

ST6GAL1 (B-L5): sc-65306

BACKGROUND

Modification of cell surface glycoprotein and glycolipid oligosaccharides is thought to play a role in tumorigenesis and metastasis. Sialyltransferases catalyze the incorporation of sialic acid into the carbohydrate chains present on glycoproteins and function in intracellular terminal glycosylation pathways. The expression of one such sialyltransferase, CD75, (also known as ST6GAL1), leads to the appearance of the cell surface antigens CD76, HB-6 and CDw75. Expressed in the Golgi apparatus and secreted into the extracellular fluid, CD75 is a type II membrane protein that is involved in generating sialylated antigens that function as cell-surface carbohydrate determinants. One such antigen, CDw75 (also known as CD75s or CD75-sialyated), is formed via the catalytic transfer of a sialic acid residue from CD75 to a cell surface galactose-containing carbohydrate acceptor. While CD75 functions in cells throughout the body, CDw75 is found primarily on B and T cells and may be upregulated in B cell leukemias, suggesting a possible role for CDw75 in carcinogenesis.

REFERENCES

1. Epstein, A.L., et al. 1987. Two new monoclonal antibodies, Lym-1 and Lym-2, reactive with human B-lymphocytes and derived tumors, with immunodiagnostic and immunotherapeutic potential. *Cancer Res.* 47: 830-840.
2. Stamenkovic, I., et al. 1991. The B lymphocyte adhesion molecule CD22 interacts with leukocyte common antigen CD45RO on T cells and α 2-6 sialyltransferase, CD75, on B cells. *Cell* 66: 1133-1144.
3. Erikstein, B.K., et al. 1992. Cell cycle-dependent regulation of CDw75 (β -galactoside α -2, 6-sialyltransferase) on human B lymphocytes. *Eur. J. Immunol.* 2: 1149-1155.
4. Bast, B.J., et al. 1992. The HB6, CDw75, and CD76 differentiation antigens are unique cell-surface carbohydrate determinants generated by the β -galactoside α 2,6-sialyltransferase. *J. Cell Biol.* 116: 423-435.
5. De Lau, W.B., et al. 1993. HB4 antibody recognizes a carbohydrate structure on lymphocyte surface proteins related to HB6, CDw75, and CD76 antigens. *J. Immunol.* 150: 4911-4919.
6. David, L., et al. 1993. CDw75 antigen expression in human gastric carcinoma and adjacent mucosa. *Cancer* 72: 1522-1527.
7. Reed, W., et al. 1993. CDw75 antigen expression in breast lesions. *Pathol. Res. Practice* 189: 394-398.
8. Eichler, W. 2007. Characteristics of two CD75-related cell-surface expressed antigens of human lymphocytes. *Mol. Immunol.* 44: 2047-2055.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

CHROMOSOMAL LOCATION

Genetic locus: ST6GAL1 (human) mapping to 3q27.3.

SOURCE

ST6GAL1 (B-L5) is a mouse monoclonal antibody raised against Raji cell line of human origin.

PRODUCT

Each vial contains 100 μ g IgM in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and 1% stabilizer protein.

APPLICATIONS

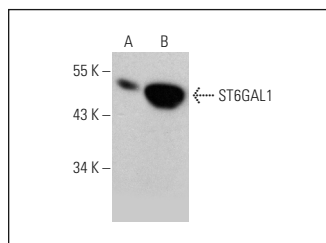
ST6GAL1 (B-L5) is recommended for detection of ST6GAL1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for ST6GAL1 siRNA (h): sc-42804, ST6GAL1 shRNA Plasmid (h): sc-42804-SH and ST6GAL1 shRNA (h) Lentiviral Particles: sc-42804-V.

Molecular Weight of ST6GAL1: 46 kDa.

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

DATA



ST6GAL1 (B-L5): sc-65306. Western blot analysis of ST6GAL1 expression in HeLa (A) and Hep G2 (B) whole cell lysates.

PROTOCOLS

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