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Placental lactogen I α siRNA (m): sc-44370

BACKGROUND

Placental lactogens, also referred to as chorionic somatomammotropin hormones, are protein hormones. They are produced in the mammalian placenta and are similar in structure and function to growth hormones. Together, Placental lactogens and growth factors play an essential role to assure successful lactation after pregnancy. Placental lactogens also modify the metabolic state of the mother during pregnancy to supply energy to the fetus. Placental lactogen I exists as three isoforms (designated Placental lactogen I α , Placental lactogen I β and Placental lactogen I γ) and is a member of the somatotropin/prolactin family of hormones. The proteins in this family are crucial in mammalian growth control. The Placental lactogen I isoforms are expressed primarily during mid-pregnancy, and it has been reported that DNA methylation regulates their tissue expression in rats. Placental lactogen II is expressed later in pregnancy and, in mice, its secretion is regulated by the inhibitory control of GH, the concentration of which increases rapidly at the beginning of the last half of pregnancy.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Pl3d1 (mouse) mapping to 13 A3.1.

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

Placental lactogen I α 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Placental lactogen I α shRNA Plasmid (m): sc-44370-SH and Placental lactogen I α shRNA (m) Lentiviral Particles: sc-44370-V as alternate gene silencing products.

For independent verification of Placental lactogen I α (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-44370A, sc-44370B and sc-44370C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20 $^{\circ}$ C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20 $^{\circ}$ C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Placental lactogen I α siRNA (m) is recommended for the inhibition of Placental lactogen I α 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 μ M in 66 μ l. 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 Placental lactogen I α gene expression knockdown using RT-PCR Primer: Placental lactogen I α (m)-PR: sc-44370-PR (20 μ l). Annealing temperature for the primers should be 55-60 $^{\circ}$ C and the extension temperature should be 68-72 $^{\circ}$ C.