SANTA CRUZ BIOTECHNOLOGY, INC.

INSL3 siRNA (h): sc-60854

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The Power to Question

BACKGROUND

Insulin-like factor 3 (INSL3), also designated Leydig Insulin-like peptide (Ley IL) and Relaxin-like factor (RLF), is a peptide hormone in the Relaxin family which is secreted from the testicular Leydig cells and ovarian theca interna cells. INSL3 is involved in gonadal and other physiological processes. Structurally similar to Relaxin and Insulin, INSL3 differs from the two in that it signals through a G protein-coupled receptor, LGR8. INSL3/LGR8 signaling is involved in gubernaculum development and transabdominal testicular descent during development. Abnormal INSL3 production or action by the fetal testis causes cryptorchidism, a developmental defect of the urogenital tract in human males wherein the testis do not descend into the scrotum during embryonic development. Infertility and the development of germ-cell tumors are two potential risks for individuals with cryptorchidism.

REFERENCES

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4. McKinnell, C., et al. 2005. Expression of Insulin-like factor 3 protein in the rat testis during fetal and postnatal development and in relation to cryptorchidism induced by in utero exposure to di (n-Butyl) phthalate. Endocrinology 146: 4536-4544.
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6. Sadeghian, H., et al. 2005. Constitutive regulation of the Insl3 gene in rat Leydig cells. Mol. Cell. Endocrinol. 241: 10-20.
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8. Shen, P.J., et al. 2005. Restricted expression of LGR8 in intralaminar thalamic nuclei of rat brain suggests a role in sensorimotor systems. Ann. N.Y. Acad. Sci. 1041: 510-515.
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CHROMOSOMAL LOCATION

Genetic locus: INSL3 (human) mapping to 19p13.11.

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.

PRODUCT

INSL3 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 INSL3 shRNA Plasmid (h): sc-60854-SH and INSL3 shRNA (h) Lentiviral Particles: sc-60854-V as alternate gene silencing products.

For independent verification of INSL3 (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-60854A, sc-60854B and sc-60854C.

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

INSL3 siRNA (h) is recommended for the inhibition of INSL3 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 INSL3 gene expression knockdown using RT-PCR Primer: INSL3 (h)-PR: sc-60854-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.