SANTA CRUZ BIOTECHNOLOGY, INC.

T Cell Marker (6A465): sc-73102

BACKGROUND

T cells, along with B cells and NK cells, belong to the group of white blood cells known as lymphocytes. They play a central role in cell-mediated immunity and are distinguished by their T cell receptor (TCR), a special receptor on their cell surface. T cells originate in the bone marrow, mature in the thymus and travel in the blood to other lymphoid tissues, such as the tonsils, spleen and lymph nodes. CD2, CD3, CD5 and CD7 are pan T cell markers, as they are present on most normal mature T cells. Of the pan T cell markers, CD2 and CD3 are the most specific for T cells. CD5 is strongly associated with T cells but is also expressed on a small subset of normal B lymphocytes and in B-chronic lymphocytic leukemia. CD7 may occasionally be present on early myeloid cells, especially in leukemia. In acute infectious mononucleosis, there is downregulation of the pan T cell markers, namely CD7, and in Sezary syndrome, a T cell cutaneous lymphoma, the T cells express CD4 but do not usually express CD7.

REFERENCES

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6. Sempowski, G.D., Lee, D.M., Kaufman, R.E. and Haynes, B.F. 1999. Structure and function of the CD7 molecule. Crit. Rev. Immunol. 19: 331-348.
7. Weisberger, J., Cornfield, D., Gorczyca, W. and Liu, Z. 2003. Downregulation of pan T cell antigens, particularly CD7, in acute infectious mononucleosis. Am. J. Clin. Pathol. 120: 49-55.

SOURCE

T Cell Marker (6A465) is a mouse monoclonal antibody raised against peritoneal T cells of guinea pig origin.

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.

PRODUCT

Each vial contains 250 µl culture supernatant containing IgG_1 with < 0.1% sodium azide and 0.7% stabilizer protein.

APPLICATIONS

T Cell Marker (6A465) is recommended for detection of a cell surface antigen present on the surface of all T lymphocytes of guinea pig origin by immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:500) and flow cytometry (1-2 µl per 1 x 10^6 cells); may cross-react with some myeloid cells and L2C B cell leukemia.

PROTOCOLS

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