



# AZ3 siRNA (m): sc-141421

## BACKGROUND

The antizyme family is a group of small proteins that play a role in cell growth and division by regulating the biosynthesis of polyamines such as putrescine, spermidine and spermine. AZ3, also known as OAZ3 (ornithine decarboxylase antizyme 3), is a 187 amino acid protein that belongs to the ODC antizyme family. AZ3 probably plays a key role in spermatogenesis by regulating the intracellular concentration of polyamines in haploid germ cells because it binds to, and destabilizes, ornithine decarboxylase. However, mutations in the AZ3 gene are not a common cause of male infertility and the normal AZ3 protein does not accelerate ornithine decarboxylase degeneration. AZ3 expression has a sharp onset in early spermatids, peaks in later stages and is gone in spermatozoa. The AZ3 gene maps to human chromosome 1q21.3.

## REFERENCES

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4. Ota, T., et al. 2004. Complete sequencing and characterization of 21, 243 full-length human cDNAs. *Nat. Genet.* 36: 40-45.
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7. Fitzgerald, C., et al. 2006. Mammalian transcription in support of hybrid mRNA and protein synthesis in testis and lung. *J. Biol. Chem.* 281: 38172-38180.
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## CHROMOSOMAL LOCATION

Genetic locus: Oaz3 (mouse) mapping to 3 F2.1.

## PRODUCT

AZ3 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see AZ3 shRNA Plasmid (m): sc-141421-SH and AZ3 shRNA (m) Lentiviral Particles: sc-141421-V as alternate gene silencing products.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

AZ3 siRNA (m) is recommended for the inhibition of AZ3 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  $\mu$ M in 66  $\mu$ l. 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 AZ3 gene expression knockdown using RT-PCR Primer: AZ3 (m)-PR: sc-141421-PR (20  $\mu$ l). 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.