



Mucin 17 siRNA (h): sc-44612

BACKGROUND

The mucins are a family of highly glycosylated, secreted proteins with a basic structure consisting of a variable number of tandem repeats (VNTRs). Membrane-associated and secretory mucins are high molecular weight glycoproteins of the glycocalyx (polysaccharide biofilm) that protects mucosal epithelium from particulate matter and microorganisms. Epithelial mucins are large, secreted and cell surface glycoproteins crucial for adhesion modulation, signaling and epithelial cell protection. 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 17, encoded for by the MUC17 gene, is a membrane bound protein. Like other membrane mucins, Mucin 17 provides cytoprotection in epithelial cells, maintain luminal structure and providing signal transduction. In cancer cells that lose their apical or basal polarization it can confer anti-adhesive properties.

REFERENCES

1. Van Klinken, B.J., et al. 1997. Molecular cloning of human MUC3 cDNA reveals a novel 59 amino acid tandem repeat region. *Biochem. Biophys. Res. Commun.* 238: 143-148.
2. Gum, J.R. Jr., et al. 2002. MUC17, a novel membrane-tethered mucin. *Biochem. Biophys. Res. Commun.* 291: 466-475.
3. Corrales, R.M., et al. 2003. Normal human conjunctival epithelium expresses MUC13, MUC15, MUC16 and MUC17 mucin genes. *Arch. Soc. Esp. Ophthalmol.* 78: 375-381.
4. Ho, J.J., et al. 2003. N-glycosylation is required for the surface localization of MUC17 mucin. *Int. J. Oncol.* 23: 585-592.
5. Seo, J.T., et al. 2005. Expression of mucin genes in the human testis and its relationship to spermatogenesis. *Yonsei. Med. J.* 46: 667-672.

CHROMOSOMAL LOCATION

Genetic locus: MUC17 (human) mapping to 7q22.1.

PRODUCT

Mucin 17 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Mucin 17 shRNA Plasmid (h): sc-44612-SH and Mucin 17 shRNA (h) Lentiviral Particles: sc-44612-V as alternate gene silencing products.

For independent verification of Mucin 17 (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-44612A, sc-44612B and sc-44612C.

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 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

Mucin 17 siRNA (h) is recommended for the inhibition of Mucin 17 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Mucin 17 gene expression knockdown using RT-PCR Primer: Mucin 17 (h)-PR: sc-44612-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.