

Datasheet: MCA1710A488

Description:	MOUSE ANTI HUMAN CD20:Alexa Fluor® 488
Specificity:	CD20
Format:	ALEXA FLUOR® 488
Product Type:	Monoclonal Antibody
Clone:	2H7
Isotype:	IgG2b
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 - 1/5
Immunofluorescence			■	

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								
Species Cross Reactivity	Reacts with: Rhesus Monkey N.B. Antibody reactivity and working conditions may vary between species.								
Product Form	Purified IgG conjugated to Alexa Fluor® 488 - liquid.								
Max Ex/Em	<table><tr><th>Fluorophore</th><th>Excitation Max (nm)</th><th>Emission Max (nm)</th></tr><tr><td>Alexa Fluor®488</td><td>495</td><td>519</td></tr></table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	Alexa Fluor®488	495	519		
Fluorophore	Excitation Max (nm)	Emission Max (nm)							
Alexa Fluor®488	495	519							
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant								
Buffer Solution	Phosphate buffered saline								
Preservative	0.09% Sodium Azide								
Stabilisers	1% Bovine Serum Albumin								
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml								
External Database Links	UniProt: P11836 Related reagents								

Entrez Gene:[931](#) MS4A1 [Related reagents](#)**Synonyms**

CD20

Specificity

Mouse anti Human CD20 antibody, clone 2H7 recognizes the human CD20 cell surface antigen, a 33-37 kDa non-glycosylated phosphoprotein.

The CD20 antigen is expressed during pre-B-cell development. It is present on both resting and activated B-cells but is lost prior to terminal B-cell differentiation into plasma cells.

The epitope recognized by clone 2H7 has been mapped to the following sequence found in the large extracellular loop of human CD20: YNCEPANPSEKNSPST. Furthermore it appears that Mouse anti Human CD20 antibody, clone 2H7 only recognizes human CD20 in its native oligomeric form ([Polyak et al. 2002](#)).

Flow Cytometry

Use 10ul of the suggested working dilution to label 10⁶ cells or 100ul whole blood

References

1. Lifson, J.D. *et al.* (2001) Role of CD8(+) lymphocytes in control of simian immunodeficiency virus infection and resistance to rechallenge after transient early antiretroviral treatment. [J Virol. 75 \(21\): 10187-99.](#)
2. Cragg, M.S. *et al.* (2003) Complement-mediated lysis by anti-CD20 mAb correlates with segregation into lipid rafts. [Blood. 101: 1045-52.](#)
3. Jaramillo, M.C. *et al.* (2009) Increased manganese superoxide dismutase expression or treatment with manganese porphyrin potentiates dexamethasone-induced apoptosis in lymphoma cells. [Cancer Res. 69: 5450-7.](#)
4. Teeling, J.L. *et al.* (2006) The biological activity of human CD20 monoclonal antibodies is linked to unique epitopes on CD20. [J Immunol. 177 \(1\): 362-71.](#)
5. Chan, H.T. *et al.* (2003) CD20-induced lymphoma cell death is independent of both caspases and its redistribution into triton X-100 insoluble membrane rafts. [Cancer Res. 63: 5480-9.](#)
6. Greig, B. *et al.* (2014) Stabilization media increases recovery in paucicellular cerebrospinal fluid specimens submitted for flow cytometry testing. [Cytometry B Clin Cytom. 86: 135-8.](#)
7. van den Akker, E. *et al.* (2010) The majority of the in vitro erythroid expansion potential resides in CD34(-) cells, outweighing the contribution of CD34(+) cells and significantly increasing the erythroblast yield from peripheral blood samples. [Haematologica. 95: 1594-8.](#)
8. Polyak, M.J. *et al.* (2002) Alanine-170 and proline-172 are critical determinants for extracellular CD20 epitopes; heterogeneity in the fine specificity of CD20 monoclonal antibodies is defined by additional requirements imposed by both amino acid sequence and quaternary structure. [Blood. 1:99:3256-62.](#)
9. Jaramillo, M.C. *et al.* (2015) Manganese (III) meso-tetrakis N-ethylpyridinium-2-yl porphyrin acts as a pro-oxidant to inhibit electron transport chain proteins, modulate bioenergetics, and enhance the response to chemotherapy in lymphoma cells. [Free Radic Biol Med. 83: 89-100.](#)
10. Kohler, S.L. *et al.* (2016) Germinal Center T Follicular Helper Cells Are Highly Permissive to HIV-1 and Alter Their Phenotype during Virus Replication. [J Immunol. 196 \(6\): 2711-22.](#)
11. Grobárová V *et al.* (2016) Quambalarine B, a Secondary Metabolite from *Quambalaria cyanescens* with Potential Anticancer Properties. [J Nat Prod. 79 \(9\): 2304-14.](#)
12. Cecchinato, V. *et al.* (2017) Impairment of CCR6+ and CXCR3+ Th Cell Migration in HIV-1 Infection Is Rescued by Modulating Actin Polymerization. [J Immunol. 198 \(1\): 184-195.](#)
13. Popov, J. *et al.* (2017) Unique therapeutic properties and preparation methodology of multivalent rituximab-lipid nanoparticles. [Eur J Pharm Biopharm. 117: 256-69.](#)

Further Reading

1. Hultin, L.E. *et al.* (1993) CD20 (pan B cell) antigen is expressed at a low level on a

subpopulation of human T lymphocytes. [Cytometry 14: 196.](#)

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.
Shelf Life	18 months from date of despatch.
Acknowledgements	This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchase product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or outlicensing@thermofisher.com
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: 10041: https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG2b NEGATIVE CONTROL:Alexa Fluor® 488 \(MCA691A488\)](#)

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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Printed on 01 Aug 2018