

Product datasheet for **TR308806**

Thymidine Kinase 2 (TK2) Human shRNA Plasmid Kit (Locus ID 7084)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Thymidine Kinase 2 (TK2) Human shRNA Plasmid Kit (Locus ID 7084)
Locus ID:	7084
Synonyms:	MTDPS2; MTTK; PEOB3; SCA31
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	TK2 - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 7084). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	NM_001172643 , NM_001172644 , NM_001172645 , NM_001271934 , NM_001271935 , NM_001272050 , NM_004614 , NR_073520 , NR_073521 , NM_004614.1 , NM_004614.2 , NM_004614.4 , NM_001172643.1 , NM_001172644.1 , NM_001172645.1 , NM_001271935.1 , NM_001272050.1 , NM_001271934.1 , BC029263 , BC040667 , BC113928 , BC134344 , BC142970 , NM_001172644.2 , NM_001271934.2 , NM_004614.5 , NM_001272050.2
UniProt ID:	O00142
Summary:	This gene encodes a deoxyribonucleoside kinase that specifically phosphorylates thymidine, deoxycytidine, and deoxyuridine. The encoded enzyme localizes to the mitochondria and is required for mitochondrial DNA synthesis. Mutations in this gene are associated with a myopathic form of mitochondrial DNA depletion syndrome. Alternate splicing results in multiple transcript variants encoding distinct isoforms, some of which lack transit peptide, so are not localized to mitochondria. [provided by RefSeq, Dec 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 techsupport@origene.com . If you need a special design or shRNA sequence, please utilize our custom shRNA service .



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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. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).