

GnT-IVA (M-71): sc-100785

BACKGROUND

GnT-IVA (N-acetylglucosaminyltransferase IVA), also known as GlcNAc-T IVA, GnT-IV or MGAT4A (mannosyl (α -1,3-)-glycoprotein β -1,4-N-acetylglucosaminyltransferase, isozyme A) is a type II single-pass membrane protein that belongs to the glycosyltransferase 54 family of proteins. Localizing to the membrane of the Golgi apparatus, GnT-IVA is expressed in thymus, pancreas, prostate, small intestine, lymph node, spleen and peripheral blood leukocytes. It functions as a glycosyltransferase and participates in protein modification by catalyzing the transfer of N-acetylglucosamine (GlcNAc) to mannose residues of N-linked glycans, thereby regulating the formation of tri- and multi-antennary structures. GnT-IVA may be involved in regulating cell differentiation, oncogenesis and the availability of serum glycoproteins and is known to play a role in the development of choriocarcinoma. In addition, GnT-IVA is recognized as a genetic marker for pancreatic cancer as its expression is downregulated in these cancer tissues.

REFERENCES

1. Takamatsu, S., et al. 1999. Unusually high expression of N-acetylglucosaminyltransferase-IVA in human choriocarcinoma cell lines: a possible enzymatic basis of the formation of abnormal biantennary sugar chain. *Cancer Res.* 59: 3949-3953.
2. Fukuta, K., et al. 2001. The widespread effect of β 1,4-galactosyltransferase on N-glycan processing. *Arch. Biochem. Biophys.* 392: 79-86.

CHROMOSOMAL LOCATION

Genetic locus: MGAT4A (human) mapping to 2q11.2.

SOURCE

GnT-IVA (M-71) is a mouse monoclonal antibody raised against recombinant GnT-IVA of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GnT-IVA (M-71) is recommended for detection of GnT-IVA of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GnT-IVA siRNA (h): sc-94905, GnT-IVA shRNA Plasmid (h): sc-94905-SH and GnT-IVA shRNA (h) Lentiviral Particles: sc-94905-V.

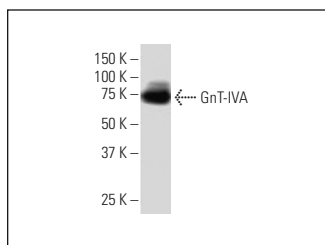
Molecular Weight of GnT-IVA: 62 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or human pancreas extract: sc-363770.

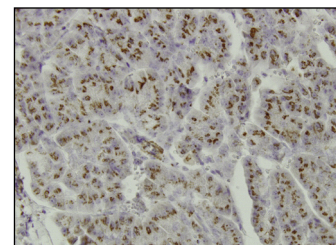
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



GnT-IVA (M-71): sc-100785. Western blot analysis of GnT-IVA expression in Jurkat whole cell lysate.



GnT-IVA (M-71): sc-100785. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human pancreas tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Niimi, K., et al. 2012. High expression of N-acetylglucosaminyltransferase IVa promotes invasion of choriocarcinoma. *Br. J. Cancer* 107: 1969-1977.
2. Wang, X., et al. 2014. Overexpression of α (1,6) fucosyltransferase associated with aggressive prostate cancer. *Glycobiology* 24: 935-944.
3. Nishino, K., et al. 2017. N-acetylglucosaminyltransferase IVA promotes invasion of choriocarcinoma. *Oncol. Rep.* 38: 440-448.

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.

PROTOCOLS

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