

Product datasheet for **TL514103**

Pdk4 Mouse shRNA Plasmid (Locus ID 27273)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Pdk4 Mouse shRNA Plasmid (Locus ID 27273)
Locus ID:	27273
Synonyms:	AV005916
Vector:	pGFP-C-shLenti (TR30023)
E. coli Selection:	Chloramphenicol (34 ug/ml)
Mammalian Cell Selection:	Puromycin
Format:	Lentiviral plasmids
Components:	Pdk4 - Mouse, 4 unique 29mer shRNA constructs in lentiviral GFP vector(Gene ID = 27273). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pGFP-C-shLenti Vector, TR30021, included for free.
RefSeq:	BC026134 , NM_013743 , NM_013743.1 , NM_013743.2
UniProt ID:	O70571
Summary:	Kinase that plays a key role in regulation of glucose and fatty acid metabolism and homeostasis via phosphorylation of the pyruvate dehydrogenase subunits PDHA1 and PDHA2. This inhibits pyruvate dehydrogenase activity, and thereby regulates metabolite flux through the tricarboxylic acid cycle, down-regulates aerobic respiration and inhibits the formation of acetyl-coenzyme A from pyruvate. Inhibition of pyruvate dehydrogenase decreases glucose utilization and increases fat metabolism in response to prolonged fasting and starvation. Plays an important role in maintaining normal blood glucose levels under starvation, and is involved in the insulin signaling cascade. Via its regulation of pyruvate dehydrogenase activity, plays an important role in maintaining normal blood pH and in preventing the accumulation of ketone bodies under starvation. In the fed state, mediates cellular responses to glucose levels and to a high-fat diet. Regulates both fatty acid oxidation and de novo fatty acid biosynthesis. Plays a role in the generation of reactive oxygen species. Protects detached epithelial cells against anoikis. Plays a role in cell proliferation via its role in regulating carbohydrate and fatty acid metabolism.[UniProtKB/Swiss-Prot Function]



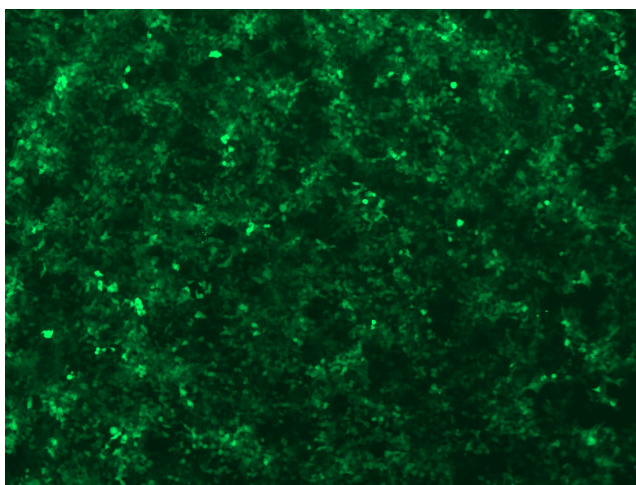
[View online »](#)

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 techsupport@origene.com. If you need a special design or shRNA sequence, please utilize our [custom shRNA service](#).

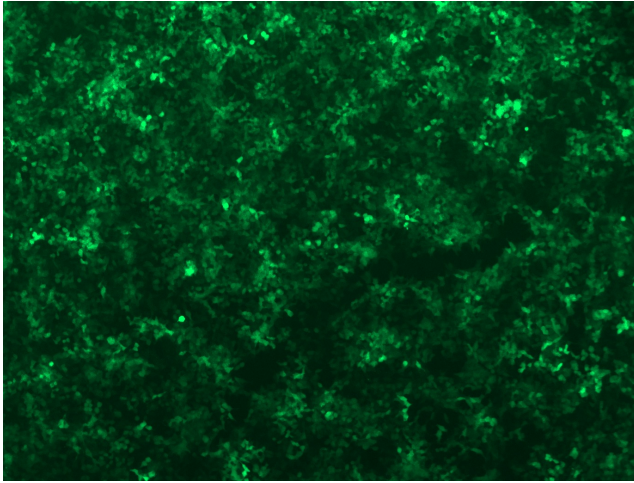
Performance Guaranteed: OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency 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. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).

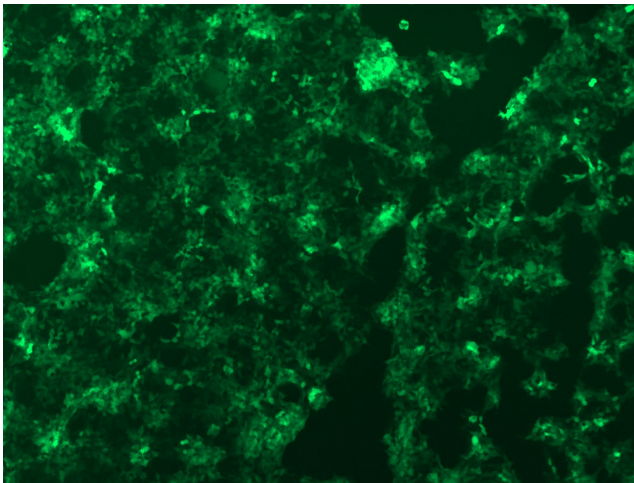
Product images:



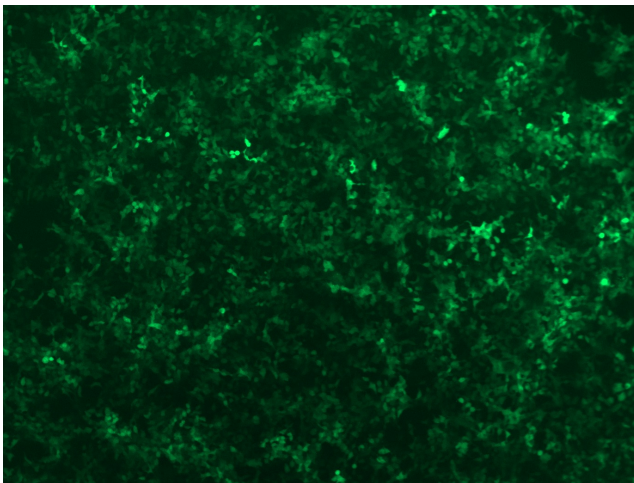
GFP signal was observed under microscope at 48 hours after transduction of TL514103A virus into HEK293 cells. TL514103A virus was prepared using lenti-shRNA TL514103A and [TR30037] packaging kit.



GFP signal was observed under microscope at 48 hours after transduction of TL514103B virus into HEK293 cells. TL514103B virus was prepared using lenti-shRNA TL514103B and [TR30037] packaging kit.



GFP signal was observed under microscope at 48 hours after transduction of [TL514103C] virus into HEK293 cells. [TL514103C] virus was prepared using lenti-shRNA [TL514103C] and [TR30037] packaging kit.



GFP signal was observed under microscope at 48 hours after transduction of [TL514103D] virus into HEK293 cells. [TL514103D] virus was prepared using lenti-shRNA [TL514103D] and [TR30037] packaging kit.