SANTA CRUZ BIOTECHNOLOGY, INC.

VCX-A siRNA (h): sc-106688

BACKGROUND

Human chromosome X contains nearly 153 million base pairs and houses over 1,000 genes, while human chromosome Y contains approximately 58 million base pairs and houses over 80 genes. The VCX and VCY (variable charge, X-linked and Y-linked, respectively) gene families are found on X and Y chromosomes and encode small, highly charged proteins that are expressed specifically on male germ cells and may be involved in spermatogenesis. There are six members of the VCX/Y family, namely VCX-A, VCX-B, VCX-B1, VCX-C, VCY and VCY1B, all of which share a high degree of homology, with the exception of an amino acid sequence that is tandemly repeated in VCX proteins, but occurs only once in VCY proteins. Mutations or deletions in the genes encoding VCX proteins are associated with X-linked mental retardation.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: VCX3A (human) mapping to Xp22.31.

RESEARCH USE

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

PRODUCT

VCX-A siRNA (h) 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 VCX-A shRNA Plasmid (h): sc-106688-SH and VCX-A shRNA (h) Lentiviral Particles: sc-106688-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

VCX-A siRNA (h) is recommended for the inhibition of VCX-A 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.

GENE EXPRESSION MONITORING

VCX-A (AL-78): sc-135600 is recommended as a control antibody for monitoring of VCX-A gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor VCX-A gene expression knockdown using RT-PCR Primer: VCX-A (h)-PR: sc-106688-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.