

## 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

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

#### Contact Information:

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## 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.

## 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

<b>Storage</b>	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
<b>Stability</b>	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

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- 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 >
- 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 >

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The Safety Data Sheet for this product is available at [www.sysmex-partec.com/services](http://www.sysmex-partec.com/services).

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