

GnT-IVH (K-12): sc-161671

BACKGROUND

GnT-IVH, also known as HGNT-IV-H or MGAT4C (mannosyl (α -1,3-)-glycoprotein β -1,4-N-acetylglucosaminyltransferase, isozyme C), is a 478 amino acid single-pass type II membrane protein that localizes to the Golgi apparatus and belongs to the glycosyltransferase 54 family. Expressed in liver, heart, testis, brain and adrenal gland, GnT-IVH functions as a glycosyltransferase that catalyzes the transfer of N-acetylglucosamine (GlcNAc) to the core mannose residues of N-linked glycans, thereby playing a crucial role in the production of tri- and tetra-antennary N-linked sugar chains. The gene encoding GnT-IVH maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

REFERENCES

- Papandreou, M.J. and Fenouillet, E. 1997. Effect of various glycosidase treatments on the resistance of the HIV-1 envelope to degradation. *FEBS Lett.* 406: 191-195.
- Furukawa, T., Youssef, E.M., Yatsuoka, T., Yokoyama, T., Makino, N., Inoue, H., Fukushige, S., Hoshi, M., Hayashi, Y., Sunamura, M. and Horii, A. 1999. Cloning and characterization of the human UDP-N-acetylglucosamine: α -1,3-D-mannoside β -1,4-N-acetylglucosaminyltransferase IV-homologue (hGnT-IV-H) gene. *J. Hum. Genet.* 44: 397-401.
- Sakamoto, Y., Taguchi, T., Honke, K., Korekane, H., Watanabe, H., Tano, Y., Dohmae, N., Takio, K., Horii, A. and Taniguchi, N. 2000. Molecular cloning and expression of cDNA encoding chicken UDP-N-acetyl-D-glucosamine (GlcNAc): GlcNAc β 1-6(GlcNAc β 1-2)-Man α 1-R[GlcNAc to Man] β 1,4N-acetylglucosaminyltransferase VI. *J. Biol. Chem.* 275: 36029-36034.
- Zhang, W., Betel, D. and Schachter, H. 2002. Cloning and expression of a novel UDP-GlcNAc: α -D-mannoside β 1,2-N-acetylglucosaminyltransferase homologous to UDP-GlcNAc: α -3-D-mannoside β 1,2-N-acetylglucosaminyltransferase I. *Biochem. J.* 361: 153-162.
- Schachter, H. 2002. The role of the GlcNAc β 1,2Man α -moiety in mammalian development. Null mutations of the genes encoding UDP-N-acetylglucosamine: α -3-D-mannoside β -1,2-N-acetylglucosaminyltransferase I and UDP-N-acetylglucosamine: α -D-mannoside β 1,2-N-acetylglucosaminyltransferase I.2 cause embryonic lethality and congenital muscular dystrophy in mice and men, respectively. *Biochim. Biophys. Acta* 1573: 292-300.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607385. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: MGAT4C (human) mapping to 12q21.31; Mgat4c (mouse) mapping to 10 D1.

SOURCE

GnT-IVH (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GnT-IVH of human origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-161671 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GnT-IVH (K-12) is recommended for detection of GnT-IVH 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-IVH (K-12) is also recommended for detection of GnT-IVH in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GnT-IVH siRNA (h): sc-96198, GnT-IVH siRNA (m): sc-145665, GnT-IVH shRNA Plasmid (h): sc-96198-SH, GnT-IVH shRNA Plasmid (m): sc-145665-SH, GnT-IVH shRNA (h) Lentiviral Particles: sc-96198-V and GnT-IVH shRNA (m) Lentiviral Particles: sc-145665-V.

Molecular Weight of GnT-IVH: 55 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.

STORAGE

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

PROTOCOLS

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