TotalSeq™-B0100 anti-human CD20 Antibody

Catalog# / Size	302361 / 10 µg
Clone	2H7
Regulatory Status	RUO
Workshop	IV B201
Other Names	B1, Bp35
Isotype	Mouse IgG2b, κ
Barcode Sequence	TTCTGGGTCCCTAGA
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 1 mM EDTA.
Preparation	The antibody was purified by chromatography and conjugated with TotalSeq™-B oligomer under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. **Do not freeze.**
Application	PG - *Quality tested*
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis and the oligomer sequence is confirmed by sequencing. TotalSeq™-B antibodies are compatible with 10x Genomics Single Cell Gene Expression Solutions. To maximize performance, it is strongly recommended that the reagent be titrated for each application, and that you centrifuge the antibody dilution before adding to the cells at 14,000xg at 2 - 8°C for 10 minutes. Carefully pipette out the liquid avoiding the bottom of the tube and add to the cell suspension. For Proteogenomics analysis, the suggested starting amount of this reagent for titration is ≤ 1.0 µg per million cells in 100 µL volume. Refer to the corresponding TotalSeq™ protocol for specific staining instructions. Buyer is solely responsible for determining whether Buyer has all intellectual property rights that are necessary for Buyer's intended uses of the BioLegend TotalSeq™ products. For example, for any technology platform Buyer uses with TotalSeq™, it is Buyer's sole responsibility to determine whether it has all necessary third party intellectual property rights to use that platform and TotalSeq™ with that platform.
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].

Additional Product Notes	TotalSeq™ reagents are designed to profile protein levels at a single cell level following an optimized protocol similar to the CITE-seq workflow. A compatible single cell device (e.g. 10x Genomics Chromium System and Reagents) and sequencer (e.g. Illumina analyzers) are required. Please contact technical support for more information, or visit biolegend.com/totalseq. The barcode flanking sequences are GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCTNNNNNNNNN (PCR handle), and NNNNNNNNNGCTTTAAGGCCGGTCCTAGC*A*A (capture sequence). N represents either randomly selected A, C, G, or T, and * indicates a phosphorothioated bond, to prevent nuclease degradation. View more applications data for this product in our Scientific Poster Library.
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. Kumar P, *et al.* 2022. Nat Neurosci. 25:956. PubMed
RRID	AB_2800742 (BioLegend Cat. No. 302361)

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

TotalSeq™-B or -C with 10x Feature Barcoding Technology

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

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587