SANTA CRUZ BIOTECHNOLOGY, INC.

ZP4 siRNA (h): sc-61832

BACKGROUND

The mammalian zona pellucida is composed of four major glycoproteins, ZP1, ZP2, ZP3 and ZP4, which may act as sperm receptors. 2 forms of porcine ZP4 peptides exist: one consisting of 128 amino acid residues and the other of 133 amino acid residues. These two peptides are identical, except the larger form contains an additional five amino acid sequence at its carboxy-terminal end. Both peptides have two potential N-linked glycosylation sites. The smaller peptide shares 39.1% identity with the amino-terminal region of mouse ZP2 polypeptide. Based on results from animal studies, ZP4 antigen is a promising candidate for the development of a contraceptive vaccine.

REFERENCES

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2. Koyama, K., et al. 1992. Blocking of human sperm-zona interaction by monoclonal antibodies to a glycoprotein family (ZP4) of porcine zona pellucida. Biol. Reprod. 45: 727-735.
3. Hasegawa, A., et al. 1994. Amino by peptide mapping and cDNA cloning. J. Reprod. Fertil. 100: 245-255.
4. Lefièvre, L., et al. 2004. Four zona pellucida glycoproteins are expressed in the human. Hum. Reprod. 19: 1580-1586.
5. Boja, E.S., et al. 2005. Structural conservation of mouse and rat zona pellucida glycoproteins. Probing the native rat zona pellucida proteome by mass spectrometry. Biochemistry 44: 16445-16460.
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CHROMOSOMAL LOCATION

Genetic locus: ZP4 (human) mapping to 1q43.

PRODUCT

ZP4 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 ZP4 shRNA Plasmid (h): sc-61832-SH and ZP4 shRNA (h) Lentiviral Particles: sc-61832-V as alternate gene silencing products.

For independent verification of ZP4 (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-61832A, sc-61832B and sc-61832C.

PROTOCOLS

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

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

ZP4 siRNA (h) is recommended for the inhibition of ZP4 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ZP4 gene expression knockdown using RT-PCR Primer: ZP4 (h)-PR: sc-61832-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.