SANTA CRUZ BIOTECHNOLOGY, INC.

INSL5 siRNA (m): sc-60858

BACKGROUND

INSL5 (insulin-like peptide INSL5, Relaxin/Insulin-like protein) is a 135 amino acid protein encoded by the human gene INSL5. The Insulin gene superfamily hormones modulate metabolism, cell growth, and tissue-specific functions. Members of this superfamily are characterized by a signal peptide, a B chain, a connecting C chain and an A chain. Insulin-like peptides (INSL proteins), also designated relaxin-like factors, are mostly secreted proteins that are expressed mainly in testis, placenta, uterus or prenatal tissues. INSL5 shares 40% and 59% sequence homology with human RLN1 and mouse Insl5, respectively, and contains a dibasic cleavage site between the B and C chains. INSL5 exists as a heterodimer of a B chain and an A chain which are linked by two disulfide bonds. INSL5 is thought to play a role in gut contractility or in thymic development and regulation, as it demonstrates predominant expression in the rectum and intermediate expression in the uterus and ascending and descending colon.

REFERENCES

1. Conklin, D., et al. 1999. Identification of INSL5, a new member of the Insulin superfamily. Genomics 60: 50-56.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606413. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Liu, C., et al. 2005. Recent progress in relaxin-3-related research. Ann. N.Y. Acad. Sci. 1041: 47-60.
4. Liu, C., et al. 2005. INSL5 is a high affinity specific agonist for GPCR142 (GPR100). J. Biol. Chem. 280: 292-300.
5. Hsu, S.Y., et al. 2005. Evolution of the signaling system in relaxin-family peptides. Ann. N.Y. Acad. Sci. 1041: 520-529.
6. Wilkinson, T.N., et al. 2005. Evolution of the relaxin-like peptide family. BMC Evol. Biol. 5: 14.
7. Wilkinson, T.N., et al. 2005. Evolution of the relaxin-like peptide family: from neuropeptide to reproduction. Ann. N.Y. Acad. Sci. 1041: 530-533.

CHROMOSOMAL LOCATION

Genetic locus: Insl5 (mouse) mapping to 4 C6.

PRODUCT

INSL5 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see INSL5 shRNA Plasmid (m): sc-60858-SH and INSL5 shRNA (m) Lentiviral Particles: sc-60858-V as alternate gene silencing products.

For independent verification of INSL5 (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-60858A, sc-60858B and sc-60858C.

RESEARCH USE

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

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

INSL5 siRNA (m) is recommended for the inhibition of INSL5 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.

GENE EXPRESSION MONITORING

INSL5 (G-12): sc-398048 is recommended as a control antibody for monitoring of INSL5 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 INSL5 gene expression knockdown using RT-PCR Primer: INSL5 (m)-PR: sc-60858-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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