SANTA CRUZ BIOTECHNOLOGY, INC.

SPATA5 siRNA (h): sc-89261

BACKGROUND

SPATA5 (spermatogenesis-associated protein 5), also known as SPAF (spermatogenesis-associated factor protein) or AFG2 (ATPase family protein 2 homolog), is an 893 amino acid protein that localizes to cytoplasm and mitochondrion, and may be involved in morphological and functional mitochondrial transformations during spermatogenesis. Existing as three alternatively spliced isoforms, SPATA5 belongs to the AAA ATPase family and the AFG2 subfamily. The gene that encodes SPATA5 consists of more than 396,000 bases and maps to human chromosome 4q28.1. Housing nearly 900 genes, chromosome 4 represents approximately 6% of the human genome and is associated with Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

REFERENCES

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7. Sommardahl, C., et al. 2001. Phenotypic variations of orpk mutation and chromosomal localization of modifiers influencing kidney phenotype. Physiol. Genomics 7: 127-134.
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CHROMOSOMAL LOCATION

Genetic locus: SPATA5 (human) mapping to 4q28.1.

PROTOCOLS

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

PRODUCT

SPATA5 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 SPATA5 shRNA Plasmid (h): sc-89261-SH and SPATA5 shRNA (h) Lentiviral Particles: sc-89261-V as alternate gene silencing products.

For independent verification of SPATA5 (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-89261A, sc-89261B and sc-89261C.

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

SPATA5 siRNA (h) is recommended for the inhibition of SPATA5 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 SPATA5 gene expression knockdown using RT-PCR Primer: SPATA5 (h)-PR: sc-89261-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.