

TECHNICAL DATA SHEET

CyFlow™ CD19 PE-DyLight™ 594 Anti-Hu; Clone 4G7

REF AA625612

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD19
Alternative Names	B4
Clone	4G7
Clonality	monoclonal
Format	PE-DyLight™ 594
Host / Isotype	Mouse / IgG1
Species Reactivity	Human
Negative Species Reactivity	—
Quantity	100 tests
Immunogen	Human CCL (chronic lymphocytic leukemia) cells

Specificity

The mouse monoclonal antibody 4G7 recognizes CD19 antigen, a 95 kDa type I transmembrane glycoprotein of immunoglobulin superfamily, expressed on B lymphocytes and follicular dendritic cells; it is lost on plasma cells.

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Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 4 µl reagent / 100 µl of whole blood or 10⁶ cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests.

Other usages may be determined from the scientific literature.

Storage Buffer

The reagent is provided in stabilizing phosphate buffered saline (PBS) solution, pH ≈7.4, containing 0.1% (w/v) sodium azide.

Storage and Stability

Storage	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
Stability	Do not use after expiration date stamped on vial label.

Background Information

CD19 is a transmembrane glycoprotein of Ig superfamily expressed by B cells from the time of heavy chain rearrangement until plasma cell differentiation. It forms a tetrameric complex with CD21 (complement receptor type 2), CD81 (TAPA-1) and Leu13. Together with BCR (B cell antigen receptor), this complex signals to decrease B cell threshold for activation by the antigen. Besides being signal-amplifying coreceptor for BCR, CD19 can also signal independently of BCR coligation and it turns out to be 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.

References

- Reinherz EL, Haynes BF, Nadler LM, Bernstein ID: Leukocyte Typing II, Volume 1 Human T Lymphocytes. Springer Verlag, New York. 1986; 1:1-549. < PMID: Springer 8587-5 >
- Muench MO, Roncarolo MG, Namikawa R: Phenotypic and functional evidence for the expression of CD4 by hematopoietic stem cells isolated from human fetal liver. Blood. 1997 Feb 15; 89(4):1364-75. < PMID: 9028960 >
- Stockmeyer B, Dechant M, van Egmond M, Tutt AL, Sundarapandiyan K, Graziano RF, Repp R, Kalden JR, Gramatzki M, Glennie MJ, van de Winkel JG, Valerius T: Triggering Fc alpha-receptor I (CD8{09}

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- recruits neutrophils as effector cells for CD20-directed antibody therapy. *J Immunol.* 2000 Nov 15; 165(10):5954-61. < PMID: 11067958 >
- Dubois B, Massacrier C, Caux C: Selective attraction of naive and memory B cells by dendritic cells. *J Leukoc Biol.* 2001 Oct; 70(4):633-41. < PMID: 11590201 >
 - Basu S, Lynne CM, Ruiz P, Aballa TC, Ferrell SM, Brackett NL: Cytofluorographic identification of activated T-cell subpopulations in the semen of men with spinal cord injuries. *J Androl.* 2002 Jul-Aug; 23(4):551-6. < PMID: 12065463 >
 - Porcellini S, Vallanti G, Nozza S, Poli G, Lazzarin A, Tambussi G, Siccardi AG, Grassi F: Improved thymopoietic potential in aviremic HIV infected individuals treated with HAART by intermittent IL-2 administration. *AIDS.* 2003 Jul 25; 17(11):1621-30. < PMID: 12853744 >
 - Treusch M, Vonthein R, Baur M, Günaydin I, Koch S, Stübiger N, Eckstein AK, Peter HH, Ness T, Zierhut M, Kötter I: Influence of human recombinant interferon-alpha2a (rhIFN-alpha2a) on altered lymphocyte subpopulations and monocytes in Behcet's disease. *Rheumatology (Oxford).* 2004 Oct; 43(10):1275-82. < PMID: 15252211 >
 - Köller M, Zwölfer B, Steiner G, Smolen JS, Scheinecker C: Phenotypic and functional deficiencies of monocyte-derived dendritic cells in systemic lupus erythematosus (SLE) patients. *Int Immunol.* 2004 Nov; 16(11):1595-604. < PMID: 15381672 >
 - Martino V, Tonelli R, Montemurro L, Franzoni M, Marino F, Fazzina R, Pession A: Down-regulation of MLL-AF9, MLL and MYC expression is not obligatory for monocyte-macrophage maturation in AML-M5 cell lines carrying t(9: 11)(p22: q23). *Oncol Rep.* 2006 Jan; 15(1):207-11. < PMID: 16328057 >
 - Andersen P, Pedersen MW, Woetmann A, Villingshøj M, Stockhausen MT, Odum N, Poulsen HS: EGFR induces expression of IRF-1 via STAT1 and STAT3 activation leading to growth arrest of human cancer cells. *Int J Cancer.* 2008 Jan 15; 122(2):342-9. < PMID: 17918184 >

The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

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