

# GnT-III siRNA (h): sc-43808

## BACKGROUND

GnT-III (also designated N-acetylglucosaminyltransferase III and GlcNAc-T III) catalyzes the transfer of a N-acetylglucosamine residue to the  $\beta$ -linked mannose of the trimannosyl core of N-linked oligosaccharides, thereby inhibiting the extension of N-glycans by introducing a bisecting N-acetylglucosamine residue. Overexpression of GnT-III suppresses H<sub>2</sub>O<sub>2</sub>-induced activation of the PKC  $\delta$ -JNK1 pathway, resulting in inhibition of apoptosis.

## REFERENCES

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2. Shibukawa, Y., Takahashi, M., Laffont, I., Honke, K. and Taniguchi, N. 2003. Down-regulation of hydrogen peroxide-induced PKC  $\delta$  activation in N-acetylglucosaminyltransferase III-transfected HeLaS3 cells. *J. Biol. Chem.* 278: 3197-3203.
3. Yang, X., Tang, J., Rogler, C.E. and Stanley, P. 2003. Reduced hepatocyte proliferation is the basis of retarded liver tumor progression and liver regeneration in mice lacking N-acetylglucosaminyltransferase III. *Cancer Res.* 63: 7753-7759.
4. Sasai, K., Ikeda, Y., Ihara, H., Honke, K. and Taniguchi, N. 2003. Caveolin-1 regulates the functional localization of N-acetylglucosaminyltransferase III within the Golgi apparatus. *J. Biol. Chem.* 278: 25295-25301.
5. Kang, S.K., Chung, T.W., Lee, J.Y., Lee, Y.C., Morton, R.E. and Kim, C.H. 2004. The hepatitis B virus X protein inhibits secretion of apolipoprotein B by enhancing the expression of N-acetylglucosaminyltransferase III. *J. Biol. Chem.* 279: 28106-28112.
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## CHROMOSOMAL LOCATION

Genetic locus: MGAT3 (human) mapping to 22q13.1.

## PRODUCT

GnT-III 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GnT-III shRNA Plasmid (h): sc-43808-SH and GnT-III shRNA (h) Lentiviral Particles: sc-43808-V as alternate gene silencing products.

For independent verification of GnT-III (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-43808A, sc-43808B and sc-43808C.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

GnT-III siRNA (h) is recommended for the inhibition of GnT-III 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  $\mu$ M in 66  $\mu$ 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 GnT-III gene expression knockdown using RT-PCR Primer: GnT-III (h)-PR: sc-43808-PR (20  $\mu$ 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.