SANTA CRUZ BIOTECHNOLOGY, INC.

DAZL siRNA (m): sc-63281

BACKGROUND

DAZL (deleted in azoospermia-like), an RNA-binding protein that influences spermatogenesis, is an autosomal homologue of the Y chromosome DAZ (deleted in azoospermia). The gene encoding human DAZL maps to chromosome locus 3p24. DAZL, like other members of the DAZ family including BOULE and DAZ, contain a highly conserved RNA-binding motif and a unique DAZ repeat. All DAZ family members are exclusively expressed in germ cells in both male and female gonads. A Thr 54-to-Ala mutation within the RNA-recognition domain of DAZL proteins contributes to spermatogenic failure. Infertility in DAZL knockout mice occurs because their germ cells are unable to complete the first meiotic prophase in the first wave of spermatogenesis.

REFERENCES

1. Teng, Y., et al. 2002. Association of a single-nucleotide polymorphism of the deleted-in-azoospermia-like gene with susceptibility to spermatogenic failure. J. Clin. Endocr. Metab. 87: 5258-5264.
2. Lifschitz-Mercer, B., et al. 2002. Localization of a specific germ cell marker, DAZL1, in testicular germ cell neoplasias. Virchows Arch. 4: 387-391.
3. Becherini, L., et al. 2004. DAZL polymorphisms and susceptibility to spermatogenic failure: an example of remarkable ethnic differences. Int. J. Androl. 27: 375-381.
4. Kuo, P.L., et al. 2004. Expression profiles of the DAZ gene family in human testis with and without spermatogenic failure. Fertil. Steril. 81: 1034-1040.
5. Maratou, K., et al. 2004. Expression profiling of the developing testis in wild-type and DAZL knockout mice. Mol. Reprod. Dev. 67: 26-54.
6. Reynolds, N., et al. 2005. Role of the DAZ genes in male fertility. Reprod. Biomed. Online 10: 72-80.
7. Fox, M., et al. 2005. Identification and characterization of RNA sequences to which human Pumilio 2 (PUM2) and deleted in azoospermia-like (DAZL) bind. Genomics 85: 92-105.

CHROMOSOMAL LOCATION

Genetic locus: Dazl (mouse) mapping to 17 C.

PRODUCT

DAZL 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 DAZL shRNA Plasmid (m): sc-63281-SH and DAZL shRNA (m) Lentiviral Particles: sc-63281-V as alternate gene silencing products.

For independent verification of DAZL (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-63281A, sc-63281B and sc-63281C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support 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 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

DAZL siRNA (m) is recommended for the inhibition of DAZL 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.

GENE EXPRESSION MONITORING

DAZL (E-6): sc-390929 is recommended as a control antibody for monitoring of DAZL gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor DAZL gene expression knockdown using RT-PCR Primer: DAZL (m)-PR: sc-63281-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.