SANTA CRUZ BIOTECHNOLOGY, INC.

ST8Sia II (B-12): sc-390223

BACKGROUND

ST8Sia II (ST8 α-N-acetyl-neuraminide α-2,8-sialyltransferase II), also known as STX (sialyltransferase X) or SIAT8B, is a 375 amino acid single-pass type II membrane protein that localizes to the membrane of the Golgi apparatus. Expressed in adult heart and thymus, as well as in fetal kidney, brain and heart, ST8Sia II functions to catalyze the transfer of sialic acid to N-linked glycoproteins and oligosaccharides. More specifically, ST8Sia II uses CMP-sialic acid as a donor to transfer sialic acid, via α-2,8-linkages, to the α-2,6-linked and α-2,3-linked sialic acid residues of N-glycans. Additionally, ST8Sia II is thought to be involved in the expression of polysialic acid (PSA), an important regulator of neuronal plasticity. Defects in the gene encoding ST8Sia II may be associated with schizophrenia and tumorigenesis.

REFERENCES

1. Kojima, N., et al. 1996. Characterization of mouse ST8Sia II (STX) as a neural cell adhesion molecule-specific polysialic acid synthase. Requirement of core α1,6-linked fucose and a polypeptide chain for polysialylation. J. Biol. Chem. 271: 19457-19463.
2. Close, B.E., et al. 1998. *In vivo* autopolysialylation and localization of the polysialyltransferases PST and STX. J. Biol. Chem. 273: 34586-34593.
3. Angata, K., et al. 2000. Differential biosynthesis of polysialic acid on neural cell adhesion molecule (NCAM) and oligosaccharide acceptors by three distinct α 2,8-sialyltransferases, ST8Sia IV (PST), ST8Sia II (STX), and ST8Sia III. J. Biol. Chem. 275: 18594-18601.
4. Close, B.E., et al. 2001. The polysialyltransferase ST8Sia II/STX: post-translational processing and role of autopolysialylation in the polysialylation of neural cell adhesion molecule. Glycobiology 11: 997-1008.

CHROMOSOMAL LOCATION

Genetic locus: ST8SIA2 (human) mapping to 15q26.1; St8sia2 (mouse) mapping to 7 D2.

SOURCE

ST8Sia II (B-12) is a mouse monoclonal antibody raised against amino acids 1-136 mapping at the N-terminus of ST8Sia II of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ST8Sia II (B-12) is available conjugated to agarose (sc-390223 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390223 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390223 PE), fluorescein (sc-390223 FITC), Alexa Fluor® 488 (sc-390223 AF488), Alexa Fluor® 546 (sc-390223 AF546), Alexa Fluor® 594 (sc-390223 AF594) or Alexa Fluor® 647 (sc-390223 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390223 AF680) or Alexa Fluor® 790 (sc-390223 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

ST8Sia II (B-12) is recommended for detection of ST8Sia II of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for ST8Sia II siRNA (h): sc-89953, ST8Sia II siRNA (m): sc-106573, ST8Sia II shRNA Plasmid (h): sc-89953-SH, ST8Sia II shRNA Plasmid (m): sc-106573-SH, ST8Sia II shRNA (h) Lentiviral Particles: sc-89953-V and ST8Sia II shRNA (m) Lentiviral Particles: sc-106573-V.

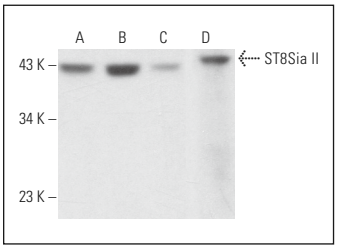
Molecular Weight of ST8Sia II: 42 kDa.

Positive Controls: T98G cell lysate: sc-2294, HL-60 whole cell lysate: sc-2209 or IMR-32 cell lysate: sc-2409.

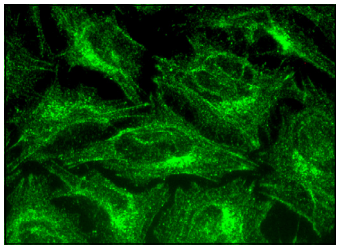
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ST8Sia II (B-12): sc-390223. Western blot analysis of ST8Sia II expression in T98G (**A**), IMR-32 (**B**) and HL-60 (**C**) whole cell lysates and rat testis tissue extract (**D**).



ST8Sia II (B-12): sc-390223. Immunofluorescence staining of methanol-fixed HeLa cells showing Golgi apparatus and membrane localization.

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 for detailed protocols and support products.