SANTA CRUZ BIOTECHNOLOGY, INC.

PSG9 siRNA (h): sc-97336

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PSG9 (pregnancy-specific β-1-glycoprotein 9), also known as PSG7 (pregnancy-specific glycoprotein 7), PS-β-B (pregnancy-specific β-1 glycoprotein B) and PSBG-11 (pregnancy-specific β-1-glycoprotein 11), is a member of the PSG family, a group of closely related secreted glycoproteins that are highly expressed in fetal placental syncytiotrophoblast cells. The members of the PSG protein family all have a characteristic N-terminal domain that is homologous to the immunoglobulin variable region. PSGs become detectable in serum during the first two to three weeks of pregnancy and increase as the pregnancy progresses, eventually representing the most abundant fetal protein in the maternal blood at term. PSGs function to stimulate secretion of TH2-type cytokines from monocytes, and they may also modulate the maternal immune system during pregnancy, thereby protecting the semi-allotypic fetus from rejection. PSGs are commonly expressed in trophoblast tumors. 11 human PSG proteins (PSG1-PSG11) have been described.

REFERENCES

1. Thompson, J., et al. 1990. The human pregnancy-specific glycoprotein genes are tightly linked on the long arm of chromosome 19 and are coordinately expressed. Biochem. Biophys. Res. Commun. 167: 848-859.
2. Khan, W.N. and Hammarström, S. 1990. Identification of a new carcinoembryonic antigen (CEA) family member in human fetal liver—cloning and sequence determination of pregnancy-specific glycoprotein 7. Biochem. Biophys. Res. Commun. 168: 214-225.
3. Arakawa, F., et al. 1990. The nucleotide and deduced amino acid sequences of a cDNA encoding a new species of pregnancy-specific β 1-glycoprotein (PS β G). Biochim. Biophys. Acta 1048: 303-305.
4. Streydio, C., et al. 1990. Structure, evolution and chromosomal localization of the human pregnancy-specific β 1 glycoprotein gene family. Genomics 6: 579-592.
5. Brophy, B.K., et al. 1992. cDNA sequence of the pregnancy-specific β 1-glycoprotein-11s (PSG-11s). Biochim. Biophys. Acta 1131: 119-121.
6. McLenachan, P.A., et al. 1994. Characterization of the PSG11 gene. Genomics 22: 356-363.
7. Olsen, A., et al. 1994. Gene organization of the pregnancy-specific glycoprotein region on human chromosome 19: assembly and analysis of a 700-kb cosmid contig spanning the region. Genomics 23: 659-668.
8. Beauchemin, N., et al. 1999. Redefined nomenclature for members of the carcinoembryonic antigen family. Exp. Cell Res. 252: 243-249.
9. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 176398. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: PSG9 (human) mapping to 19q13.31.

PROTOCOLS

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

PRODUCT

PSG9 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 PSG9 shRNA Plasmid (h): sc-97336-SH and PSG9 shRNA (h) Lentiviral Particles: sc-97336-V as alternate gene silencing products.

For independent verification of PSG9 (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-97336A, sc-97336B and sc-97336C.

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

PSG9 siRNA (h) is recommended for the inhibition of PSG9 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 PSG9 gene expression knockdown using RT-PCR Primer: PSG9 (h)-PR: sc-97336-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.