

## Anti-Human CD20 Antibody, Clone 2H7, APC



Scientists Helping Scientists™ | [WWW.STEMCELL.COM](http://WWW.STEMCELL.COM)

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

[INFO@STEMCELL.COM](mailto:INFO@STEMCELL.COM) • [TECHSUPPORT@STEMCELL.COM](mailto:TECHSUPPORT@STEMCELL.COM)

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

## Antibodies

Mouse monoclonal IgG2b antibody  
against human, rhesus, cynomolgus  
CD20, APC-conjugated

Catalog #60008AZ  
#60008AZ.1

100 Tests 5 µL/test  
25 Tests 5 µL/test

## Product Description

Antibody 2H7 reacts with CD20, an ~35 kDa non-glycosylated type 1 transmembrane protein in the MS4A protein family. The CD20 polypeptide transverses the cell membrane four times, with only a minor portion of the protein displayed on the cell surface. The epitope recognized by antibody 2H7 has been mapped to the amino acid sequence YNCEPANPSEKNSPST, located in the large extracellular loop of CD20. CD20 is expressed on pre-B cells, resting and activated B cells, some follicular dendritic cells, and a subset of T cells. Expression by B cells is lost upon their differentiation into plasma cells. By associating with several proteins, including the B cell receptor (CD79), MHC class I and II, CD53, CD81, and CD82, CD20 is involved in initiating intracellular signaling pathways that modulate the activation, proliferation, and differentiation of B cells. It is thought that CD20 forms multi-subunit ion channels that regulate calcium ion flux across the plasma membrane. Activation of CD20 is accompanied by pronounced phosphorylation of the cytoplasmic domain of the ~33 kDa apo-protein, with the appearance of 35 - 37 kDa isoforms that associate with Src family kinases such as Fyn, Lck, and Lyn.

Target Antigen Name:	CD20
Alternative Names:	B-lymphocyte antigen, B1, Bp35, Leu-16, MS4A1
Gene ID:	931
Species Reactivity:	Human, Rhesus, Cynomolgus, Baboon, Chimpanzee, Capuchin Monkey, Nancy Ma's Night Monkey, Pigtailed Macaque, Squirrel Monkey
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	2H7
Isotype:	IgG2b, kappa
Immunogen:	Human tonsillar B cells
Conjugate:	APC (Allophycocyanin)

## Applications

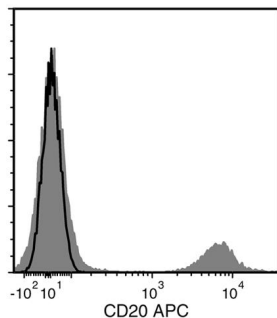
Verified:	FC
Reported:	FC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Human Whole Blood CD20 Positive Selection Kit (Catalog #18685), EasySep™ Human CD19 Positive Selection Kit II (Catalog #17854), and EasySep™ HLA Whole Blood Lymphoid Positive Selection Kit (Catalog #18684HLA).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

## Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) bovine serum albumin
Purification:	The antibody was purified by affinity chromatography and conjugated with APC under optimal conditions. The solution is free of unconjugated APC and unconjugated antibody.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact <a href="mailto:techsupport@stemcell.com">techsupport@stemcell.com</a> .
Directions for Use:	For flow cytometry, the suggested use of this antibody is 5 µL per 1 × 10 <sup>6</sup> cells in 100 µL or per 100 µL of whole blood. It is recommended that the antibody be titrated for optimal performance for each application.

## Data



Flow cytometry analysis of human buffy coat cells labeled with Anti-Human CD20 Antibody, Clone 2H7, APC (filled histogram) or Mouse IgG2b, kappa Isotype Control Antibody, Clone MPC-11, APC (Catalog #60072AZ) (solid line histogram).

## Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at [www.stemcell.com/antibodies](http://www.stemcell.com/antibodies) or contact us at [techsupport@stemcell.com](mailto:techsupport@stemcell.com).

## References

1. Agrawal SM et al. (2013) Extracellular matrix metalloproteinase inducer shows active perivascular cuffs in multiple sclerosis. *Brain* 136(Pt 6): 1760–77. (ICC, IF)
2. Du J et al. (2008) Crystal structure of chimeric antibody C2H7 Fab in complex with a CD20 peptide. *Mol Immunol* 45(10): 2861–8.
3. Daubenberger CA et al. (2007) Flow cytometric analysis on cross-reactivity of human-specific CD monoclonal antibodies with splenocytes of *Aotus nancymaae*, a non-human primate model for biomedical research. *Vet Immunol Immunopathol* 119(1-2): 14–20. (FC)
4. Teeling JL et al. (2006) The biological activity of human CD20 monoclonal antibodies is linked to unique epitopes on CD20. *J Immunol* 177(1): 362–71. (ELISA, FC)
5. Mack CL et al. (2004) Biliary atresia is associated with CD4+ Th1 cell-mediated portal tract inflammation. *Pediatr Res* 56(1): 79–87. (IHC)
6. Cragg MS et al. (2003) Complement-mediated lysis by anti-CD20 mAb correlates with segregation into lipid rafts. *Blood* 101(3): 1045–52. (FA, FC)
7. Mason D. (Eds.). (2002) *Leucocyte Typing VII*. New York: Oxford University Press.
8. Barclay AN et al. (Eds.). (1997) *The Leucocyte Antigen FactsBook*, Second Edition. New York: Academic Press.
9. Kanzaki M et al. (1997) Activation of a calcium-permeable cation channel CD20 expressed in Balb/c 3T3 cells by insulin-like growth factor-I. *J Biol Chem* 272(8): 4964–9.
10. Szöllösi J et al. (1996) Supramolecular complexes of MHC class I, MHC class II, CD20, and tetraspan molecules (CD53, CD81, and CD82) at the surface of a B cell line JY. *J Immunol* 157(7): 2939–46.
11. Tedder TF & Engel P. (1994) CD20: a regulator of cell-cycle progression of B lymphocytes. *Immunol Today* 15(9): 450–4.
12. Hultin LE et al. (1993) CD20 (pan-B cell) antigen is expressed at a low level on a subpopulation of human T lymphocytes. *Cytometry* 14(2): 196–204.
13. Liu AY et al. (1987) Production of a mouse-human chimeric monoclonal antibody to CD20 with potent Fc-dependent biologic activity. *J Immunol* 139(10): 3521–6. (FA)
14. McMichael AJ et al. (Eds.). (1987) *Leucocyte Typing III: White Cell Differentiation Antigens*. New York: Oxford University Press.

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2018 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, Scientists Helping Scientists, and EasySep are trademarks of STEMCELL Technologies Canada Inc. CyTOF is a registered trademark of Fluidigm Corporation. All other trademarks are the property of their respective holders. Alexa Fluor is a registered trademark of Life Technologies Corporation. Antibodies conjugated to Alexa Fluor® are licensed for internal research use only and sale is expressly conditioned on the buyer not using the antibody for manufacturing, performing a service or medical test, or otherwise generating revenue. For use other than research, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or [outlicensing@lifetechn.com](mailto:outlicensing@lifetechn.com). While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.