SANTA CRUZ BIOTECHNOLOGY, INC.

SPAG17 siRNA (h): sc-78955

BACKGROUND

Mammalian sperm flagellum contain two cytoskeletal structures associated with the the axoneme: the outer dense fibers and the fibrous sheath. The outer dense fibers surround the axoneme in the midpiece and principal piece, whereas the fibrous sheath surrounds outer dense fibers of the tail of the principal piece. SPAG17 (sperm associated antigen 17), also known as PF6, is a 2,223 amino acid cytoplamic protein that co-localizes with SPAG6 to microtubles. Highly expressed in testis and in organs that contain cilia-bearing cells including brain, oviduct, lung and uterus, SPAG17 may be important for the structural integrity of the central apparatus of the sperm axoneme. SPAG17 contains two LRR (leucine-rich) repeats and may also participate in flagellar motility and male fertility. SPAG17 is encoded by a gene mapping to human chromosome 1p12.

REFERENCES

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2. Neilson, L.I., et al. 1999. cDNA cloning and characterization of a human sperm antigen (SPAG6) with homology to the product of the *Chlamydomonas* PF16 locus. Genomics 60: 272-280.
3. Shao, X., et al. 2001. Testicular protein SPAG5 has similarity to mitotic spindle protein Deepest and binds outer dense fiber protein Odf1. Mol. Reprod. Dev. 59: 410-416.
4. Sapiro, R., et al. 2002. Male infertility, impaired sperm motility, and hydrocephalus in mice deficient in sperm-associated antigen 6. Mol. Cell. Biol. 22: 6298-6305.
5. Kanazawa, R., et al. 2003. Isolation and characterization of a human sperm antigen gene h-Sp-1. Int. J. Androl. 26: 226-235.
6. Xing, X.W., et al. 2004. Identification of a novel gene SRG4 expressed at specific stages of mouse spermatogenesis. Acta Biochim. Biophys. Sin. 36: 351-359.

CHROMOSOMAL LOCATION

Genetic locus: SPAG17 (human) mapping to 1p12.

PRODUCT

SPAG17 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 SPAG17 shRNA Plasmid (h): sc-78955-SH and SPAG17 shRNA (h) Lentiviral Particles: sc-78955-V as alternate gene silencing products.

For independent verification of SPAG17 (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-78955A, sc-78955B and sc-78955C.

RESEARCH USE

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

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

SPAG17 siRNA (h) is recommended for the inhibition of SPAG17 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 SPAG17 gene expression knockdown using RT-PCR Primer: SPAG17 (h)-PR: sc-78955-PR (20 µl, 449 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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