

## CD75 (111-180): sc-4535 WB

### 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, HB6 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-sialylated), 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., Marder, R.J., Winter J.N., Stathopoulos, E., Chen, F.M., Parker, J.W. and Taylor, C.R. 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., Sgroi, D., Aruffo, A., Sy, M.S. and Anderson, T. 1991. The B lymphocyte adhesion molecule CD22 interacts with leukocyte common antigen CD45RO on T cells and  $\alpha$  2-6 sialyltransferase, CD75, on B cells. *Cell* 66: 1133-1144.
3. Erikstein, B.K., Funderud, S., Beiske, K., Aas-Eng, A., De Lange Davies, C., Blomhoff, H.K. and Smeland, E.B. 1992. Cell cycle-dependent regulation of CDw75 ( $\beta$ -galactoside  $\alpha$ -2, 6-sialyltransferase) on human B lymphocytes. *Euro. J. Immunol.* 2:1149-1155.
4. Bast, B.J., Zhou, L.J., Freeman, G.J., Colley, K.J., Ernst, T.J., Munro, J.M. and Tedder, T.F. 1992. The HB6, CDw75, and CD76 differentiation antigens are unique cell-surface carbohydrate determinants generated by the  $\beta$ -galactoside  $\alpha$  2,6-sialyltransferase. *J. Cell Biol.* 116: 423-435.
5. Munro, S., Bast, B.J., Colley, K.J. and Tedder, T.F. 1992. The B lymphocyte surface antigen CD75 is not an  $\alpha$ -2, 6-sialyltransferase but is a carbohydrate antigen, the production of which requires the enzyme. *Cell* 68: 1003

### SOURCE

CD75 (111-180) is expressed in *E. coli* as a 85 kDa tagged fusion protein corresponding to amino acids 111-180 of CD75 of human origin.

### PRODUCT

CD75 (111-180) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10  $\mu$ g in 0.1 ml SDS-PAGE loading buffer.

### APPLICATIONS

CD75 (111-180) is suitable as a Western blotting control for sc-20926.

### Storage

Store at -20° C; stable for one year from the date of shipment.

### Research Use

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