

## Anti-Mouse CD19 FITC

Catalogue Number : 11212-50

RUO: For Research Use Only. Not for use in diagnostic procedures.

### Product Information

**Clone:** 1D3

**Format/Conjugate:** FITC

**Concentration:** 0.5 mg/mL

**Reactivity:** Mouse

**Laser:** Blue (488nm)

**Peak Emission:** 520nm

**Peak Excitation:** 494nm

**Filter:** 530/30

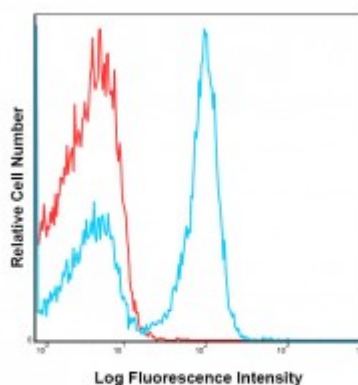
**Brightness (1=dim,5=brightest):** 3

**Isotype:** Rat IgG2a, kappa

**Formulation:** Phosphate-buffered aqueous solution,  $\leq 0.09\%$  Sodium azide, may contain carrier protein/stabilizer, pH7.2.

**Storage:** Product should be kept at 2-8°C and protected from prolonged exposure to light.

**Applications:** FC



C57Bl/6 splenocytes were stained with FITC 1D3 with relevant isotype control in Red.

### Description

The 1D3 monoclonal antibody specifically reacts with mouse CD19, a 95 kDa transmembrane glycoprotein, a member of the Ig superfamily and a B cell-lineage differentiation antigen expressed by all the B lymphocyte development stages, except for the terminally differentiated plasma cells.

CD19 associates with CD21, CD81 and MHC class II to form a multi-molecular complex that initiates the mature B lymphocyte activation by interaction with the B-cell receptors. CD 19 enhances the B cell proliferation, development and activation, and the maturation of memory B cells. In CD19-deficient mice, the generation and maturation of B lymphocytes in the bone marrow and periphery are affected.

### Preparation & Storage

The product should be stored undiluted at 4°C and should be protected from prolonged exposure to light. Do not freeze. The monoclonal antibody was purified utilizing affinity chromatography and unreacted dye was removed from the product.

### Application Notes

The antibody has been analyzed for quality through the flow cytometric analysis of the relevant cell type. For flow cytometric staining, the suggested use of this reagent is  $\leq 0.25$  ug per million cells in 100  $\mu$ l volume. It is recommended that the reagent be titrated for optimal performance for each application.

### References

1. Cherukuri, A., Cheng, P. C., ; Pierce, S. K. (2001). The role of the CD19/CD21 complex in B cell processing and presentation of complement-tagged antigens. *The Journal of Immunology*, 167(1), 163-172.
2. Krop, I., De Fougères, A. R., Hardy, R. R., Allison, M., Schlissel, M. S., ; Fearon, D. T. (1996). Self-renewal of B-1 lymphocytes is dependent on CD19. *European journal of immunology*,;26(1), 238-242.
3. Engel, P., Zhou, L. J., Ord, D. C., Sato, S., Koller, B., ; Tedder, T. F. (1995). Abnormal B lymphocyte development, activation, and differentiation in mice that lack or overexpress the CD19 signal transduction molecule. *Immunity*,;3(1), 39-50.
4. Sato, S., Jansen, P. J., ; Tedder, T. F. (1997). CD19 and CD22 expression reciprocally regulates tyrosine phosphorylation of Vav protein during B lymphocyte signaling. *Proceedings of the National Academy of Sciences*,94(24), 13158-13162.