

# GnT-III (F-20): sc-27287

## 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

- Ihara, Y., Nishikawa, A., Tohma, T., Soejima, H., Niikawa, N. and Taniguchi, N. 1993. cDNA cloning, expression, and chromosomal localization of human N-acetylglucosaminyltransferase III (GnT-III). *J. Biochem.* 113: 692-698.
- Shibukawa, Y., Takahashi, M., Laffont, I., Honke, K. and Taniguchi, N. 2003. Downregulation of hydrogen peroxide-induced PKC  $\delta$  activation in N-acetylglucosaminyltransferase III-transfected HeLaS3 cells. *J. Biol. Chem.* 278: 3197-3203.
- 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.
- 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.
- 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.
- LocusLink Report (LocusID: 4248). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: MGAT3 (human) mapping to 22q13.1; Mgat3 (mouse) mapping to 15 E1.

## SOURCE

GnT-III (F-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GnT-III of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27287 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

GnT-III (F-20) is recommended for detection of GnT-III of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GnT-III (F-20) is also recommended for detection of GnT-III in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for GnT-III siRNA (h): sc-43808, GnT-III siRNA (m): sc-63308, GnT-III shRNA Plasmid (h): sc-43808-SH, GnT-III shRNA Plasmid (m): sc-63308-SH, GnT-III shRNA (h) Lentiviral Particles: sc-43808-V and GnT-III shRNA (m) Lentiviral Particles: sc-63308-V.

Molecular Weight of non-glycosylated GnT-III: 53 kDa.

Molecular Weight of glycosylated GnT-III: 63 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.