β-1,3-Gal-T5 (E-19): sc-22064

SANTA CRUZ
BIOTECHNOLOGY

The Power to Question

BACKGROUND

β-1,3-Gal-T5 belongs to the glycosyltransferase 31 family and catalyzes the transfer of Gal to GlcNAc-based acceptors with a preference for the core3 O-linked glycan GlcNAc(β1,3)GalNAc structure. β-1,3-Gal-T5 is a type II membrane protein, and exhibits expression in stomach, jejunum, colon, pancreas, small intestine, testis and gastrointestinal and pancreatic cancer cell lines. Small levels are detected in lung, liver, adrenal gland and peripheral blood leukocytes. β3Gal-T5 also determines the amounts of the type 1 Lewis antigens including the Sialyl Lewis a antigen and is likely responsible for the synthesis of the type 1 Lewis antigens in gastrointestinal and pancreatic epithelia and tumor cells.

REFERENCES

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2. Amado, M., et al. 1999. Identification and characterization of large galactosyltransferase gene families: galactosyltransferases for all functions. Biochim. Biophys. Acta 1473: 35-53.

3. Salvini R., et al. 2001. β1,3-Galactosyltransferase β3Gal-T5 acts on the GlcNAcβ 1—>3Galβ 1—>4GlcNAcβ 1—>R sugar chains of carcinoembryonic antigen and other N-linked glycoproteins and is down-regulated in colon adenocarcinomas. J. Biol. Chem. 276: 3564-3573.

4. Dunn, C.A., et al. 2003. An endogenous retroviral long terminal repeat is the dominant promoter for human β1,3-galactosyltransferase 5 in the colon. Proc. Natl. Acad. Sci. USA 100: 12841-12846.

5. Sato, T., et al. 2004. Transcriptional regulation of the human β-1,4-galactosyltransferase V gene in cancer cells: essential role of transcription factor Sp1. J. Biol. Chem. 279: 39574-39583.

CHROMOSOMAL LOCATION

Genetic locus: B3GALT5 (human) mapping to 21q22.3.

SOURCE

β-1,3-Gal-T5 (E-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of β-1,3-Galactosyltransferase 5 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.

Blocking peptide available for competition studies, sc-22064 P, (100 µg 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

β-1,3-Gal-T5 (E-19) is recommended for detection of β-1,3-Gal-T5 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).

Suitable for use as control antibody for β-1,3-Gal-T5 siRNA (h): sc-91431, β-1,3-Gal-T5 shRNA Plasmid (h): sc-91431-SH and β-1,3-Gal-T5 shRNA (h) Lentiviral Particles: sc-91431-V.

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 or our catalog for detailed protocols and support products.