

GalNAcT-2 (E-14): sc-139354

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- β -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^k blood group phenotype. Identification of four inactivating mutations in the UDP-N-acetylgalactosamine: globotriaosylceramide 3- β -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 (E-14) 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 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-139354 P, (100 μ 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 (E-14) 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 μ g per 100-500 μ 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 β -1,4-GalNAc-T.

GalNAcT-2 (E-14) is also recommended for detection of GalNAcT-2 in additional species, including equine, canine, bovine, porcine and avian.

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.

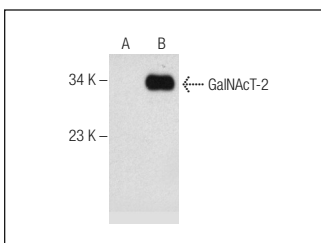
Molecular Weight of GalNAcT-2 isoforms 1/2: 63/39 kDa.

Positive Controls: GalNAcT-2 (h): 293T Lysate: sc-120399.

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 (E-14): sc-139354. Western blot analysis of GalNAcT-2 expression in non-transfected: sc-117752 (A) and mouse GalNAcT-2 transfected: sc-120399 (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 or our catalog for detailed protocols and support products.