

Oviductin siRNA (m): sc-45355

BACKGROUND

The mucins are a family of highly glycosylated, secreted proteins with a basic structure consisting of a variable number of tandem repeats (VNTRs). The number of repeats is highly polymorphic and varies among different alleles. The mucin family consists of Mucins 1-4, Mucin 5 (AC and B), Mucins 6-8, Mucins 11-13 and Mucins 15-17. Mucin 9 (Muc9), often referred to as oviduct-specific glycoprotein (Oviductin) or estrogen-dependent oviduct protein, is an oviduct-specific protein. It binds to oocyte zona pellucida *in vivo* and is involved in the fertilization process and early embryonic development. Oviductin localizes to secretory granules and the protein is detected in OE-E6/E7 cell lines. During the human reproductive cycle, Oviductin expression is highest at the time of ovulation.

REFERENCES

1. Arias, E.B., et al. 1994. Complementary deoxyribonucleic acid cloning and molecular characterization of an estrogen-dependent human oviductal glycoprotein. *Biol. Reprod.* 51: 685-694.
2. Hendrix, E., et al. 2001. Oviductin (Muc9) is expressed in rabbit endocervix. *Endocrinology* 142: 2151.
3. Briton-Jones, C., et al. 2001. Regulation of human Oviductin mRNA expression *in vivo*. *Fertil. Steril.* 75: 942-946.
4. Lok, I.H., et al. 2002. Variable expression of Oviductin mRNA at different stages of human reproductive cycle. *J. Assist. Reprod. Genet.* 19: 569-576.
5. Briton-Jones, C., et al. 2002. Human Oviductin mRNA expression is not maintained in oviduct mucosal cell culture. *Fertil. Steril.* 77: 576-580.
6. Hiroyoshi, M., et al. 2002. Oviductin, the oviductal protease that mediates gamete interaction by affecting the vitelline coat in *Bufo japonicus*: its molecular cloning and analyses of expression and posttranslational activation. *Dev. Biol.* 243: 176-184.
7. Briton-Jones, C., et al. 2004. Estradiol regulation of Oviductin/oviduct-specific glycoprotein messenger ribonucleic acid expression in human oviduct mucosal cells *in vitro*. *Fertil. Steril.* 81: 749-756.
8. Ling, L., et al. 2005. Expression of human Oviductin in an immortalized human oviductal cell line. *Fertil. Steril.* 84: 1095-1103.

CHROMOSOMAL LOCATION

Genetic locus: Ovgp1 (mouse) mapping to 3 F2.2.

PRODUCT

Oviductin 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 Oviductin shRNA Plasmid (m): sc-45355-SH and Oviductin shRNA (m) Lentiviral Particles: sc-45355-V as alternate gene silencing products.

For independent verification of Oviductin (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-45355A, sc-45355B and sc-45355C.

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 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

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

GENE EXPRESSION MONITORING

Oviductin (H-8): sc-377267 is recommended as a control antibody for monitoring of Oviductin 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-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 Oviductin gene expression knockdown using RT-PCR Primer: Oviductin (m)-PR: sc-45355-PR (20 μ l). 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.