Alexa Fluor® 488 anti-human CD20 Antibody

Catalog# / Size	302316 / 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	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 488 under optimal conditions.
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* IHC-F - *Verified*
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood. For immunohistochemical staining on frozen tissue sections, the suggested use of this reagent is 5.0 - 10 µg per ml. It is recommended that the reagent be titrated for optimal performance for each application. * Alexa Fluor® 488 has a maximum emission of 519 nm when it is excited at 488 nm. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation. View full statement regarding label licenses
Excitation Laser	Blue Laser (488 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: immunoprecipitation[4] and immunohistochemical staining of acetone-fixed frozen sections[5].
Application References **(PubMed link indicates BioLegend citation)**	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. Lindner JM, *et al.* 2019. Immunity. 50:668. PubMed
2. Silva M, *et al.* 2021. Sci Immunol. 6:eabf1152. PubMed
3. Ferrari M, *et al.* 2021. J Virol. 95:e0068521. PubMed
4. Pérol L, *et al.* 2016. Nat Commun. 7:13027. PubMed
5. Cirelli KM *et al.* 2019. Cell. 177(5):1153-1171 . PubMed

RRID AB_493227 (BioLegend Cat. No. 302316)

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	1. Hultin L, *et al.* 1993. *Cytometry* 14:196. 2. Tedder T, *et al.* 1994. *Immunol. Today* 15:450.
Gene ID	931

Related Protocols

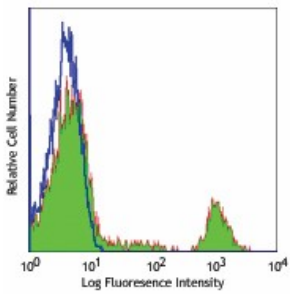
Immunohistochemistry Protocol for Frozen Sections

Cell Surface Flow Cytometry Staining Protocol

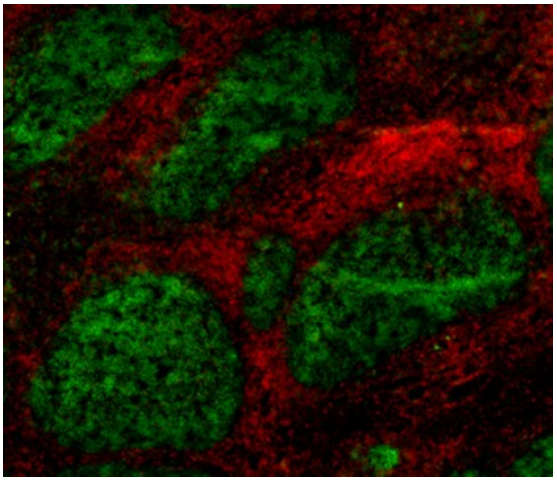
Other Formats

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

Product Data



Human peripheral blood lymphocytes were stained with anti-CD20 (clone 2H7) Alexa Fluor® 488 (filled histogram), or mouse IgG2b, κ Alexa Fluor® 488 (open histogram).



Human frozen tonsil section was fixed with 4% paraformaldehyde (PFA) for ten minutes and blocked with 5% FBS for 30 minutes at room temperature. Then the section was stained with 10 µg/ml of anti-human CD20 (clone 2H7) Alexa Fluor® 488 (green) and 10 µg/ml of purified anti-human CD5 (clone L17F12) overnight at 4°C, followed by 2.5 µg/ml of anti-mouse IgG2a (clone RMG2a-62) Alexa Fluor® 594 (red) for two hours at room temperature. The image was captured by 10X objective.

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