

DNAAF3 siRNA (m): sc-140420

BACKGROUND

DNAAF3 (dynein assembly factor 3, axonemal), also known as C19orf51, is a 541 amino acid cytoplasmic protein that belongs to the DNAAF3 family. DNAAF3 is necessary for the assembly of inner and outer dynein arms and plays a role in dynein assembly before it is transport into cilia. Defects in DNAAF3 contribute to ciliary dyskinesia type 2 (CILD2), which is an autosomal recessive disease that causes abnormalities in motile cilia. Defects in motile cilia, such as respiratory cilia, cause chronic inflammation of the respiratory system while other ciliary abnormalities cause reduced fertility in males due to defects in sperm tails. DNAAF3 is alternatively spliced into four isoforms and is encoded by a gene that maps to human chromosome 19. Chromosome 19 consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG families, and Fc receptors (FcRs).

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Dnaaf3 (mouse) mapping to 7 A1.

PRODUCT

DNAAF3 siRNA (m) is a target-specific 19-25 nt siRNA 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 DNAAF3 shRNA Plasmid (m): sc-140420-SH and DNAAF3 shRNA (m) Lentiviral Particles: sc-140420-V as alternate gene silencing 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

DNAAF3 siRNA (m) is recommended for the inhibition of DNAAF3 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 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 DNAAF3 gene expression knockdown using RT-PCR Primer: DNAAF3 (m)-PR: sc-140420-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.

PROTOCOLS

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