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SM1303F Monoclonal Antibody to B-Cells (FMC7 Antigen) - FITC

Alternate names: B cells, B-cell marker

Quantity: 100 Tests

Background: The FMC7 antigen is expressed by peripheral B lymphocytes, and has been used widely in the study of B cell malignancy. FMC7 has been used extensively to differentiate various types of B cell malignancy. The nature of the FMC7 antigen has remained poorly defined following its first description in 1981.

Host / Isotype: Mouse / IgM

Recommended Isotype Controls: SM13F

Clone: FMC7

Immunogen: HRIK cells - Human B-Lymphoblastoid line.

Format:
State: Liquid purified IgM
Purification: Gel Filtration
Buffer System: TRIS buffered glycine containing 0.09% Sodium Azide and 0.2% BSA
Label: FITC – Fluorescein Isothiocyanate Isomer 1

Applications: **Flow Cytometry:** Use 10 µl of neat antibody to label 10e6 cells or 100 µl whole blood. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody recognizes a glycoprotein antigen of 105kD expressed by B lymphocytes. B-CLL is generally considered to be negative for FMC7 expression, but strong staining is seen in many other types of B cell lymphoma, including prolymphocytic leukaemia and hairy cell leukaemia. The expression pattern closely corresponds to that seen with CD22, but studies have shown that FMC7 does not recognise the CD22 molecule itself. A recent publication by Serke et al has shown that FMC7 recognises a conformational epitope on the CD20 molecule, most likely a multimeric complex of CD20.
Species: Human.
Other species not tested.

Storage: Store the antibody undiluted at 2-8°C.
DO NOT FREEZE!
This product is photosensitive and should be protected from light.
Shelf life: one year from despatch.

General Readings:
1. Brooks D.A., et al. (1981) Human lymphocyte markers defined by antibodies derived from somatic cell hybrids. A monoclonal antibody reacting specifically with a subpopulation of human B lymphocytes. J. Immunol.
126: 1373.
2. Catovsky D., et al. (1981) Heterogeneity of B cell leukaemias demonstrated by the monoclonal antibody
FMC7. Br. J. Haematol. 49: 137.
3. Zola H., et al. (1984) The human B cell lineage studied with monoclonal antibodies.

In Leucocyte Typing Ed.A. Bernard, Springer Verlag. p363-371.
4. Zola H., et al. (1984) The antigen of mature human B cells detected by the monoclonal antibody FMC7; studies on the nature of the antigen and its expression. J. Immunol. 133: 321-326.
5. Bloem A.C., et al. (1988) Functional properties of human B cell populations defined by monoclonal antibodies HBA and FMC7. J. Immunol. 140: 768-773.
6. Zola H., et al. (1987) Markers of differentiated B cell leukemia: CD22 antibodies and FMC7 react with different molecules. Dis. Markers 5: 227.
7. Melo I.V., et al. (1988) The different diagnosis between chronic lymphocytic leukemia and other B-cell lymphoproliferative disorders: morphological and immunological studies. In: Chronic Lymphocytic Leukemia (eds. A. Polliack and D. Catovsky) p85. Harwood acad. Publ. London.
8. Ferro, L.M. and Zola H. (1990) Modulation of expression of the antigen identified by FMC7 upon human Blymphocyte activation: evidence for difference between activation in vivo and in vitro. Immunology. 69: 373-378.
9. Collins R.J., et al. (1992) Malignant lymphoma: reactive with the monoclonal antibody FMC7. Pathology 15: 350.
10. Serke, S. et al. (2001) Monoclonal antibody FMC7 detects a conformational epitope on the CD20 molecule:Evidence from phenotyping after Rituxan therapy and transfectant cell analyses. Cytometry (Comm.
Clin. Cytometry) 46:98-104

Pictures:

Staining of human peripheral blood lymphocytes with Mouse Anti Human B-Cells (FMC7): FITC (SM1303F).