SANTA CRUZ BIOTECHNOLOGY, INC.

St3Gal-IV (P-21): sc-134041

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Cell type-specific expression of unique carbohydrate structures on cell surface glycoproteins and glycolipids provides information relevant to cell-cell interactions in developing and adult organisms. Sialyltransferases contribute to the diversity of carbohydrate structures through their attachment of sialic acid in various terminal positions on glycolipid and on glycoprotein (N-linked and O-linked) carbohydrate groups. The α2,3 sialyltransferase (ST3Gal-IV), also known as SIAT4-C and SI4C, shows elevated expression in brain tissues. Sialyltransferase genes are dispersed throughout the human genome. The human SIAT4C gene maps to human chromosome 11q24.2 and encodes St3Gal-IV. Multiple ST3Gal sialyltransferases, including St3Gal-IV, contribute to selectin ligand formation. Selectin ligands are glycan structures that participate in leukocyte trafficking and inflammation. St3Gal IV expression is down-regulated in human renal cell carcinoma (RCC) and may be one of the factors associated with the malignant progression of human RCC.

CHROMOSOMAL LOCATION

Genetic locus: ST3GAL4 (human) mapping to 11q24.2; St3gal4 (mouse) mapping to 9 A4.

SOURCE

St3Gal-IV (P-21) is an affinity purified rabbit polyclonal antibody raised against synthetic St3Gal-IV peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

St3Gal-IV (P-21) is recommended for detection of St3Gal-IV of mouse, rat, human and canine 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), immunohistochemistry (including paraffin-embedded sections) (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 St3Gal-IV siRNA (h): sc-106572, St3Gal-IV siRNA (m): sc-153862, St3Gal-IV shRNA Plasmid (h): sc-106572-SH, St3Gal-IV shRNA Plasmid (m): sc-153862-SH, St3Gal-IV shRNA (h) Lentiviral Particles: sc-106572-V and St3Gal-IV shRNA (m) Lentiviral Particles: sc-153862-V.

Molecular Weight (predicted) of St3Gal-IV: 38 kDa.

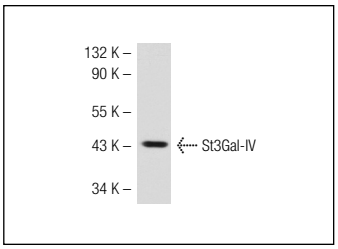
Molecular Weight (observed) of St3Gal-IV: 45 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

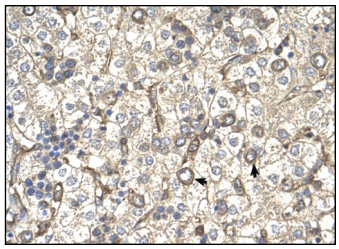
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



St3Gal-IV (P-21): sc-134041. Western blot analysis of St3Gal-IV expression in HeLa whole cell lysate.



St3Gal-IV (P-21): sc-134041. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human liver tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Li, Y., et al. 2013. Cell recognition molecule L1 promotes embryonic stem cell differentiation through the regulation of cell surface glycosylation. Biochem. Biophys. Res. Commun. 440: 405-412.

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.