

# GalNAcT-2 (N-16): sc-139353

## BACKGROUND

GalNAcT-2 (chondroitin sulfate N-acetylgalactosaminyltransferase 2), also known as CSGALNACT2 or CHGN2, is a 542 amino acid single-pass type II membrane protein belonging to the chondroitin N-acetylgalactosaminyltransferase family. Localizing to Golgi apparatus, GalNAcT-2 is ubiquitously expressed with high levels found in small intestine, leukocytes, and spleen. GalNAcT-2 plays an essential role in elongation of chondroitin chains by adding GalNAc to the core tetrasaccharide linker. GalNAcT-22 also transfers 1,4-N-acetylgalactosamine (GalNAc) from UDP-GalNAc to the non-reducing end of glucuronic acid. GalNAcT-2 exists as two alternatively spliced isoforms.

## REFERENCES

1. Das, K., et al. 2001. Biosynthesis *in vitro* of a globoside containing a 2-acetamido-2-deoxy- $\beta$ -D-galactopyranosyl group (1-3)-linked and forssman glycolipid by two N-acetylgalactosaminyltransferases from chemically transformed guinea pig cells. *Carbohydr. Res.* 149: 119-135.
2. Hellberg, A., et al. 2002. Molecular basis of the globoside-deficient P<sup>k</sup> blood group phenotype. Identification of four inactivating mutations in the UDP-N-acetylgalactosamine: globotriaosylceramide 3- $\beta$ -N-acetylgalactosaminyltransferase gene. *J. Biol. Chem.* 277: 29455-29459.
3. Sato, T., et al. 2003. Differential roles of two N-acetylgalactosaminyltransferases, CSGALNACT-1, and a novel enzyme, CSGALNACT-2. Initiation and elongation in synthesis of chondroitin sulfate. *J. Biol. Chem.* 278: 3063-3071.
4. Uyama, T., et al. 2003. Molecular cloning and expression of a second chondroitin N-acetylgalactosaminyltransferase involved in the initiation and elongation of chondroitin/dermatan sulfate. *J. Biol. Chem.* 278: 3072-3078.
5. Kitagawa, H., et al. 2003. Molecular cloning of a chondroitin polymerizing factor that cooperates with chondroitin synthase for chondroitin polymerization. *J. Biol. Chem.* 278: 23666-23671.

## CHROMOSOMAL LOCATION

Genetic locus: CSGALNACT2 (human) mapping to 10q11.21; Csgalnact2 (mouse) mapping to 6 F1.

## SOURCE

GalNAcT-2 (N-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of GalNAcT-2 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-139353 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

GalNAcT-2 (N-16) is recommended for detection of GalNAcT-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with  $\beta$ -1,4-GalNAc-T.

GalNAcT-2 (N-16) is also recommended for detection of GalNAcT-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GalNAcT-2 siRNA (h): sc-90645, GalNAcT-2 siRNA (m): sc-145318, GalNAcT-2 shRNA Plasmid (h): sc-90645-SH, GalNAcT-2 shRNA Plasmid (m): sc-145318-SH, GalNAcT-2 shRNA (h) Lentiviral Particles: sc-90645-V and GalNAcT-2 shRNA (m) Lentiviral Particles: sc-145318-V.

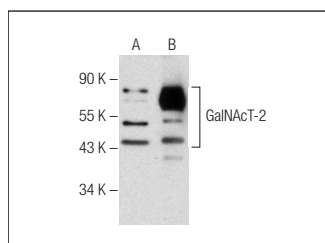
Molecular Weight of GalNAcT-2 isoforms 1/2: 63/39 kDa.

Positive Controls: GalNAcT-2 (h): 293T Lysate: sc-114796.

## 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.

## DATA



GalNAcT-2 (N-16): sc-139353. Western blot analysis of GalNAcT-2 expression in non-transfected: sc-117752 (A) and human GalNAcT-2 transfected: sc-114796 (B) 293T whole cell lysates.

## 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.