

Pacific Blue™ anti-human CD20 Antibody

Catalog# / Size	302319 / 25 µg 302320 / 100 µg 302328 / 100 tests
Clone	2H7
Regulatory Status	RUO
Workshop	IV B201
Other Names	B1, Bp35
Isotype	Mouse IgG2b, κ
Description	CD20 is a 33-37 kD, four transmembrane spanning protein, also known as B1 and Bp35. CD20 is expressed on pre-B-cells, resting and activated B cells (not plasma cells), some follicular dendritic cells, and at low levels on a T cell subset. CD20 is heavily phosphorylated on activated B cells and malignant B cells. Homo-oligomeric complexes of CD20 are thought to form Ca ²⁺ conductive ion channels in the plasma membrane of B cells. The CD20 molecule is involved in B-cell activation and is associated with various Src family kinases (Lyn, Lck, Fyn). It exists in a complex with MHC class I and II, CD53, CD81, and CD82.

Product Details

Verified Reactivity	Human, Cynomolgus, Rhesus
Reported Reactivity	Baboon, Capuchin Monkey, Chimpanzee, Pigtailed Macaque, Squirrel Monkey
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Human tonsillar B cells
Formulation	test size: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA). µg sizes: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with Pacific Blue™ under optimal conditions.
Concentration	µg sizes: 0.5 mg/mL test sizes: lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For test size , the suggested use of this reagent for immunofluorescent staining is 5 µl per 10 ⁶ cells in 100 µl volume. For µg sizes , the suggested use of this reagent for immunofluorescent staining is ≤0.5 µg per 10 ⁶ cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.

* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.

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Excitation Laser Violet Laser (405 nm)

Application Notes The epitope recognized by clone 2H7 has been mapped to the sequence YNCEPANPSEKNSPST which lies in the large extracellular loop of human CD20. Additional reported applications (for the relevant formats) include: immunoprecipitation⁴ and immunohistochemical staining of acetone-fixed frozen sections⁵.

Application References

1. Schlossman S, *et al.* 1995. Leucocyte Typing V. Oxford University Press. New York.
2. Knapp W, *et al.* 1989. Leucocyte Typing IV. Oxford University Press. New York.
3. McMichael A, *et al.* Eds. 1987. Leucocyte Typing III Oxford University Press. New York.
4. Polyak MJ, *et al.* 2002. *Blood* 99:3256. (IP)
5. Mack CL, *et al.* 2004. *Pediatr. Res.* 56:79. (IHC)

Product Citations

1. Donnadieu E, *et al.* 2020. *J Immunol.* 205:1248. [PubMed](#)
2. Glass MC, *et al.* 2022. *Cell Rep.* 39:110728. [PubMed](#)
3. Alcántara-Hernández M *et al.* 2017. *Immunity.* 47(6):1037-1050 . [PubMed](#)
4. Matzen SMH, *et al.* 2018. *Health Sci Rep.* 1:e90. [PubMed](#)
5. Hagan T, *et al.* 2020. *Cell.* 178(6):1313-1328.e13.. [PubMed](#)
6. Ma C, *et al.* 2015. *J Allergy Clin Immunol.* . [PubMed](#)
7. Davis Z, *et al.* 2011. *J Vis Exp.* 49: 2668. [PubMed](#)
8. Leach SM, *et al.* 2020. *Cell Rep.* 33:108337. [PubMed](#)
9. Lovelace SE, *et al.* 2022. *iScience.* 25:105067. [PubMed](#)
10. Prete G, *et al.* 2016. *Antimicrob Agents Chemother.* 60: 1560 - 1572. [PubMed](#)
11. Li H, *et al.* 2015. *J Infect Dis.* 211:1717. [PubMed](#)
12. Turner JS, *et al.* 2021. *Nature.* 596:109. [PubMed](#)

RRID AB_493651 (BioLegend Cat. No. 302319)
AB_493651 (BioLegend Cat. No. 302320)
AB_493651 (BioLegend Cat. No. 302328)

Antigen Details

Structure	Four transmembrane protein (TM4SF), heavily phosphorylated after activation, 33-37 kD
Distribution	B cell, T cell subsets
Function	B cell activation
Ligand/Receptor	Src family tyrosine kinases, MHC class I, II, CD53, CD81, CD82
Cell Type	B cells, T cells
Biology Area	Costimulatory Molecules, Immunology
Molecular Family	CD Molecules
Antigen References	<ol style="list-style-type: none">1. Hultin L, <i>et al.</i> 1993. <i>Cytometry</i> 14:196.2. Tedder T, <i>et al.</i> 1994. <i>Immunol. Today</i> 15:450.
Gene ID	931

Related Protocols

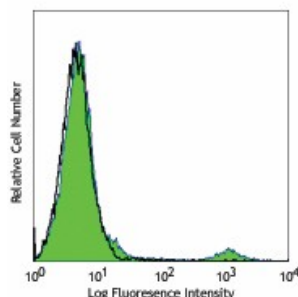
- [Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-human CD20, FITC anti-human CD20, PE anti-human CD20, PE/Cyanine5 anti-human CD20, Purified anti-human CD20, APC/Cyanine7 anti-human CD20, PE/Cyanine7 anti-human CD20, Alexa Fluor® 488 anti-human CD20, Alexa Fluor® 647 anti-human CD20, Pacific Blue™ anti-human CD20, Alexa Fluor® 700 anti-human CD20, PerCP anti-human CD20, PerCP/Cyanine5.5 anti-human CD20, Brilliant Violet 421™ anti-human CD20, Brilliant Violet 570™ anti-human CD20, Brilliant Violet 605™ anti-human CD20, Brilliant Violet 650™ anti-human CD20, Brilliant Violet 785™ anti-human CD20, Brilliant Violet 510™ anti-human CD20,

Brilliant Violet 711™ anti-human CD20, Purified anti-human CD20 (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD20, Biotin anti-human CD20, APC/Fire™ 750 anti-human CD20, Alexa Fluor® 594 anti-human CD20, TotalSeq™-A0100 anti-human CD20, TotalSeq™-B0100 anti-human CD20, TotalSeq™-C0100 anti-human CD20, Spark NIR™ 685 anti-human CD20, Spark YG™ 593 anti-human CD20, GMP FITC anti-human CD20, TotalSeq™-D0100 anti-human CD20, GMP APC anti-human CD20, Spark Violet™ 500 anti-human CD20, GMP Pacific Blue™ anti-human CD20, GMP PerCP/Cyanine5.5 anti-human CD20, Spark Violet™ 538 anti-human CD20, GMP PE/Cyanine7 anti-human CD20, Spark Blue™ 515 anti-human CD20, GMP APC/Fire™ 750 anti-human CD20, GMP PE anti-human CD20, Spark Blue™ 550 anti-human CD20 (Flexi-Fluor™), Spark Blue™ 574 anti-human CD20 (Flexi-Fluor™), Spark Red™ 718 anti-human CD20 (Flexi-Fluor™), Brilliant Violet 750™ anti-human CD20, APC/Fire™ 810 anti-human CD20, Alexa Fluor® 660 anti-human CD20

Product Data



Human peripheral blood lymphocytes were stained with anti-CD20 (clone 2H7) Pacific Blue™ (filled histogram), or mouse IgG2b, κ Pacific Blue™ (open histogram).

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