

## Product datasheet for **TR309769**

### RP1 Human shRNA Plasmid Kit (Locus ID 6101)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	RP1 Human shRNA Plasmid Kit (Locus ID 6101)
Locus ID:	6101
Synonyms:	DCDC4A; ORP1
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	RP1 - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 6101). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	<a href="#">NM_006269</a> , <a href="#">NM_006269.1</a> , <a href="#">BC156507</a> , <a href="#">BC172506</a> , <a href="#">NM_006269.2</a>
UniProt ID:	<a href="#">P56715</a>
Summary:	This gene encodes a member of the doublecortin family. The protein encoded by this gene contains two doublecortin domains, which bind microtubules and regulate microtubule polymerization. The encoded protein is a photoreceptor microtubule-associated protein and is required for correct stacking of outer segment disc. This protein and the RP1L1 protein, another retinal-specific protein, play essential and synergistic roles in affecting photosensitivity and outer segment morphogenesis of rod photoreceptors. Because of its response to in vivo retinal oxygen levels, this protein was initially named ORP1 (oxygen-regulated protein-1). This protein was subsequently designated RP1 (retinitis pigmentosa 1) when it was found that mutations in this gene cause autosomal dominant retinitis pigmentosa. Mutations in this gene also cause autosomal recessive retinitis pigmentosa. Transcript variants resulted from an alternative promoter and alternative splicings have been found, which overlap the current reference sequence and has several exons upstream and downstream of the current reference sequence. However, the biological validity and full-length nature of some variants cannot be determined at this time.[provided by RefSeq, Sep 2010]



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- 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](mailto: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](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).