

Pan T Cell marker (6A624): sc-71836

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

1. Grunow, R., Volk, H.D., Schwaab, J., Barthelmes, H., Lande, L. and von Baehr, R. 1987. Masking of pan T cell markers in patients with autoimmune diseases. *Dermatol. Monatsschr.* 173: 390-399.
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5. Youinou, P., Jamin, C. and Lydyard, P.M. 1999. CD5 expression in human B cell populations. *Immunol. Today* 20: 312-316.
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

Pan T Cell marker (6A624) is a mouse monoclonal antibody raised against WAG/Rij spleen cells of rat origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Pan T Cell marker (6A624) is recommended for detection of T cells of mouse and rat origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

SELECT PRODUCT CITATIONS

1. Guan, Q., Li, S., Gao, S., Chen, H., Nguan, C.Y. and Du, C. 2013. Reduction of chronic rejection of renal allografts by anti-transforming growth factor-β antibody therapy in a rat model. *Am. J. Physiol. Renal Physiol.* 305: F199-F207.

RESEARCH USE

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

PROTOCOLS

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