SANTA CRUZ BIOTECHNOLOGY, INC.

St3Gal-II (H-150): sc-292044

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 to various terminal positions on glycolipid and glycoprotein (N-linked and O-linked) carbohydrate groups. St3Gal-II (St3 β-galactoside α-2,3-sialyltransferase 2), also known as SIAT4B, Gal-NAc6S, ST3GAL2 or ST3GalA.2, is a member of the glycosyltransferase 29 family of proteins. Predominantly expressed in heart and skeletal muscle, St3Gal-II exists as a single-pass membrane protein localizing to the Golgi apparatus. In addition to forward sialylation reactions (the transfer of NeuAc from CMP-NeuAc to galactose-containing substrates), St3Gal-II readily catalyzes reversible sialylation reactions (the transfer of NeuAc from sialylated donors to CMP (cytidine 5'-monophosphate)). This reverse reaction provides newly synthesized CMP-NeuAc which is then available for transfer to another acceptor.

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. Kim, Y.J., et al. 1996. Molecular cloning and expression of human Gal β 1,3GalNAc α 2,3-sialytransferase (hST3Gal II). Biochem. Biophys. Res. Commun. 228: 324-327.
3. Giordanengo, V., et al. 1997. Cloning and expression of cDNA for a human Gal(β1-3)GalNAc α2,3-sialyltransferase from the CEM T-cell line. Eur. J. Biochem. 247: 558-566.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607188. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Saito, S., et al. 2003. Human α2,3-sialyltransferase (ST3Gal II) is a stage-specific embryonic antigen-4 synthase. J. Biol. Chem. 278: 26474-26479.

CHROMOSOMAL LOCATION

Genetic locus: ST3GAL2 (human) mapping to 16q22.1; St3gal2 (mouse) mapping to 8 E1.

SOURCE

St3Gal-II (H-150) is a rabbit polyclonal antibody raised against amino acids 1-150 mapping at the N-terminus of St3Gal-II 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.

STORAGE

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

APPLICATIONS

St3Gal-II (H-150) is recommended for detection of St3Gal-II 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).

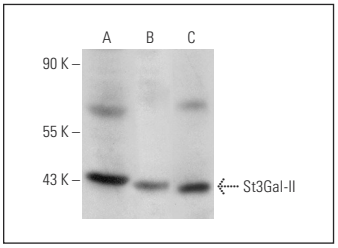
St3Gal-II (H-150) is also recommended for detection of St3Gal-II in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for St3Gal-II siRNA (h): sc-93118, St3Gal-II siRNA (m): sc-153860, St3Gal-II shRNA Plasmid (h): sc-93118-SH, St3Gal-II shRNA Plasmid (m): sc-153860-SH, St3Gal-II shRNA (h) Lentiviral Particles: sc-93118-V and St3Gal-II shRNA (m) Lentiviral Particles: sc-153860-V.

Molecular Weight of St3Gal-II: 40 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or human liver extract: sc-363766.

DATA



St3Gal-II (H-150): sc-292044. Western blot analysis of St3Gal-II expression in K-562 (**A**) and Jurkat (**B**) whole cell lysates and human liver tissue extract (**C**).

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.