Datasheet: MCA792F

BATCH NUMBER 150887

Description:	MOUSE ANTI HUMAN B CELLS:FITC
Specificity:	B CELLS (FMC7 ANTIGEN)
Other names:	CD20
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	FMC7
Isotype:	IgM
Quantity:	100 TESTS/1ml

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species

Human

Product Form

Purified IgM conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
FITC	490	525

Preparation

Purified IgM prepared by gel filtration

Buffer Solution

TRIS buffered glycine

Preservative Stabilisers

0.1% Sodium Azide (NaN_3)
0.2% Bovine Serum Albumin

Immunogen

HRIK cells - Human B-Lymphoblastoid line.

External Database Links	**UniProt:** P11836 Related reagents **Entrez Gene:** 931 MS4A1 Related reagents
Synonyms	CD20
RRID	AB_321192
Specificity	**Mouse anti Human B cells antibody, clone FMC7** recognizes a glycoprotein antigen of ~105 kDa expressed by B lymphocytes. The FMC7 antigen is expressed by peripheral B lymphocytes, and has been used widely in the study of B cell malignancy. Mouse anti Human B cells antibody, clone FMC7 has been used extensively to differentiate various types of B cell malignancy. 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 leukemia and hairy cell leukemia. The nature of the FMC7 antigen has remained poorly defined following its first description in 1981. The expression pattern closely corresponds to that seen with CD22, but studies have shown that FMC7 does not recognize the CD22 molecule itself. Mouse anti Human B cells antibody, clone FMC7 recognizes a conformational epitope on the CD20 molecule, most likely a multimeric complex of CD20 (Serke *et al.* 2001). Identity of CD20 as the antigen recognized by Mouse anti Human B cells antibody, clone FMC7 was further confirmed by strong recognition of recombinant CD20 expressed in hematopoietic and non-haematopoietic cell lines and abolition of binding in CD20 extracellular domain mutations. The recognized epitope has also been shown to be cholesterol dependent (Polyak *et al.* 2003).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells or 100ul whole blood.
References	1. Catovsky, D. *et al.* (1981) Heterogeneity of B-cell leukemias demonstrated by the monoclonal antibody FMC7. Blood. 58 (2): 406-8. 2. 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 3. Zola H., *et al.* (1984) The human B cell lineage studied with monoclonal antibodies. In Leucocyte Typing Ed.A. Bernard, Springer Verlag. p363-71. 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 modulation of its expression. J Immunol. 133 (1): 321-6. 5. Bloem, A.C. *et al.* (1988) Functional properties of human B cell subpopulations defined by monoclonal antibodies HB4 and FMC7. J Immunol. 140 (3): 768-73. 6. Zola, H. *et al.* (1987) Markers of differentiated B cell leukaemia: CD22 antibodies and FMC7 react with different molecules. Dis Markers. 5 (4): 227-35. 7. Ghia, P. *et al.* (2003) The pattern of CD38 expression defines a distinct subset of chronic lymphocytic leukemia (CLL) patients at risk of disease progression. Blood. 101 (4):

1262-9.
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13. Polyak, M.J. *et al.* (2003) A cholesterol-dependent CD20 epitope detected by the FMC7 antibody. Leukemia. 17 (7): 1384-9.
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15. Gladkikh, A. *et al.* (2010) Cyclin D1 expression in B-cell lymphomas. Exp Hematol. 38 (11): 1047-57.
16. Unruh, T.L. *et al.* (2005) Cholesterol depletion inhibits src family kinase-dependent calcium mobilization and apoptosis induced by rituximab crosslinking. Immunology. 116 (2): 223-32.
17. Gladkikh, A.A. *et al.* (2017) Comparison of the mRNA expression profile of B-cell receptor components in normal CD5-high B-lymphocytes and chronic lymphocytic leukemia: a key role of ZAP70. Cancer Med. 6 (12): 2984-97.

Storage	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10371 available at: https://www.bio-rad-antibodies.com/SDS/MCA792F 10371
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	**Worldwide**	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	**Europe**	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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