

Datasheet: MCA1710APCT

Description:	MOUSE ANTI HUMAN CD20:APC
Specificity:	CD20
Format:	APC
Product Type:	Monoclonal Antibody
Clone:	2H7
Isotype:	IgG2b
Quantity:	25 TESTS

Product Details

RRID AB_1101189

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
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 Allophycocyanin (APC) - lyophilised

Reconstitution

Reconstitute in 0.25 ml distilled water

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
APC	650	661

Preparation

Purified IgG prepared by affinity chromatography on Protein G

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide
1% Bovine Serum Albumin
5% Sucrose

**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 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. <i>et al.</i> (1993) CD20 (pan B cell) antigen is expressed at a low level on a subpopulation of human T lymphocytes. Cytometry 14: 196.
Storage	Prior to reconstitution store at +4°C. Following reconstitution store at +4°C. DO NOT FREEZE. This product should be stored undiluted. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life	12 months from date of reconstitution.
Health And Safety Information	Material Safety Datasheet documentation #10075 available at: 10075: https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG2b NEGATIVE CONTROL:APC \(MCA691APC\)](#)

Recommended Useful Reagents

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

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

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