

CD19 Monoclonal Antibody (HIB19), PE-  
Cyanine7, eBioscience™

Catalog Number25-0199-41

Product data sheet

Details		Species Reactivity	
Size	25 Tests	Species reactivity	Human
Host/Isotope	Mouse / IgG1, kappa	Published species	Human, Not Applicable
Class	Monoclonal	Tested Applications	Dilution *
Type	Antibody	Flow Cytometry (Flow)	5 µL (0.25 µg)/test
Clone	HIB19	Published Applications	
Conjugate	PE-Cyanine7	Flow Cytometry (Flow)	See 22 publications below
Form	Liquid	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Concentration	5 µL/Test		
Purification	Affinity chromatography		
Storage buffer	PBS, pH 7.2, with 0.2% BSA		
Contains	0.09% sodium azide		
Storage Conditions	4° C, store in dark, DO NOT FREEZE!		

Product specific information

Description: The HIB19 monoclonal antibody reacts with human CD19, a 95 kDa transmembrane glycoprotein. CD19 is expressed by B cells during all stages of development excluding the terminally differentiated plasma cells. Follicular dendritic cells also express CD19. Together CD21, CD81, Leu13, MHC class II, and CD19 form a multimolecular complex that associates with BCR. Signaling through CD19 induces tyrosine phosphorylation, calcium flux and proliferation of B cells. The SJ25C1 antibody and the HIB19 monoclonal antibody recognize overlapping epitopes. Applications Reported: This HIB19 antibody has been reported for use in flow cytometric analysis. Applications Tested: This HIB19 antibody has been pre-titrated and tested by flow cytometric analysis of normal human peripheral blood cells. This can be used at 5 µL (0.25 µg) per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. Light sensitivity: This tandem dye is sensitive photo-induced oxidation. Please protect this vial and stained samples from light. Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 µL cell sample + 100 µL IC Fixation Buffer) or 1-step Fix/Lyse Solution (cat. 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency/compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically. Excitation: 488-561 nm; Emission: 775 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser. Filtration: 0.2 µm post-manufacturing filtered.

Background/Target Information

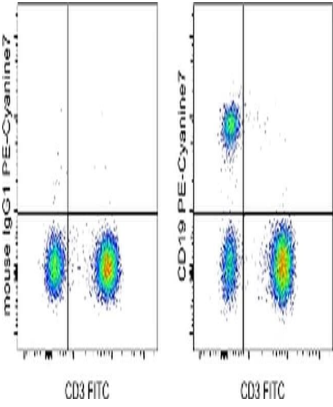
CD19 is a member of the immunoglobulin superfamily and has two Ig like domains. The CD19 molecule is expressed on 100% of the peripheral B cells as defined by expression of kappa or lambda light chains. CD19 appears to be expressed on myeloid leukemia cells, particularly those of monocytic lineage. Leukemia phenotype studies have demonstrated that the earliest and broadest B cell restricted antigen is the CD19 antigen. The receptor for CD19 is an important functional regulator of normal and malignant B cell proliferation, and is expressed in all B cell precursor leukemias. Lymphocytes proliferate and differentiate in response to various concentrations of different antigens. The ability of the B cell to respond in a specific, yet sensitive manner to the various antigens is achieved with the use of low-affinity antigen receptors. CD19 is a cell surface molecule which assembles with the antigen receptor of B lymphocytes in order to decrease the threshold for antigen receptor-dependent stimulation. Besides being a signal-amplifying coreceptor for the B cell receptor (BCR), CD19 can also signal independently of BCR co-ligation and is a central regulatory component upon which multiple signaling pathways converge. Mutation of the CD19 gene results in hypogammaglobulinemia, whereas CD19 overexpression causes B cell hyperactivity.

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**CD19 Antibody (25-0199-41) in Flow**

Staining of normal human peripheral blood cells with Anti-Human CD3 FITC (Product # 11-0038-42) and Mouse IgG1 K Isotype Control PE-Cyanine7 (Product # 25-4714-80) (left) or Anti-Human CD19 PE-Cyanine7 (right). Cells in the lymphocyte gate were used for analysis.

