SANTA CRUZ BIOTECHNOLOGY, INC.

SPATA12 siRNA (h): sc-78018

BACKGROUND

SPATA12 (spermatogenesis-associated protein 12), also known as SRG5 (Spermatogenesis-related protein 5), is a 190 amino acid protein that may be involved in the regulation of spermatogenesis. SPATA12 is expressed in normal adult testis, but is absent in fetal testis, implying that it may be involved in the development of testicular maturation. Specifically, SPATA12 is expressed in spermatocytes, spermatids and spermatozoa, with no expression in Leydig and Sertoli cells. Studies with HeLa and GC-1 germ cells indicate that expression of the SPATA12 gene may delay the progression of G_1 to S in the cell cycle, therefore it is thought that SPATA12 maintains the cell in a differentiated state and suppresses cell proliferation.

REFERENCES

1. Onisto, M., et al. 2001. Evidence for FSH-dependent upregulation of SPATA2 (spermatogenesis-associated protein 2). Biochem. Biophys. Res. Commun. 283: 86-92.
2. Li, D. and Lu, G.X. 2004. Identification and expression of a novel human testis-specific gene by digital differential display. Chin. Med. J. 117: 1791-1796.
3. Li, D., et al. 2004. Molecular cloning and expression analysis of a novel human testis-specific gene. Yi Chuan Xue Bao 31: 545-551.
4. Liu, S., et al. 2005. Cloning and characterization of zebra fish SPATA4 gene and analysis of its gonad specific expression. Biochemistry 70: 638-644.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 609869. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Dan, L., et al. 2007. Expression and possible functions of a novel gene SPATA12 in human testis. J. Androl. 28: 502-512.
7. Ge, S.Q., et al. 2008. Genes involved in spermatogenesis. Yi Chuan 30: 3-12.

CHROMOSOMAL LOCATION

Genetic locus: SPATA12 (human) mapping to 3p14.3.

PRODUCT

SPATA12 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 SPATA12 shRNA Plasmid (h): sc-78018-SH and SPATA12 shRNA (h) Lentiviral Particles: sc-78018-V as alternate gene silencing products.

For independent verification of SPATA12 (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-78018A, sc-78018B and sc-78018C.

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

SPATA12 siRNA (h) is recommended for the inhibition of SPATA12 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SPATA12 gene expression knockdown using RT-PCR Primer: SPATA12 (h)-PR: sc-78018-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.