

St3Gal-IV (C-19): sc-26749

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 α 2,3 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.

REFERENCES

1. Chang, M.L., et al. 1995. Three genes that encode human β -galactoside α 2,3-sialyltransferases. Structural analysis and chromosomal mapping studies. *Glycobiology* 5: 319-325.
2. Kitagawa, H., et al. 1996. Genomic organization and chromosomal mapping of the Gal β 1,3GalNAc/Gal β 1,4GlcNAc α 2,3-sialyltransferase. *J. Biol. Chem.* 271: 931-938.
3. Ellies, L.G., et al. 2002. Sialyltransferase specificity in selectin ligand formation. *Blood* 100: 3618-3625.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 104240. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Matsushashi, H., et al. 2003. Region-specific and epileptogenic-dependent expression of six subtypes of α 2,3-sialyltransferase in the adult mouse brain. *J. Neurochem.* 84: 53-66.

CHROMOSOMAL LOCATION

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

SOURCE

St3Gal-IV (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of St3Gal-IV of human origin.

PRODUCT

Each vial contains 200 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-26749 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

St3Gal-IV (C-19) is recommended for detection of St3Gal-IV 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).

St3Gal-IV (C-19) is also recommended for detection of St3Gal-IV in additional species, including canine, porcine and avian.

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

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.

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.



Try **St3Gal-IV (1F4): sc-293406**, our highly recommended monoclonal alternative to St3Gal-IV (C-19).