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22 Flow Cytometry References

Species / Dilution	Summary
	25-0199 was used in Flow cytometry/Cell sorting to to assess whether CellSearch is effective in detecting the five subtypes of human breast cancer, showing that CellSearch did not recognise normal-like breast cancer cells, suggesting that new tests should be developed that include other antibodies than those against EpCAM.
Human / Not Cited	Journal of the National Cancer Institute ( 2009; 101: 61) <b>"Anti-epithelial cell adhesion molecule antibodies and the detection of circulating normal-like breast tumor cells."</b> Author(s):Sieuwerts AM,Kraan J,Bolt J,van der Spoel P,Elstrodt F,Schutte M,Martens JW,Gratama JW,Sleijfer S,Foekens JA PubMed Article URL: <a href="http://dx.doi.org/10.1093/jnci/djn419">http://dx.doi.org/10.1093/jnci/djn419</a>
	25-0199 was used in Flow cytometry/Cell sorting to develop a generalised unmixing model for multispectral flow cytometry.
Human / Not Cited	Cytometry. Part A : the journal of the International Society for Analytical Cytology ( 2013; 83: 508) <b>"Generalized unmixing model for multispectral flow cytometry utilizing nonsquare compensation matrices."</b> Author(s):Novo D,Grégori G,Rajwa B PubMed Article URL: <a href="http://dx.doi.org/10.1002/cyto.a.22272">http://dx.doi.org/10.1002/cyto.a.22272</a>
	25-0199 was used in Flow cytometry/Cell sorting to suggest that CD1a on LCs is involved in maintaining the immune barrier in the skin.
Human / Not Cited	Journal of immunology (Baltimore, Md. : 1950) ( 2018; 201: 3006) <b>"Differentiation of Langerhans Cells from Monocytes and Their Specific Function in Inducing IL-22-Specific Th Cells."</b> Author(s):Otsuka Y,Watanabe E,Shinya E,Okura S,Saeki H,Geijtenbeek TBH,Takahashi H PubMed Article URL: <a href="http://dx.doi.org/10.4049/jimmunol.1701402">http://dx.doi.org/10.4049/jimmunol.1701402</a>
	25-0199-42 was used in Flow Cytometry to characterise CD11c+ B cells from healthy donors by flow cytometry, microarray analysis, and in vitro functional assays.
Human / Not Cited	Frontiers in immunology ( 2021; 11: ) <b>"CD11c&lt;sup&gt;+&lt;/sup&gt; B Cells Are Mainly Memory Cells, Precursors of Antibody Secreting Cells in Healthy Donors."</b> Author(s):Golinski ML,Demeules M,Derambure C,Riou G,Maho-Vaillant M,Boyer O,Joly P,Calbo S PubMed Article URL: <a href="http://dx.doi.org/10.3389/fimmu.2020.00032">http://dx.doi.org/10.3389/fimmu.2020.00032</a>
