

β -1,4-GalNAc-T3 (A-14): sc-166979

BACKGROUND

β -1,4-GalNAc-T3 (β -1,4-N-acetyl-galactosaminyl transferase 3), also known as B4GALNT3, is a 998 amino acid single-pass type II membrane protein belonging to the chondroitin N-acetylgalactosaminyltransferase family. Encoded by a gene that maps to human chromosome 12p13.33, β -1,4-GalNAc-T3 is highly expressed in testis, colon and stomach, and weakly expressed in other tissues. β -1,4-GalNAc-T3 exhibits subcellular localization to apical Golgi and exists as two alternatively spliced isoforms. β -1,4-GalNAc-T3 is involved in the mediation of N,N'-diacetyllactosamine formation on gastric mucosa and in N-acetyl- β -glucosaminyl-glycoprotein 4- β -N-acetylgalactosaminyltransferase activities. β -1,4-GalNAc-T3 is integral to cellular membranes and may function in a protective capacity against sudden cardiac arrest.

REFERENCES

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2. Ikehara, Y., et al. 2006. Apical Golgi localization of N,N'-diacetyllactosamine synthase, β 4GalNAc-T3, is responsible for LacdiNAc expression on gastric mucosa. *Glycobiology* 16: 777-785.
3. Nguyen, S.T., et al. 2007. Identification of a predictive gene expression signature of cervical lymph node metastasis in oral squamous cell carcinoma. *Cancer Sci.* 98: 740-746.
4. Huang, J., et al. 2007. β 1,4-N-acetylgalactosaminyltransferase III enhances malignant phenotypes of colon cancer cells. *Mol. Cancer Res.* 5: 543-552.
5. Rooryck, C., et al. 2009. 2.3 Mb terminal deletion in 12p13.33 associated with oculaauriculovertebral spectrum and evaluation of WNT5B as a candidate gene. *Eur. J. Med. Genet.* 52: 446-449.
6. Ito, H., et al. 2009. Strategy for glycoproteomics: identification of glyco-alteration using multiple glycan profiling tools. *J. Proteome Res.* 8: 1358-1367.
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8. Fukushima, K., et al. 2010. α 1,2-Fucosylated and β -N-acetylgalactosaminylated prostate-specific antigen as an efficient marker of prostatic cancer. *Glycobiology* 20: 452-460.
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CHROMOSOMAL LOCATION

Genetic locus: B4GALNT3 (human) mapping to 12p13.33; B4galnt3 (mouse) mapping to 6 F1.

STORAGE

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

SOURCE

β -1,4-GalNAc-T3 (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of β -1,4-GalNAc-T3 of human origin.

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-166979 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

β -1,4-GalNAc-T3 (A-14) is recommended for detection of β -1,4-GalNAc-T3 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); non cross-reactive with other β -1,4-GalNAc-T family members.

β -1,4-GalNAc-T3 (A-14) is also recommended for detection of β -1,4-GalNAc-T3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for β -1,4-GalNAc-T3 siRNA (h): sc-96247, β -1,4-GalNAc-T3 siRNA (m): sc-108230, β -1,4-GalNAc-T3 shRNA Plasmid (h): sc-96247-SH, β -1,4-GalNAc-T3 shRNA Plasmid (m): sc-108230-SH, β -1,4-GalNAc-T3 shRNA (h) Lentiviral Particles: sc-96247-V and β -1,4-GalNAc-T3 shRNA (m) Lentiviral Particles: sc-108230-V.

Molecular Weight of β -1,4-GalNAc-T3: 115 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.

RESEARCH USE

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

PROTOCOLS

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