

## Product datasheet for **TR704270**

### Oaz3 Rat shRNA Plasmid (Locus ID 689588)

#### Product data:

**Product Type:** shRNA Plasmids

**Product Name:** Oaz3 Rat shRNA Plasmid (Locus ID 689588)

**Locus ID:** 689588

**Synonyms:** Az3; Oaz-t; ODC-Az 3

**Vector:** pRS (TR20003)

**E. coli Selection:** Ampicillin

**Mammalian Cell Selection:** Puromycin

**Format:** Retroviral plasmids

**Components:** Oaz3 - Rat , 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 689588). 5µg purified plasmid DNA per construct  
29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.

**RefSeq:** [NM\\_001101018](#), [NM\\_001101018.1](#)

**Summary:** The protein encoded by this gene belongs to the ornithine decarboxylase antizyme family, which plays a role in cell growth and proliferation by regulating intracellular polyamine levels. Expression of antizymes requires +1 ribosomal frameshifting, which is enhanced by high levels of polyamines. Antizymes in turn bind to and inhibit ornithine decarboxylase (ODC), the key enzyme in polyamine biosynthesis; thus, completing the auto-regulatory circuit. This gene encodes antizyme 3, the third member of the antizyme family. Like antizymes 1 and 2, antizyme 3 inhibits ODC activity and polyamine uptake; however, it does not stimulate ODC degradation. Also, while antizymes 1 and 2 have broad tissue distribution, expression of antizyme 3 is restricted to haploid germ cells in testis, suggesting a distinct role for this antizyme in spermiogenesis. Antizyme 3 gene knockout studies showed that homozygous mutant male mice were infertile, and indicated the likely role of this antizyme in the formation of a rigid connection between the sperm head and tail during spermatogenesis. This transcript initiates translation from a non-AUG (CUG) codon that is highly conserved among the antizyme 3 orthologs. [provided by RefSeq, Dec 2014]

**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](#).



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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).