SANTA CRUZ BIOTECHNOLOGY, INC.

LHR siRNA (m): sc-40106

BACKGROUND

Lutropin (also designated luteinizing hormone) plays a role in spermatogenesis and ovulation by stimulating the testis and ovaries to produce steroids. Gonadotropin (also designated choriogonadotropin) production in the placenta maintains estrogen and progesterone levels during the first trimester of pregnancy. Ovaries and testis abundantly express luteinizing hormone/choriogonadotropin receptor (LHR) as a seven transmembrane, G protein-coupled receptor glycoprotein. LHR influences the protective effect of pregnancy and gonadotropin against breast cancer. The expression of LHR on breast carcinoma correlates in part to the degree of tumor differentiation. LHR-positive breast tumors occur more frequently in tumors with greater cell differentiation in premenopausal women. The gene encoding human LHR maps to chromosome 2p21.

REFERENCES

1. Minegishi, T., et al. 1990. Cloning and sequencing of human LH/hCG receptor cDNA. Biochem. Biophys. Res. Commun. 172: 1049-1054.
2. Rousseau-Merck, M.F., et al. 1990. Localization of the human luteinizing hormone/choriogonadotropin receptor gene (LHCGR) to chromosome 2p21. Cytogenet. Cell Genet. 54: 77-79.
3. Vuhai-Luuthi, M.T., et al. 1990. Monoclonal antibodies against luteinizing hormone receptor. Immunochemical characterization of the receptor. Endocrinology 127: 2090-2098.
4. Hakola, K., et al. 1998. Recombinant forms of rat and human luteinizing hormone and follicle-stimulating hormone; comparison of functions *in vitro* and *in vivo*. J. Endocrinol. 158: 441-448.
5. Vaananen, J.E., et al. 1998. Regulation of prostaglandin F2α-receptor mRNA in human granulosa-luteal cells by human chorionic gonadotropin and prostaglandin. Endocrine 8: 261-267.
6. Meduri, G., et al. 2003. Luteinizing hormone receptor status and clinical, pathologic, and prognostic features in patients with breast carcinomas. Cancer 97: 1810-1816.

CHROMOSOMAL LOCATION

Genetic locus: Lhcgr (mouse) mapping to 17 E4.

PRODUCT

LHR 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 LHR shRNA Plasmid (m): sc-40106-SH and LHR shRNA (m) Lentiviral Particles: sc-40106-V as alternate gene silencing products.

For independent verification of LHR (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-40106A, sc-40106B and sc-40106C.

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

LHR siRNA (m) is recommended for the inhibition of LHR 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

LHR (8G9A2): sc-293165 is recommended as a control antibody for monitoring of LHR 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 LHR gene expression knockdown using RT-PCR Primer: LHR (m)-PR: sc-40106-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.