



11-596-C025

## Monoclonal Antibody to CD19 (mouse) Purified Antibody (0.025 mg)

|                             |   |
|-----------------------------|---|
| <b>Clone:</b>               | 1D3   |
| <b>Isotype:</b>             | Rat IgG2a   |
| <b>Specificity:</b>         | The rat monoclonal antibody 1D3 detects mouse CD19, 95 kDa type I transmembrane glycoprotein (immunoglobulin superfamily) expressed on B lymphocytes and follicular dendritic cells; it is lost on plasma cells.  |
| <b>Regulatory Status:</b>   | RUO   |
| <b>Immunogen:</b>           | Mouse CD19-transfected cell line  |
| <b>Species Reactivity:</b>  | Mouse   |
| <b>Application:</b>         | Flow Cytometry<br>Immunoprecipitation<br>Immunohistochemistry (frozen sections)<br>Functional Application<br>This antibody can induce down-regulation of CD19, affecting the proportions of B cell subpopulations.  |
| <b>Purity:</b>              | > 95% (by SDS-PAGE)   |
| <b>Purification:</b>        | Purified by protein-G affinity chromatography   |
| <b>Concentration:</b>       | 1 mg/ml   |
| <b>Storage Buffer:</b>      | Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4   |
| <b>Storage / Stability:</b> | Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.  |
| <b>Expiration:</b>          | See vial label  |
| <b>Lot Number:</b>          | See vial label  |
| <b>Background:</b>          | 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. |

**For laboratory research only, not for drug, diagnostic or other use.**



**Antibodies**

**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.

\*Krop I, de Fougères 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.

\*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.

\*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.

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