Datasheet: MCA2260F

BATCH NUMBER 152873

Description:	RAT ANTI RITUXIMAB:FITC
Specificity:	RITUXIMAB
Other names:	MabThera , Rituxan
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	MB2A4
Isotype:	IgG2a
Quantity:	0.1 mg

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

Product Form

Purified IgG - liquid

Max Ex/Em

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

Preparation

Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide
1% Bovine Serum Albumin

Approx. Protein Concentrations

IgG concentration 0.1 mg/ml

Immunogen

$F(ab)_2$ fragment of Rituximab

RRID	AB_324411
Fusion Partners	Spleen cells from immunised rats were fused with cells of the NS-1 mouse myeloma cell line
Specificity	**Rat Anti-Rituximab Antibody, clone MB2A4,** is an anti-idiotypic antibody that specifically recognizes the monoclonal antibody drug rituximab. The antibody can be used to measure the levels of rituximab and biosimilar products in bioanalytical assays. Rat Anti-Rituximab Antibody, clone MB2A4, is specific for rituximab and does not recognize other CD20 antibodies. Clone MB2A4 has been used in ELISA to monitor the levels of rituximab in patient serum following therapy (Cragg *et al*. 2004 and Hampson *et al*. 2010). Clone MB2A4 has been used to detect rituximab bound to the surface of the Raji B cell line, however detection of rituximab bound in vivo to B-CLL cells has not been demonstrated. It is possible that complement deposition on rituximab opsonised cells inhibits binding of the Anti-Rituximab Antibody to cell bound rituximab (Beum *et al*. 2004). Inhibition experiments carried out with Daudi cells demonstrated that this antibody is inhibitory at a ratio of 5:1 antibody:rituximab, but does not inhibit rituximab binding to CD20 at a ratio of 1:1. Rituximab (reference product branded as Rituxan) is a chimeric mouse/human monoclonal antibody approved for the treatment of certain autoimmune diseases and cancer, including non-Hodgkin's lymphoma, chronic lymphocytic leukemia and rheumatoid arthritis. The antibody is specific for the cell surface protein CD20, which is widely expressed on B cells. Through three different mechanisms of action it eliminates B cells from the body, enabling the development of a new population of healthy B cells. View a summary of all Anti-Rituximab Antibodies.
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.
References	1. Cragg, M. S. *et al*. (2004) A new anti-idiotype antibody capable of binding rituximab on the surface of lymphoma cells. Blood. 104:2540-2 2. Cragg, M.S. *et al.* (2004) Apparent modulation of CD20 by rituximab: an alternative explanation. Blood. 103 (10): 3989-90; author reply 3990-1. 3. Pers, J.O. *et al.* (2007) BAFF-modulated repopulation of B lymphocytes in the blood and salivary glands of rituximab-treated patients with Sjögren's syndrome. Arthritis Rheum. 56: 1464-77. 4. Hampson, G. *et al.* (2010) Validation of an ELISA for the determination of rituximab pharmacokinetics in clinical trials subjects. J Immunol Methods. 360 (1-2): 30-8. 5. Blasco, H. *et al.* (2007) Evaluation of a peptide ELISA for the detection of rituximab in serum. J Immunol Methods.325: 127-39. 6. Daydé, D. *et al.* (2009) Tumor burden influences exposure and response to rituximab: pharmacokinetic-pharmacodynamic modeling using a syngeneic bioluminescent murine model expressing human CD20. Blood. 113: 3765-72. 7. Aung, T. *et al.* (2011) Exosomal evasion of humoral immunotherapy in aggressive B-cell lymphoma modulated by ATP-binding cassette transporter A3. Proc Natl Acad Sci U S A.

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14. Blasco, H. *et al.* (2009) Pharmacokinetics of rituximab associated with CHOP chemotherapy in B-cell non-Hodgkin lymphoma. Fundam Clin Pharmacol. 23: 601-8.
15. Illidge, T.M. *et al.* (2016) Short duration immunochemotherapy followed by radioimmunotherapy consolidation is effective and well tolerated in relapsed follicular lymphoma: 5-year results from a UK National Cancer Research Institute Lymphoma Group study. Br J Haematol. 173 (2): 274-82.
16. Vacher, P. *et al.* (2015) Localized Store-Operated Calcium Influx Represses CD95-Dependent Apoptotic Effects of Rituximab in Non-Hodgkin B Lymphomas. J Immunol. pii: 1402942.
17. Komori, M. *et al.* (2016) Insufficient disease inhibition by intrathecal rituximab in progressive multiple sclerosis. Ann Clin Transl Neurol. 3 (3): 166-79.
18. Kashiwagi, N. *et al.* (2017) Method for measuring anti-drug antibody US Patent Application US20170315118A1
19. Lioger, B. *et al.* (2017) Antigenic burden and serum IgG concentrations influence rituximab pharmacokinetics in rheumatoid arthritis patients. Br J Clin Pharmacol. 83 (8): 1773-81.
20. Zhang, Y. *et al.* (2013) Stability of stock and diluted rituximab. Am J Health Syst Pharm. 70 (5): 436-8.

Storage

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. 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

Acknowledgements

Rituxan® is a registered trademark of Biogen Idec/Genentech in the USA.
MabThera ® is a registered trademark of Roche in Europe.

Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA2260F 10041
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

HUMAN ANTI RITUXIMAB (HCA061)
HUMAN ANTI RITUXIMAB (HCA062)
HUMAN ANTI RITUXIMAB (HCA186)

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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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