

## Product datasheet for **TL311017**

### Melanopsin (OPN4) Human shRNA Plasmid Kit (Locus ID 94233)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	Melanopsin (OPN4) Human shRNA Plasmid Kit (Locus ID 94233)
Locus ID:	94233
Synonyms:	MOP
Vector:	pGFP-C-shLenti (TR30023)
E. coli Selection:	Chloramphenicol (34 ug/ml)
Mammalian Cell Selection:	Puromycin
Format:	Lentiviral plasmids
Components:	OPN4 - Human, 4 unique 29mer shRNA constructs in lentiviral GFP vector(Gene ID = 94233). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pGFP-C-shLenti Vector, TR30021, included for free.
RefSeq:	<a href="#">NM_001030015</a> , <a href="#">NM_033282</a> , <a href="#">NM_001030015.1</a> , <a href="#">NM_001030015.2</a> , <a href="#">NM_033282.1</a> , <a href="#">NM_033282.2</a> , <a href="#">NM_033282.3</a> , <a href="#">BC113558</a> , <a href="#">BC029291</a> , <a href="#">BC143688</a> , <a href="#">BM672338</a> , <a href="#">NM_033282.4</a>
UniProt ID:	<a href="#">Q9UHM6</a>
Summary:	Opsins are members of the guanine nucleotide-binding protein (G protein)-coupled receptor superfamily. This gene encodes a photoreceptive opsin protein that is expressed within the ganglion and amacrine cell layers of the retina. In mouse, retinal ganglion cell axons expressing this gene projected to the suprachiasmatic nucleus and other brain nuclei involved in circadian photoentrainment. In mouse, this protein is coupled to a transient receptor potential (TRP) ion channel through a G protein signaling pathway and produces a physiologic light response via membrane depolarization and increased intracellular calcium. The protein functions as a sensory photopigment and may also have photoisomerase activity. Experiments with knockout mice indicate that this gene attenuates, but does not abolish, photoentrainment. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]
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).