SANTA CRUZ BIOTECHNOLOGY, INC.

Sialyltransferase 7E (H-50): sc-67348

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The Power to Question

BACKGROUND

Sialyltransferase 7E, also known as GD1 α synthase or ST6GalNAc V, is a Golgi type II transmembrane glycosyltransferase predominantly expressed in the brain. It belongs to the ST6GalNAc family of sialyltransferases involved in the biosynthesis of α-series gangliosides. Gangliosides are critical components to a variety of cellular events including cell adhesion, protein targeting, cell-cell interaction and mediation of invasion of vectors. They are glycosphingolipids with sialic acids in the carbohydrate portion. Sialyltransferase 7E is specific for the substrate GM1b, leading to the synthesis of the ganglioside GD1α. In addition, Sialyltransferase 7E can catalyze the synthesis of disialyl Lc4 from sialyl Lc4, leading to the synthesis of disialyl Lewis a.

REFERENCES

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3. Ikehara, Y., et al. 2000. A novel glycosyltransferase with a polyglutamine repeat; a new candidate for GD1α synthase (ST6GalNAc V). FEBS Lett. 463: 92-96.
4. Tsuchida, A., et al. 2003. Synthesis of disialyl Lewis a (Le^a) structure in colon cancer cell lines by a sialyltrans-ferase, ST6GalNAc VI, responsible for the synthesis of α-series gangliosides. J. Biol. Chem. 278: 22787-22794.
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6. Harduin-Lepers, A., et al. 2005. The animal sialyltransferases and sialyltransferase-related genes: a phylogenetic approach. Glycobiology 15: 805-817.
7. Yasukawa, Z., et al. 2005. Inflammation-dependent changes in α2,3-, α2,6-, and α2,8-sialic acid glycotopes on serum glycoproteins in mice. Glycobiology 15: 827-837.
8. Patel, R.Y., et al. 2006. Identification of linkage-specific sequence motifs in sialyltransferases. Glycobiology 16: 108-116.
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CHROMOSOMAL LOCATION

Genetic locus: ST6GALNAC5 (human) mapping to 1p31.1; St6galnac5 (mouse) mapping to 3 H3.

RESEARCH USE

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

SOURCE

Sialyltransferase 7E (H-50) is a rabbit polyclonal antibody raised against amino acids 171-220 mapping within an internal region of Sialyltransferase 7E of human origin.

PRODUCT

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

APPLICATIONS

Sialyltransferase 7E (H-50) is recommended for detection of Sialyltransferase 7E of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Sialyltransferase 7E (H-50) is also recommended for detection of Sialyltransferase 7E in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Sialyltransferase 7E siRNA (h): sc-72299, Sialyltransferase 7E siRNA (m): sc-72300, Sialyltransferase 7E shRNA Plasmid (h): sc-72299-SH, Sialyltransferase 7E shRNA Plasmid (m): sc-72300-SH, Sialyltransferase 7E shRNA (h) Lentiviral Particles: sc-72299-V and Sialyltransferase 7E shRNA (m) Lentiviral Particles: sc-72300-V.

Molecular Weight of Sialyltransferase 7E: 38 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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.

STORAGE

Store at 4° C, **DO 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.