

## Datasheet: MCA1710APC

**BATCH NUMBER 164622**

<b>Description:</b>	MOUSE ANTI HUMAN CD20:APC
<b>Specificity:</b>	CD20
<b>Format:</b>	APC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	2H7
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	100 TESTS

### 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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat
Immunofluorescence			▪	

Where this product 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 product 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. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

#### Product Form

Purified IgG conjugated to Allophycocyanin (APC) - lyophilized

#### Reconstitution

Reconstitute with 1 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 A from tissue culture

supernatant

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**Buffer Solution** Phosphate buffered saline

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**Preservative** 0.09% sodium azide (NaN<sub>3</sub>)  
**Stabilisers** 1% bovine serum albumin  
5% sucrose

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**External Database Links**

**UniProt:**  
[P11836](#)    [Related reagents](#)

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

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**Synonyms** CD20

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**RRID** AB\_324775

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**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](#)).

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**Flow Cytometry** Use 10µl of the suggested working dilution to label 10<sup>6</sup> cells or cells or 100µl whole blood

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**References**

1. 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.](#)
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. Polyak, M.J. & Deans, J.P. (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. 99 \(9\): 3256-62.](#)
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. 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.](#)

9. 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.](#)

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. Popov, J. *et al.* (2017) Unique therapeutic properties and preparation methodology of multivalent rituximab-lipid nanoparticles. [Eur J Pharm Biopharm. 117: 256-69.](#)

13. Sieg, M. *et al.* (2019) A New Genotype of Feline Morbillivirus Infects Primary Cells of the Lung, Kidney, Brain and Peripheral Blood. [Viruses. 11 \(2\): 146.](#)

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<b>Storage</b>	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted. Should this product contain a precipitate we recommend microcentrifugation before use.
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<b>Guarantee</b>	12 months from date of despatch
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #20487 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1710APC">https://www.bio-rad-antibodies.com/SDS/MCA1710APC</a> 20487
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<b>Regulatory</b>	For research purposes only
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## Related Products

### Recommended Negative Controls

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

### Recommended Useful Reagents

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

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

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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](https://bio-rad-antibodies.com/datasheets)  
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