	25-0199 was used in Flow cytometry/Cell sorting to determine the relationship between interleukin-1 type 1 and type 2 receptor gene polymorphisms and the expression level of membrane-bound IL1-Rs.
Human / Not Cited	Cellular & molecular immunology ( 2015; 12: 222) <b>"Relationship between interleukin-1 type 1 and 2 receptor gene polymorphisms and the expression level of membrane-bound receptors."</b> Author(s):Vasilyev FF,Silko AN,Sennikov SV PubMed Article URL: <a href="http://dx.doi.org/10.1038/cmi.2014.43">http://dx.doi.org/10.1038/cmi.2014.43</a>
	25-0199 was used in Flow cytometry/Cell sorting to assess the role of DNA replicative stress and nucleotide pool levels in limiting Epstein-Barr virus (EBV)-infected B-cell outgrowth.
Human / 1 µL x 10^6 cells	Oncogenesis ( 2017; 6: ) <b>"Limited nucleotide pools restrict Epstein-Barr virus-mediated B-cell immortalization."</b> Author(s):Hafez AY,Messinger JE,McFadden K,Fenyofalvi G,Shepard CN,Lenzi GM,Kim B,Luftig MA PubMed Article URL: <a href="http://dx.doi.org/10.1038/oncsis.2017.46">http://dx.doi.org/10.1038/oncsis.2017.46</a>
	25-0199 was used in Flow cytometry/Cell sorting to examined associations between B and T cell phenotypic profiles and antibody responses to the pentavalent rotavirus vaccine in perinatally HIV-infected infants.
Human / Not Cited	Frontiers in immunology ( 2020; 8: ) <b>"B and T Cell Phenotypic Profiles of African HIV-Infected and HIV-Exposed Uninfected Infants: Associations with Antibody Responses to the Pentavalent Rotavirus Vaccine."</b> Author(s):Weinberg A,Lindsey J,Bosch R,Persaud D,Sato P,Ogwu A,Asmelash A,Bwakura-Dangarambezi M,Chi BH,Canniff J,Lockman S,Gaseitsiwe S,Moyo S,Smith CE,Moraka NO,Levin MJ PubMed Article URL: <a href="http://dx.doi.org/10.3389/fimmu.2017.02002">http://dx.doi.org/10.3389/fimmu.2017.02002</a>
	25-0199 was used in Flow cytometry/Cell sorting to characterise the different B-cell pathologies that exist within systemic lupus erythematosus.
Human / Not Cited	Rheumatology (Oxford, England) ( 2012; 51: 1208) <b>"B-cell numbers and phenotype at clinical relapse following rituximab therapy differ in SLE patients according to anti-dsDNA antibody levels."</b> Author(s):Lazarus MN,Turner-Stokes T,Chavele KM,Isenberg DA,Ehrenstein MR PubMed Article URL: <a href="http://dx.doi.org/10.1093/rheumatology/ker526">http://dx.doi.org/10.1093/rheumatology/ker526</a>

