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SPATA7 siRNA (m): sc-153725

BACKGROUND

SPATA7 (spermatogenesis-associated protein 7), also known as HSD3, is a 599 amino acid protein that exists as three alternatively spliced isoforms and may be involved in retinal functions. The gene that encodes SPATA7 consists of approximately 52,817 bases and maps to human chromosome 14q31.3. Defects in SPATA7 are the cause of Leber congenital amaurosis type 3 (LCA3) and retinitis pigmentosa autosomal recessive (ARRP). Leber congenital amaurosis (LCA) designates a clinically and genetically heterogeneous group of childhood retinal degenerations, generally inherited in an autosomal recessive manner. Affected infants have little or no retinal photoreceptor function. Retinitis pigmentosa autosomal recessive (ARRP) is a retinal dystrophy belonging to the group of pigmentary retinopathies. RP is characterized by retinal pigment deposits visible on fundus examination and primary loss of rod photoreceptor cells followed by secondary loss of cone photoreceptors. Patients typically have night vision blindness and loss of midperipheral visual field.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Spata7 (mouse) mapping to 12 E.

PROTOCOLS

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

PRODUCT

SPATA7 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SPATA7 shRNA Plasmid (m): sc-153725-SH and SPATA7 shRNA (m) Lentiviral Particles: sc-153725-V as alternate gene silencing products.

For independent verification of SPATA7 (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-153725A, sc-153725B and sc-153725C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SPATA7 siRNA (m) is recommended for the inhibition of SPATA7 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 μ M in 66 μ l. 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 SPATA7 gene expression knockdown using RT-PCR Primer: SPATA7 (m)-PR: sc-153725-PR (20 μ l). 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.