SANTA CRUZ BIOTECHNOLOGY, INC.

Mucin 19 siRNA (h): sc-96138

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. Mucin 19 (MUC-19) is a 6,254 amino acid secreted protein that is expressed in corneal epithelial cells, conjunctival goblet and epithelial cells and lacrimal gland cells. Existing as two alternatively spliced isoforms, Mucin 19 contains one CTCK (C-terminal cystine knot-like) domain, two VWFC domains and three VWFD domains.

REFERENCES

1. Watanabe, H. 2002. Significance of mucin on the ocular surface. Cornea 21: S17-S22.
2. Davies, J.R., et al. 2002. Respiratory tract mucins: structure and expression patterns. Novartis Found. Symp. 248: 76-88.
3. Gipson, I.K. and Argüeso, P. 2003. Role of mucins in the function of the corneal and conjunctival epithelia. Int. Rev. Cytol. 231: 1-49.
4. Chen, Y., et al. 2004. Genome-wide search and identification of a novel gel-forming mucin MUC19/Muc19 in glandular tissues. Am. J. Respir. Cell Mol. Biol. 30: 155-165.
5. Kerschner, J.E. 2007. Mucin gene expression in human middle ear epithelium. Laryngoscope 117: 1666-1676.
6. Mantelli, F. and Argüeso, P. 2008. Functions of ocular surface mucins in health and disease. Curr. Opin. Allergy Clin. Immunol. 8: 477-483.
7. Yu, D.F., et al. 2008. MUC19 expression in human ocular surface and lacrimal gland and its alteration in Sjögren syndrome patients. Exp. Eye Res. 86: 403-411.

CHROMOSOMAL LOCATION

Genetic locus: MUC19 (human) mapping to 12q12.

PRODUCT

Mucin 19 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 Mucin 19 shRNA Plasmid (h): sc-96138-SH and Mucin 19 shRNA (h) Lentiviral Particles: sc-96138-V as alternate gene silencing products.

For independent verification of Mucin 19 (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-96138A, sc-96138B and sc-96138C.

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

Mucin 19 siRNA (h) is recommended for the inhibition of Mucin 19 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 Mucin 19 gene expression knockdown using RT-PCR Primer: Mucin 19 (h)-PR: sc-96138-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.

PROTOCOLS

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