	25-0199 was used in Flow cytometry/Cell sorting to suggest a chronic immune stimulation leading to a lower natural killer cell count in secondary recurrent pregnancy loss patients with a lower natural killer cytotoxicity.
Human / Not Cited	Journal of clinical medicine ( 2021; 10: ) <b>"Different Background: Natural Killer Cell Profiles in Secondary versus Primary Recurrent Pregnancy Loss."</b> Author(s):Strobel L,Vomstein K,Kyvelidou C,Hofer-Tollinger S,Feil K,Kuon RJ,Ebner S,Troppmair J,Toth B PubMed Article URL: <a href="http://dx.doi.org/10.3390/jcm10020194">http://dx.doi.org/10.3390/jcm10020194</a>
	25-0199 was used in Flow cytometry/Cell sorting to analyse different cell subpopulations for the number of membrane-bound IL-1R molecules.
Human / Not Cited	Cytotechnology ( 2013; 65: 795) <b>"Optimized flow cytometry protocol for analysis of surface expression of interleukin-1 receptor types I and II."</b> Author(s):Vasilyev FF,Lopatnikova JA,Sennikov SV PubMed Article URL: <a href="http://dx.doi.org/10.1007/s10616-013-9546-6">http://dx.doi.org/10.1007/s10616-013-9546-6</a>
	25-0199 was used in Flow cytometry/Cell sorting to investigate whether T cell-independent antibody responses are required to resolve Borrelia relapse in humans.
Human / Not Cited	Proceedings of the National Academy of Sciences of the United States of America ( 2011; 108: 20707) <b>"Characteristics of Borrelia hermsii infection in human hematopoietic stem cell-engrafted mice mirror those of human relapsing fever."</b> Author(s):Vuyyuru R,Liu H,Manser T,Alugupalli KR PubMed Article URL: <a href="http://dx.doi.org/10.1073/pnas.1108776109">http://dx.doi.org/10.1073/pnas.1108776109</a>
	25-0199 was used in Flow cytometry/Cell sorting to demonstrate that exogenous PEPITEM reduces T cell recruitment into inflamed tissues in multiple animal models of autoimmune, inflammatory diseases.
Human / 1:50	Nature medicine ( 2015; 21: 467) <b>"Homeostatic regulation of T cell trafficking by a B cell-derived peptide is impaired in autoimmune and chronic inflammatory disease."</b> Author(s):Chimen M,McGettrick HM,Apta B,Kuravi SJ,Yates CM,Kennedy A,Odedra A,Alassiri M,Harrison M,Martin A,Barone F,Nayar S,Hitchcock JR,Cunningham AF,Raza K,Filer A,Copland DA,Dick AD,Robinson J,Kalia N,Walker LSK,Buckley CD,Nash GB,Narendran P,Rainger GE PubMed Article URL: <a href="http://dx.doi.org/10.1038/nm.3842">http://dx.doi.org/10.1038/nm.3842</a>
	25-0199 was used in Flow cytometry/Cell sorting to investigate the DNA damage response mediated senescence in early arrested EBV-infected B cells.
Human / Not Cited	Viruses ( 2017; 9: ) <b>"Characterization of the EBV-Induced Persistent DNA Damage Response."</b> Author(s):Hafez AY,Luftig MA PubMed Article URL: <a href="http://dx.doi.org/10.3390/v9120366">http://dx.doi.org/10.3390/v9120366</a>
	25-0199-42 was used in Flow cytometry/Cell sorting to find that IGHV1-2 alleles traditionally thought to be incompatible with VRC01-class responses are relatively common in various human populations and that germline variation within IGHV1-2 associates with gene usage frequencies in the naive BCR repertoire.
Human / 1:100	NPJ vaccines ( 2021; 6: ) <b>"Vaccine genetics of IGHV1-2 VRC01-class broadly neutralizing antibody precursor naïve human B cells."</b> Author(s):Lee JH,Toy L,Kos JT,Safonova Y,Schief WR,Havenar-Daughton C,Watson CT,Crotty S PubMed Article URL: <a href="http://dx.doi.org/10.1038/s41541-021-00376-7">http://dx.doi.org/10.1038/s41541-021-00376-7</a>
	25-0199 was used in Flow cytometry/Cell sorting to investigate the interplay between uracil creation by activation-induced deaminase and its removal by UNG2 glycosylase in splenocytes undergoing maturation and in B cell cancers.
Human / Not Cited	Molecular and cellular biology ( 2014; 34: 4019) <b>"Genomic uracil homeostasis during normal B cell maturation and loss of this balance during B cell cancer development."</b> Author(s):Shalhout S,Haddad D,Sosin A,Holland TC,Al-Katib A,Martin A,Bhagwat AS PubMed Article URL: <a href="http://dx.doi.org/10.1128/MCB.00589-14">http://dx.doi.org/10.1128/MCB.00589-14</a>
	25-0199 was used in Flow cytometry/Cell sorting to investigate the level of TNF receptors on various cells of the immune system and its association with gene polymorphism.
Human / Not Cited	Mediators of inflammation ( 2014; 2014: ) <b>"Polymorphisms in the tumor necrosis factor receptor genes affect the expression levels of membrane-bound type I and type II receptors."</b> Author(s):Sennikov SV,Vasilyev FF,Lopatnikova JA,Shkaruba NS,Silkov AN PubMed Article URL: <a href="http://dx.doi.org/10.1155/2014/745909">http://dx.doi.org/10.1155/2014/745909</a>

