

St3Gal-IV (1F4): sc-293406

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

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- Ellies, L.G., et al. 2002. Sialyltransferase specificity in selectin ligand formation. *Blood* 100: 3618-3625.
- Saito, S., et al. 2002. Clinical significance of ST3Gal-IV expression in human renal cell carcinoma. *Oncol. Rep.* 9: 1251-1255.
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- 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.

SOURCE

St3Gal-IV (1F4) is a mouse monoclonal antibody raised against amino acids 31-130 of St3Gal-IV of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 (1F4) is recommended for detection of St3Gal-IV of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] 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 shRNA Plasmid (h): sc-106572-SH and St3Gal-IV shRNA (h) Lentiviral Particles: sc-106572-V.

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

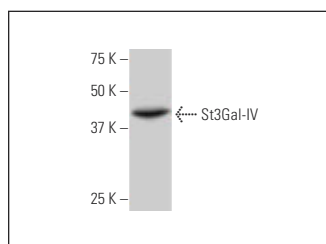
Molecular Weight (observed) of St3Gal-IV: 45 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



St3Gal-IV (1F4): sc-293406. Western blot analysis of St3Gal-IV expression in MCF7 whole cell lysate.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.