



# OAZIN siRNA (m): sc-150158

## BACKGROUND

Ornithine decarboxylase (ODC) performs the first step in polyamine biosynthesis, namely the conversion of ornithine to putrescine and CO<sub>2</sub>. Via its enzymatic activity, ODC plays an important role in diverse biological processes, including cell growth, differentiation, transformation and apoptosis. OAZIN, also known as OAZI (ornithine decarboxylase antizyme inhibitor), AZIN1 (antizyme inhibitor 1) or ODC1L, is a 448 amino acid protein that is expressed in liver tissue and belongs to the ODC antizyme inhibitor sub-family of Orn/Lys/Arg decarboxylase class-II proteins. Existing as a monomer, OAZIN functions to inhibit antizyme-mediated ODC degradation by binding to and inhibiting ODC activity, thereby playing a role in the regulation of polyamine biosynthesis.

## REFERENCES

1. Koguchi, K., et al. 1997. Cloning and sequencing of a human cDNA encoding ornithine decarboxylase antizyme inhibitor. *Biochim. Biophys. Acta* 1353: 209-216.
2. Murakami, Y., et al. 2000. Degradation of ornithine decarboxylase by the 26S proteasome. *Biochem. Biophys. Res. Commun.* 267: 1-6.
3. Tsuji, T., et al. 2007. Ornithine decarboxylase antizyme upregulates DNA-dependent protein kinase and enhances the nonhomologous end-joining repair of DNA double-strand breaks in human oral cancer cells. *Biochemistry* 46: 8920-8932.
4. Fiori, L.M. and Turecki, G. 2008. Implication of the polyamine system in mental disorders. *J. Psychiatry Neurosci.* 33: 102-110.
5. López-Contreras, A.J., et al. 2008. Antizyme inhibitor 2 (AZIN2/ODCp) stimulates polyamine uptake in mammalian cells. *J. Biol. Chem.* 283: 20761-20769.
6. Mangold, U., et al. 2008. Antizyme, a mediator of ubiquitin-independent proteasomal degradation and its inhibitor localize to centrosomes and modulate centriole amplification. *Oncogene* 27: 604-613.
7. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 607909. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: Azin1 (mouse) mapping to 15 B3.1.

## PRODUCT

OAZIN siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see OAZIN shRNA Plasmid (m): sc-150158-SH and OAZIN shRNA (m) Lentiviral Particles: sc-150158-V as alternate gene silencing products.

For independent verification of OAZIN (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-150158A, sc-150158B and sc-150158C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μl of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μl of RNase-free water makes a 10 μM solution in a 10 μM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

OAZIN siRNA (m) is recommended for the inhibition of OAZIN expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μM in 66 μl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor OAZIN gene expression knockdown using RT-PCR Primer: OAZIN (m)-PR: sc-150158-PR (20 μl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.