	25-0199 was used in Flow cytometry/Cell sorting to demonstrate reduced IL-10 and increased AID levels in the B cells of patients with Behcet's disease.
Human / Not Cited	Biomedical reports ( 2017; 7: 520) <b>"Aberrant expression of interleukin-10 and activation-induced cytidine deaminase in B cells from patients with Behçet's disease."</b> Author(s):Yoon JY, Lee Y, Yu SL, Yoon HK, Park HY, Joung CI, Park SR, Kwon M, Kang J PubMed Article URL: <a href="http://dx.doi.org/10.3892/br.2017.996">http://dx.doi.org/10.3892/br.2017.996</a>
Human / Not Cited	25-0199 was used in Flow cytometry/Cell sorting to investigate a strategy for an HCMV vaccine that aims at the simultaneous activation of innate and adaptive immune responses.  PLoS pathogens ( 2016; 12: ) <b>"Activation of Innate and Adaptive Immunity by a Recombinant Human Cytomegalovirus Strain Expressing an NKG2D Ligand."</b> Author(s):Tomi A, Varanasi PR, Golemac M, Mali S, Riese P, Borst EM, Mischak-Weissinger E, Guzmán CA, Krmpoti A, Jonji S, Messerle M PubMed Article URL: <a href="http://dx.doi.org/10.1371/journal.ppat.1006015">http://dx.doi.org/10.1371/journal.ppat.1006015</a>
Human / Not Cited	25-0199 was used in Flow cytometry/Cell sorting to investigate the molecular connection between agricultural pesticide use, t(14;18) in blood and lymphomagenesis.  The Journal of experimental medicine ( 2009; 206: 1473) <b>"Agricultural pesticide exposure and the molecular connection to lymphomagenesis."</b> Author(s):Agopian J, Navarro JM, Gac AC, Lecluse Y, Briand M, Grenot P, Gauduchon P, Ruminy P, Lebailly P, Nadel B, Roulland S PubMed Article URL: <a href="http://dx.doi.org/10.1084/jem.20082842">http://dx.doi.org/10.1084/jem.20082842</a>
Human / Not Cited	25-0199 was used in Flow cytometry/Cell sorting to investigate the presence and identity of LLT1-expressing cells in RA synovial fluid (SF) and synovial tissue (ST).  PloS one ( 2016; 10: ) <b>"Expression of Lectin-Like Transcript 1, the Ligand for CD161, in Rheumatoid Arthritis."</b> Author(s):Chalan P, Bijzet J, Huitema MG, Kroesen BJ, Brouwer E, Boots AM PubMed Article URL: <a href="http://dx.doi.org/10.1371/journal.pone.0132436">http://dx.doi.org/10.1371/journal.pone.0132436</a>
Human / Not Cited	25-0199 was used in Flow cytometry/Cell sorting to study immune cell types and their differential expression of receptors to immunomodulatory cytokines in healthy and arthritic individuals.  Mediators of inflammation ( 2016; 2015: ) <b>"Differences of IL-1 Receptors Expression by Immunocompetent Cells Subsets in Rheumatoid Arthritis."</b> Author(s):Alshevskaya AA, Lopatnikova JA, Shkaruba NS, Chumasova OA, Sizikov AE, Karaulov AV, Kozlov VA, Sennikov SV PubMed Article URL: <a href="http://dx.doi.org/10.1155/2015/948393">http://dx.doi.org/10.1155/2015/948393</a>
Human / Not Cited	25-0199 was used in Flow cytometry/Cell sorting to characterize transcription factor activities along the B-lineage differentiation trajectory as a reference to characterize the aberrant cell states present in leukemic bone marrow, and to identify those transcription factors that maintain cancer-specific cell states for more precise therapeutic intervention.  Genome medicine ( 2020; 12: ) <b>"Single cell characterization of B-lymphoid differentiation and leukemic cell states during chemotherapy in ETV6-RUNX1-positive pediatric leukemia identifies drug-targetable transcription factor activities."</b> Author(s):Mehtonen J, Teppo S, Lahnalampi M, Kokko A, Kaukonen R, Oksa L, Bouvy-Liivrand M, Malyukova A, Mäkinen A, Laukkanen S, Mäkinen PI, Rounioja S, Ruusuvaori P, Sangfelt O, Lund R, Lönnberg T, Lohi O, Heinäniemi M PubMed Article URL: <a href="http://dx.doi.org/10.1186/s13073-020-00799-2">http://dx.doi.org/10.1186/s13073-020-00799-2</a>

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