SANTA CRUZ BIOTECHNOLOGY, INC.

Relaxin 1 siRNA (h): sc-39720

BACKGROUND

Relaxin 1 (also referred to as Relaxin or RLXH1) is a peptide hormone produced by the corpora lutea of the ovary during pregnancy in many mammalian species, including human. The secretion of the hormone into the blood stream just before parturition results in a marked softening and lengthening of the pubic symphysis and a softening of the cervix, which facilitates the birth process. By inhibiting uterine contractions, Relaxin 1 may influence the timing of parturition. Like Insulin, Relaxin 1 consists of two peptide chains, α and β, covalently linked by disulfide bonds. By further analogy to Insulin, the two peptides are synthesized as a single-chain precursor polypeptide with the β chain at the amino-terminus. The gene that encodes the human Relaxin 1 protein maps to chromosome 9p24.1. Relaxin 2, a related protein, is selectively expressed in the ovary during pregnancy. The gene that encodes the human Relaxin 2 protein also maps to chromosome 9p24.1.

REFERENCES

1. Hudson, P., et al. 1981. Molecular cloning and characterization of cDNA sequences coding for rat Relaxin. Nature 291: 127-131.
2. Hudson, P., et al. 1983. Structure of a genomic clone encoding biologically active human Relaxin. Nature 301: 628-631.
3. Hudson, P., et al. 1984. Relaxin gene expression in human ovaries and the predicted structure of a human preprorelaxin by analysis of cDNA clones. EMBO J. 3: 2333-2339.
4. Crawford, R.J., et al. 1984. Two human Relaxin genes are on chromosome 9. EMBO J. 3: 2341-2345.
5. Masini, E., et al. 2002. Protective effect of Relaxin in cardiac anaphylaxis: involvement of the nitric oxide pathway. Br. J. Pharmacol. 137: 337-344.
6. Conrad, K.P., et al. 2004. Relaxin modifies systemic arterial resistance and compliance in conscious, nonpregnant rats. Endocrinology 145: 3289-3296.
7. Samuel, C.S., et al. 2004. Relaxin modulates cardiac fibroblast proliferation, differentiation, and collagen production and reverses cardiac fibrosis *in vivo*. Endocrinology 145: 4125-4133.
8. Goldsmith, L.T., et al. 2004. Relaxin regulation of endometrial structure and function in the rhesus monkey. Proc. Natl. Acad. Sci. USA 101: 4685-4689.

CHROMOSOMAL LOCATION

Genetic locus: RLN1 (human) mapping to 9p24.1.

PRODUCT

Relaxin 1 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 Relaxin 1 shRNA Plasmid (h): sc-39720-SH and Relaxin 1 shRNA (h) Lentiviral Particles: sc-39720-V as alternate gene silencing products.

For independent verification of Relaxin 1 (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-39720A, sc-39720B and sc-39720C.

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

Relaxin 1 siRNA (h) is recommended for the inhibition of Relaxin 1 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

Relaxin 1 (6F1willi): sc-57426 is recommended as a control antibody for monitoring of Relaxin 1 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Relaxin 1 gene expression knockdown using RT-PCR Primer: Relaxin 1 (h)-PR: sc-39720-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.