



# $\beta$ -1,4-GalNAc-T2 (C-13): sc-107333

## BACKGROUND

$\beta$ -1,4-N-acetyl-galactosaminyl transferase 2 ( $\beta$ -1,4-GalNAc-T2) is a 566 amino acid protein belonging to the glycosyltransferase 2 family. Localized to the membrane of the Golgi apparatus,  $\beta$ -1,4-GalNAc-T2 participates in the synthesis of the Sd<sup>a</sup> antigen, a carbohydrate determinant expressed on erythrocytes, colonic mucosa and other tissues. During Sd<sup>a</sup> production,  $\beta$ -1,4-GalNAc-T2 transfers a  $\beta$ -1,4-linked GalNAc to the galactose residue of an  $\alpha$ -2,3-sialylated chain.  $\beta$ -1,4-GalNAc-T2 also catalyzes the last step in the biosynthesis of the CAD antigen.  $\beta$ -1,4-GalNAc-T2 is widely expressed, with the highest expression in colon and lesser expression in kidney, stomach, ileum and rectum. Mutations in the gene encoding  $\beta$ -1,4-GalNAc-T2 have been linked to Type I von Willebrand disease (VWD), the most common bleeding disorder in humans, characterized by reduced levels of plasma von Willebrand factor. Two named isoforms of  $\beta$ -1,4-GalNAc-T2 exist as a result of alternative splicing events.

## REFERENCES

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- Sato, T., et al. 2003. Molecular cloning and characterization of a novel human  $\beta$ -1,4-N-acetylgalactosaminyltransferase,  $\beta$ -4GalNAc-T3, responsible for the synthesis of N,N'-diacetyllactosidamine, galNAc  $\beta$ -1-4GlcNAc. *J. Biol. Chem.* 278: 47534-47544.

## STORAGE

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

## CHROMOSOMAL LOCATION

Genetic locus: B4GALNT2 (human) mapping to 17q21.32.

## SOURCE

$\beta$ -1,4-GalNAc-T2 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of  $\beta$ -1,4-GalNAc-T2 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-107333 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

$\beta$ -1,4-GalNAc-T2 (C-13) is recommended for detection of  $\beta$ -1,4-GalNAc-T2 of 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 family members  $\beta$ -1,4-GalNAc-T,  $\beta$ -1,4-GalNAc-T3, or  $\beta$ -1,4-GalNAc-T4.

Suitable for use as control antibody for  $\beta$ -1,4-GalNAc-T2 siRNA (h): sc-93560,  $\beta$ -1,4-GalNAc-T2 shRNA Plasmid (h): sc-93560-SH and  $\beta$ -1,4-GalNAc-T2 shRNA (h) Lentiviral Particles: sc-93560-V.

Molecular Weight of  $\beta$ -1,4-GalNAc-T2: 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.

## RESEARCH USE

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

## PROTOCOLS

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