TECHNICAL DATA SHEET

CyFlow™ CD19 PE

Anti-Ms; Clone 1D3

REF **CF747469**

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD19
Alternative Names	B4
Clone	1D3
Clonality	monoclonal
Format	PE
Host / Isotype	Rat / IgG2a
Species Reactivity	Mouse
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [0.5 mg/ml]
Immunogen	Mouse CD19-transfected cell line

Specificity

The rat monoclonal antibody 1D3 recognizes mouse CD19 antigen, 95 kDa type I transmembrane glycoprotein (immunoglobulin superfamily) expressed on B lymphocytes and follicular dendritic cells; it is lost on plasma cells.

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

Application

The reagent is designed for Flow Cytometry analysis. Suggested working usage is 1 µg/ml. Indicated dilution is recommended starting point for use of this product, but working concentrations should be validated by the investigator.

Other usages may be determined from the scientific literature.

Storage Buffer

The reagent is provided in 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 treshold 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

- Krop I, de Fougerolles AR, Hardy RR, Allison M, Schlissel MS, Fearon DT: Self-renewal of B-1 lymphocytes is dependent on CD19. Eur J Immunol. 1996 Jan; 26(1):238-42. < PMID: 8566073 >
- Krop I, Shaffer AL, Fearon DT, Schlissel MS: The signaling activity of murine CD19 is regulated during cell development. J Immunol. 1996 Jul 1; 157(1):48-56. < PMID: 8683154 >
- Cherukuri A, Cheng PC, Pierce SK: The role of the CD19/CD21 complex in B cell processing and presentation of complement-tagged antigens. J Immunol. 2001 Jul 1; 167(1):163-72. < PMID: 11418645 >

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

- Inabe K, Kurosaki T: Tyrosine phosphorylation of B-cell adaptor for phosphoinositide 3-kinase is required for Akt activation in response to CD19 engagement. Blood. 2002 Jan 15; 99(2):584-9. < PMID: 11781242 >
- Shoham T, Rajapaksa R, Boucheix C, Rubinstein E, Poe JC, Tedder TF, Levy S: The tetraspanin CD81 regulates the expression of CD19 during B cell development in a postendoplasmic reticulum compartment. J Immunol. 2003 Oct 15; 171(8):4062-72. < PMID: 14530327 >

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

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com