SANTA CRUZ BIOTECHNOLOGY, INC.

Dmrtc1c siRNA (m): sc-143065

BACKGROUND

In humans, the DMRT (doublesex and mab-3 related transcription factor) genes encode a large family of transcription factors that are related to the *Drosophila* doublesex proteins. Expressed primarily in the gonads, DMRT proteins contain cysteine-rich DNA-binding motifs and are thought to play an important role in sexual development. DMRTC1 (DMRT-like family C1) is a 182 amino acid nuclear protein that exists as three alternatively spliced isoforms and belongs to the DMRT family. Involved in sexual development, DMRTC1 is expressed in Sertoli cells in male testis but, unlike other DMRT family members, it does not contain a DM DNA-binding domain. The gene encoding DMRTC1 maps to the human X chromosome, which consists of about 153 million base pairs and nearly 1,000 genes. The combination of an X and Y chromosome lead to normal male development while two copies of X lead to normal female development. There are a number of conditions related to an unsual number and combination of sex chromosomes being inherited, including Klinefelter's syndrome, Turner's syndrome, and Triple X syndrome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Dmrtc1c1 (mouse) mapping to X D.

PROTOCOLS

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

PRODUCT

Dmrtc1c 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 Dmrtc1c shRNA Plasmid (m): sc-143065-SH and Dmrtc1c shRNA (m) Lentiviral Particles: sc-143065-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

Dmrtc1c siRNA (m) is recommended for the inhibition of Dmrtc1c 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 Dmrtc1c gene expression knockdown using RT-PCR Primer: Dmrtc1c (m)-PR: sc-143065-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.