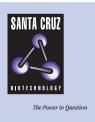
SANTA CRUZ BIOTECHNOLOGY, INC.

β-1,3-Gal-T6 (D-17): sc-103365



BACKGROUND

 β -1,3-Gal-T6 (beta-1,3-galactosyltransferase 6), also known as galactosyltransferase II or GAG GalTII, is a 329 amino acid protein belonging to the glycosyltransferase 31 family. β -1,3-Gal-T6 is involved in several glycan metabolism pathways. With manganese as a cofactor, β -1,3-Gal-T6 catalyzes the transfer of galactose from UDP-galactose to substrates with a terminal β -linked galactose residue. β -1,3-Gal-T6 has a preference for galactose- β -1,4-xylose found in the linker region of chondroitin sulfate, heparan sulfate and other glycosaminoglycans, but does not have activity towards substrates with terminal galactosamine or glucosamine residues. Ubiquitously expressed, β -1,3-Gal-T6 is a single-pass type II membrane protein localized to the Golgi stack membrane.

REFERENCES

- 1. Zhou, D., Dinter, A., Gutierrez Gallego, R., Kamerling, J.P., Vliegenthart, J.F., Berger, E.G. and Hennet, T. 1999. A β -1,3-N-acetylglucosaminyl-transferase with poly-N-acetyllactosamine synthase activity is structurally related to β -1,3-galactosyltransferases. Proc. Natl. Acad. Sci. USA 96: 406-411.
- 2. Bai, X., Zhou, D., Brown, J.R., Crawford, B.E., Hennet, T. and Esko, J.D. 2001. Biosynthesis of the linkage region of glycosaminoglycans: cloning and activity of galactosyltransferase II, the sixth member of the β 1,3-galactosyltransferase family (β 3GalT6). J. Biol. Chem. 276: 48189-48195.
- Cole, S.E., Mao, M.S., Johnston, S.H. and Vogt, T.F. 2001. Identification, expression analysis, and mapping of β3GalT6, a putative galactosyl transferase gene with similarity to *Drosophila* brainiac. Mamm. Genome 12: 177-179.
- Patel, R.Y. and Balaji, P.V. 2007. Fold-recognition and comparative modeling of human β3GalT I, II, IV, V and VI and β3GalNAcT I: prediction of residues conferring acceptor substrate specificity. J. Mol. Graph. Model. 26: 255-268.
- Rivinoja, A., Hassinen, A., Kokkonen, N., Kauppila, A. and Kellokumpu, S. 2009. Elevated Golgi pH impairs terminal N-glycosylation by inducing mislocalization of Golgi glycosyltransferases. J. Cell. Physiol. 220: 144-154.

CHROMOSOMAL LOCATION

Genetic locus: B3GALT6 (human) mapping to 1p36.33; B3galt6 (mouse) mapping to 4 E2.

SOURCE

 β -1,3-Gal-T6 (D-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of β -1,3-Gal-T6 of human origin.

STORAGE

Store at 4° C, **D0 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.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103365 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

 β -1,3-Gal-T6 (D-17) is recommended for detection of β -1,3-Gal-T6 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 -1,3-Gal-T family members.

Suitable for use as control antibody for β -1,3-Gal-T6 siRNA (h): sc-78716, β -1,3-Gal-T6 siRNA (m): sc-105002, β -1,3-Gal-T6 shRNA Plasmid (h): sc-78716-SH, β -1,3-Gal-T6 shRNA Plasmid (m): sc-105002-SH, β -1,3-Gal-T6 shRNA (h) Lentiviral Particles: sc-78716-V and β -1,3-Gal-T6 shRNA (m) Lentiviral Particles: sc-105002-V.

Molecular Weight of β -1,3-Gal-T6: 37 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) Immunofluo-rescence: 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.