SANTA CRUZ BIOTECHNOLOGY, INC.

Glycodelin siRNA (h): sc-43807

BACKGROUND

Glycodelin (also designated GD, placental protein 14, PP14, progesterone-associated endometrial protein, progestagen-associated endometrial protein, pregnancy-associated endometrial α-2 globulin, PAEG or PEG) is a glycoprotein with structural homology to β-lactoglobulins. Glycodelin is synthesized by the secretory endometrium and decidua during embryo implantation and in the first few weeks of pregnancy. It is expressed in steroid responsive tissues of the female reproductive tract and in the paranucleolar vacuole, which is characteristically present in lobular breast cancer cells. Glycodelin expression in breast cancer cells is accompanied by the acquisition of a phenotype of organized glandular epithelium.

REFERENCES

1. Bell, S.C., et al. 1987. Pregnancy-associated endometrial α 2-globulin, the major secretory protein of the luteal phase and first trimester pregnancy endometrium, is not glycosylated prolactin but related to β-lactoglobulins. J. Clin. Endocrinol. Metab. 65: 1067-1071.
2. Huhtala, M.L., et al. 1987. Amino acid sequence homology between human placental protein 14 and β-lactoglobulins from various species. Endocrinology 120: 2620-2622.
3. Julkunen, M., et al. 1988. Complete amino acid sequence of human placental protein 14: a progesterone-regulated uterine protein homologous to β-lactoglobulins. Proc. Natl. Acad. Sci. USA 85: 8845-8849.
4. Vaisse, C., et al. 1990. Human placental protein 14 gene: sequence and characterization of a short duplication. DNA Cell Biol. 9: 401-413.
5. Garde, J., et al. 1991. Multiple forms of mRNA encoding human pregnancy-associated endometrial α 2-globulin, a β-lactoglobulin homologue. Proc. Natl. Acad. Sci. USA 88: 2456-2460.
6. Dell, A., et al. 1995. Structural analysis of the oligosaccharides derived from Glycodelin, a human glycoprotein with potent immunosuppressive and contraceptive activities. J. Biol. Chem. 270: 24116-24126.
7. Kamarainen, M., et al. 1999. Expression of Glycodelin in human breast and breast cancer. Int. J. Cancer 83: 738-742.

CHROMOSOMAL LOCATION

Genetic locus: PAEP (human) mapping to 9q34.3.

PRODUCT

Glycodelin 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 Glycodelin shRNA Plasmid (h): sc-43807-SH and Glycodelin shRNA (h) Lentiviral Particles: sc-43807-V as alternate gene silencing products.

For independent verification of Glycodelin (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-43807A, sc-43807B and sc-43807C.

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

Glycodelin siRNA (h) is recommended for the inhibition of Glycodelin 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 Glycodelin gene expression knockdown using RT-PCR Primer: Glycodelin (h)-PR: sc-43807-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Zadran, S., et al. 2013. miRNA and mRNA cancer signatures determined by analysis of expression levels in large cohorts of patients. Proc. Natl. Acad. Sci. USA 110: 19160-19165.

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.