SANTA CRUZ BIOTECHNOLOGY, INC.

CD77 synthase (38-13): sc-59113

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Expression of CD77, also called Gb3, sensitizes a cell to verotoxins, causing cellular injury that can lead to disease. Therefore, the complex regulation of CD77 biosynthesis and the activity of the enzymes involved, such as CD77 synthase, can be studied by comparing gene expression between toxin-sensitive and insensitive tissues and cell lines. The highest tissue expression of CD77 synthase occurs in the kidney, mesenteric lymph node, spleen and brain. Burkitt leukemia cells express very high levels of CD77 as well as CD77 synthase, and are sensitive to verotoxin-induced apoptosis. These megakaryoblasts then never mature, leading to the arrest of platelet generation in the bone marrow, which may cause thrombocytopenia, a symptom associated with various hemorrhagic conditions.

REFERENCES

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5. Furukawa, K., et al. 2002. Expression of the Gb3/CD77 synthase gene in megakaryoblastic leukemia cells: implication in the sensitivity to verotoxins. J. Biol. Chem. 277: 11247-11254.
6. Iwamura, K., et al. 2003. The blood group P1 synthase gene is identical to the Gb3/CD77 synthase gene. A clue to the solution of the P1/P2/p puzzle. J. Biol. Chem. 278: 44429-44438.
7. Fujii, Y., et al. 2005. Murine glycosyltransferases responsible for the expression of globo-series glycolipids: cDNA structures, mRNA expression and distribution of their products. Glycobiology 15: 1257-1267.
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CHROMOSOMAL LOCATION

Genetic locus: A4GALT (human) mapping to 22q13.2; A4galt (mouse) mapping to 15 E1.

SOURCE

CD77 synthase (38-13) is a rat monoclonal antibody raised against Daudi Burkitt's lymphoma cell line of human origin.

PRODUCT

Each vial contains IgM in 1 ml of PBS with 0.09% sodium azide and 0.2% BSA.

APPLICATIONS

CD77 synthase (38-13) is recommended for detection of CD77 synthase of human origin by immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:200) and flow cytometry [1 µg (approximately 5-10 µl) per 1 x 10^6 cells].

Molecular Weight of CD77 synthase: 40 kDa.

STORAGE

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

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.