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Mucin 6 siRNA (m): sc-149705

BACKGROUND

Mucin 6 (also designated MUC 6 and gastric mucin) is a large glycoprotein that plays a major role in the protection of the gastrointestinal tract. Mucin 6 carries GlcNAc α 1 \rightarrow 4Gal β \rightarrow R structures, indicating that α 1, 4-N-acetylglucosaminyltransferase is important to the formation of the mucous glycoproteins *in vivo*. Mucin 6 expression is highest in the stomach and gall bladder, with lower expression in the terminal ileum and right colon. In gastric cancer, Mucin 6 has an altered expression. In normal stomach, Mucin 6 apomucin is associated with Lewis type 2; Mucin 6 is also expressed in gastric metaplasia, duodenum and pancreas. Mucin 6 is a secretory mucin, located in the deeper mucosal folds of human gall bladder, and its expression is altered with increasing degrees of inflammation. Mucin 6 mRNA is expressed transiently in the nephrogenic zone of the kidney in the early mid-trimester of development, and Mucin 6 glycoprotein is expressed in the epithelium of ureteric buds and collecting ducts, but absent from adult kidney. Proliferating bile ductular cells express Mucin 6 apomucin in diseased liver, especially in chronic viral hepatitis with active necroinflammation, suggesting that this secreted mucin acts as a cytoprotective agent and represents a phenotype of reactive biliary epithelium in chronic viral hepatitis.

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CHROMOSOMAL LOCATION

Genetic locus: Muc6 (mouse) mapping to 7 F5.

PRODUCT

Mucin 6 siRNA (m) is a pool of 2 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 6 shRNA Plasmid (m): sc-149705-SH and Mucin 6 shRNA (m) Lentiviral Particles: sc-149705-V as alternate gene silencing products.

For independent verification of Mucin 6 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-149705A and sc-149705B.

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 6 siRNA (m) is recommended for the inhibition of Mucin 6 expression in mouse 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 6 gene expression knockdown using RT-PCR Primer: Mucin 6 (m)-PR: sc-149705-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.

PROTOCOLS

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