SANTA CRUZ BIOTECHNOLOGY, INC.

DZIP1 siRNA (h): sc-105317

BACKGROUND

DZIP1 (DAZ interacting protein 1) is also known as DZIP or DZIP2 and is a 867 amino acid protein which is expressed as three isoforms, designated DZIPb, DZIPt1 and DZIPt2. DZIP1 is localized to testis, oocytes, ovary and fetal brain, as well as in embryonic stem cells and germ cells. In testis, DZIP1 is localized to the nucleus and also shows some cytoplasmic distribution in spermatogonia. DZIP1 belongs to the C_2H_2-type zinc finger protein family, and, characteristic of the C_2H_2-type zinc-finger protein family, DZIP1 contains one C_2H_2-type zinc finger region through which it is thought to interact with DAZ, an interaction that promotes spermiogenesis. DZIP1 expression is not found in those afflicted with Sertoli cell-only syndrome (characterized by the absence of germ cells in the testis), suggesting that the lack of DZIP1 may be involved in the pathogenesis of Sertoli cell-only syndrome-induced male sterility.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608671. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Sekimizu, K., et al. 2004. The zebrafish iguana locus encodes DZIP1, a novel zinc-finger protein required for proper regulation of hedgehog signaling. Development 131: 2521-2532.
3. Wolff, C., et al. 2004. Iguana encodes a novel zinc-finger protein with coiled-coil domains essential for hedgehog signal transduction in the zebrafish embryo. Genes Dev. 18: 1565-1576.
4. Moore, F.L., et al. 2004. Identification of a novel gene, DZIP (DAZ-interacting protein), that encodes a protein that interacts with DAZ (deleted in azoospermia) and is expressed in embryonic stem cells and germ cells. Genomics 83: 834-843.
5. Curry, B.J., et al. 2006. Characteri-zation of structure and expression of the DZIP1 gene in the rat and mouse. Genomics 87: 275-285.

CHROMOSOMAL LOCATION

Genetic locus: DZIP1 (human) mapping to 13q32.1.

PRODUCT

DZIP1 siRNA (h) 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 DZIP1 shRNA Plasmid (h): sc-105317-SH and DZIP1 shRNA (h) Lentiviral Particles: sc-105317-V as alternate gene silencing products.

For independent verification of DZIP1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-105317A, sc-105317B and sc-105317C.

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

DZIP1 siRNA (h) is recommended for the inhibition of DZIP1 expression in human 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

DZIP1 (C-7): sc-515454 is recommended as a control antibody for monitoring of DZIP1 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 DZIP1 gene expression knockdown using RT-PCR Primer: DZIP1 (h)-PR: sc-105317-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.