

GCNT3 (L-21): sc-133611

BACKGROUND

Belonging to the glycosyltransferase 14 family, GCNT3, also known as β 1,3-galactosyl-O-glycosyl-glycoprotein β -1,6-N-acetylglucosaminyltransferase 3 or core 2/core 4 β 1,6-N-acetylglucosaminyltransferase (C2/4GnT), is a 438 amino acid glycosyltransferase that is localized to the Golgi apparatus. Other members of this family include GCNT1, GCNT2, GCNT3, GCNT4 and GCNT6. GCNT3 has been shown to play an important regulatory role in the synthesis of all known mucin β 6-N-acetylglucosaminides and in mediating core 2 and core 4 O-glycan branching, two important steps in mucin-type biosynthesis. Primarily expressed in mucus-secreting tissues, GCNT3 displays I-branching enzyme activity by converting linear into branched poly-N-acetylglucosaminoglycans, leading to the introduction of the blood group I antigen during embryonic development.

REFERENCES

1. El-Battari, A., et al. 2003. Different glycosyltransferases are differentially processed for secretion, dimerization, and autoglycosylation. *Glycobiology* 13: 941-953.
2. Hiraoka, N., et al. 2004. Core 2 branching β 1,6-N-acetylglucosaminyltransferase and high endothelial venule-restricted sulfotransferase collaboratively control lymphocyte homing. *J. Biol. Chem.* 279: 3058-3067.
3. Beum, P.V., et al. 2005. Mucin biosynthesis: upregulation of core 2 β 1,6-N-acetylglucosaminyltransferase by retinoic acid and Th2 cytokines in a human airway epithelial cell line. *Am. J. Physiol. Lung Cell Mol. Physiol.* 288: L116-L124.
4. Hagiwara, S., et al. 2005. Expression of core 2 β 1,6-N-acetylglucosaminyltransferase facilitates prostate cancer progression. *Glycobiology* 15: 1016-1024.

CHROMOSOMAL LOCATION

Genetic locus: GCNT3 (human) mapping to 15q22.2.

SOURCE

GCNT3 (L-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic GCNT3 peptide of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

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.

APPLICATIONS

GCNT3 (L-21) is recommended for detection of GCNT3 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 GCNT3 siRNA (h): sc-89937, GCNT3 shRNA Plasmid (h): sc-89937-SH and GCNT3 shRNA (h) Lentiviral Particles: sc-89937-V.

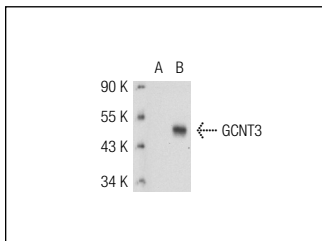
Molecular Weight of GCNT3: 51 kDa.

Positive Controls: GCNT3 (h): 293 Lysate: sc-112929.

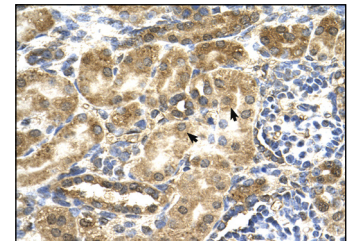
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



GCNT3 (L-21): sc-133611. Western blot analysis of GCNT3 expression in non-transfected: sc-110760 (A) and human GCNT3 transfected: sc-112929 (B) 293 whole cell lysates.



GCNT3 (L-21): sc-133611. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human kidney tissue showing cytoplasmic localization.

RESEARCH USE

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

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Try **GCNT3 (D-7): sc-398646**, our highly recommended monoclonal alternative to GCNT3 (L-21).