shRNA Plasmid Kit (Locus ID 2645)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	Glucokinase (GCK) Human shRNA Plasmid Kit (Locus ID 2645)
Locus ID:	2645
Synonyms:	FGQTL3; GK; GLK; HHF3; HK4; HKIV; HXKP; LGLK; MODY2; PNDM1
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	GCK - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 2645). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	<a href="#">BC001890</a> , <a href="#">NM_000162</a> , <a href="#">NM_033507</a> , <a href="#">NM_033508</a> , <a href="#">NM_001354800</a> , <a href="#">NM_001354801</a> , <a href="#">NM_001354802</a> , <a href="#">NM_001354803</a> , <a href="#">NM_000162.1</a> , <a href="#">NM_000162.2</a> , <a href="#">NM_000162.3</a> , <a href="#">NM_033508.1</a> , <a href="#">NM_033507.1</a> , <a href="#">BC001890.1</a> , <a href="#">NM_000162.5</a> , <a href="#">NM_033507.3</a> , <a href="#">NM_033508.3</a>
UniProt ID:	<a href="#">P35557</a>
Summary:	This gene encodes a member of the hexokinase family of proteins. Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. In contrast to other forms of hexokinase, this enzyme is not inhibited by its product glucose-6-phosphate but remains active while glucose is abundant. The use of multiple promoters and alternative splicing of this gene result in distinct protein isoforms that exhibit tissue-specific expression in the pancreas and liver. In the pancreas, this enzyme plays a role in glucose-stimulated insulin secretion, while in the liver, this enzyme is important in glucose uptake and conversion to glycogen. Mutations in this gene that alter enzyme activity have been associated with multiple types of diabetes and hyperinsulinemic hypoglycemia. [provided by RefSeq, Aug 2017]
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> .



[View online »](#)

**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).