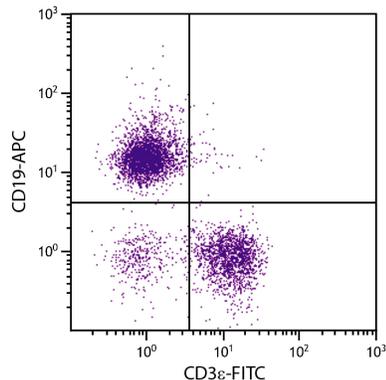




## Mouse Anti-Mouse CD19

Cat. No.	Format	Size
1576-01	Purified (UNLB)	0.5 mg
1576-02	Fluorescein (FITC)	0.5 mg
1576-08	Biotin (BIOT)	0.5 mg
1576-09	R-phycoerythrin (PE)	0.1 mg
1576-11	Allophycocyanin (APC)	0.1 mg
1576-13	Spectral Red® (SPRD)	0.1 mg
1576-18	Allophycocyanin-Cyanine 5.5 (APC/CY5.5)	0.1 mg
1576-19	Allophycocyanin-Cyanine 7 (APC/CY7)	0.1 mg



BALB/c mouse splenocytes were stained with Mouse Anti-Mouse CD19-APC (SB Cat. No. 1576-11) and Rat Anti-Mouse CD3 $\epsilon$ -FITC (SB Cat. No. 1535-02).

### Overview

<b>Clone</b>	MB19-1
<b>Isotype</b>	Mouse (129 x C57BL/6) IgA $\kappa$
<b>Immunogen</b>	CD19 <sup>+</sup> mouse pre-B cell line 300.19
<b>Specificity</b>	Mouse CD19; Mr 95 kDa
<b>Alternate Name(s)</b>	B4, Leu-12

### Description

CD19 is a monomeric transmembrane glycoprotein expressed at relatively constant levels throughout B cell development from early pro-B/pre-B cells (i.e. B220<sup>+</sup>/CD43<sup>+</sup>/HSA<sup>+</sup>) through fully differentiated B cell stages. Terminally differentiated plasma cells do not express CD19. In humans, the CD19 molecule on the surface of mature B cells associates with CD21 (CR-2) and CD81 (TAPA-1), and this multimolecular complex synergizes with surface immunoglobulin to provide signal transduction and promote cellular activation. All splenic and peritoneal IgM<sup>+</sup> cells of both B-1 and B-2 lineages are CD19<sup>+</sup>, with B-1 cells expressing higher levels of CD19 than B-2 cells in these sites. Studies with CD19-deficient mice have suggested that this molecule may not be required for normal generation and maturation of B cells in the bone marrow.

### Applications

FC – Quality tested <sup>1,6</sup>  
 IP – Reported in literature <sup>1-3,7</sup>  
 Activ – Reported in literature <sup>4,5,7</sup>

### Working Dilutions

<b>Flow Cytometry</b>	FITC and BIOT conjugates	≤ 1 $\mu$ g/10 <sup>6</sup> cells
	APC/CY5.5 and APC/CY7 conjugates	≤ 0.3 $\mu$ g/10 <sup>6</sup> cells
	PE, APC, and SPRD conjugates	≤ 0.2 $\mu$ g/10 <sup>6</sup> cells
	For flow cytometry, the suggested use of these reagents is in a final volume of 100 $\mu$ L	

**Other Applications** Since applications vary, you should determine the optimum working dilution for the product that is appropriate for your specific need.

**For Research Use Only. Not for Diagnostic or Therapeutic Use.**

Corporate Offices: 160 Oxmoor Blvd • Birmingham, AL 35209 • USA Mailing Address: P.O. Box 26221 • Birmingham, AL 35260 • USA

Tel: 205.945.1774 • U.S. and Canada: 800.722.2255 • Fax: 205.945.8768

Email: [info@southernbiotech.com](mailto:info@southernbiotech.com) • Website: [www.southernbiotech.com](http://www.southernbiotech.com)

## Handling and Storage

---

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of borate buffered saline, pH 8.2. *No preservatives or amine-containing buffer salts added.* Store at 2-8°C.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN<sub>3</sub>. Store at 2-8°C.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN<sub>3</sub>. Store at 2-8°C.
- The R-phycoerythrin (PE) and allophycocyanin (APC) conjugates are supplied as 0.1 mg in 1.0 mL of PBS/NaN<sub>3</sub> and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The Spectral Red<sup>®</sup> (SPRD), allophycocyanin-Cyanine 5.5 (APC/CY5.5), and allophycocyanin-Cyanine 7 (APC/CY7) conjugates are supplied as 0.1 mg in 1.0 mL of PBS/NaN<sub>3</sub> and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- Protect fluorochrome-conjugated forms from light. Reagents are stable for the period shown on the label if stored as directed.

## Warning

---

Some reagents contain sodium azide. Please refer to product specific SDS.

## References

---

1. Sato S, Ono N, Steeber DA, Pisetsky DS, Tedder TF. CD19 regulates B lymphocyte signaling thresholds critical for the development of B-1 lineage cells and autoimmunity. *J Immunol.* 1996;157:4371-8. (Immunogen, FC, IP)
2. Yazawa N, Fujimoto M, Sato S, Miyake K, Asano N, Nagai Y, et al. CD19 regulates innate immunity by the toll-like receptor RP105 signaling in B lymphocytes. *Blood.* 2003;102:1374-80. (IP)
3. Fujimoto M, Poe JC, Jansen PJ, Sato S, Tedder TF. CD19 amplifies B lymphocyte signal transduction by regulating Src-family protein tyrosine kinase activation. *J Immunol.* 1999;162:7088-94. (IP)
4. Fujimoto M, Poe JC, Hasegawa M, Tedder TF. CD19 amplification of B lymphocyte Ca<sup>2+</sup> responses: a role for Lyn sequestration in extinguishing negative regulation. *J Biol Chem.* 2001;276:44820-7. (Activ)
5. Sato S, Jansen PJ, Tedder TF. CD19 and CD22 expression reciprocally regulates tyrosine phosphorylation of Vav protein during B lymphocyte signaling. *Proc Natl Acad Sci USA.* 1997;94:13158-62. (Activ)
6. Sato S, Steeber DA, Jansen PJ, Tedder TF. CD19 expression levels regulate B lymphocyte development: human CD19 restores normal function in mice lacking endogenous CD19. *J Immunol.* 1997;158:4662-9. (FC)
7. Lee Y, Haas KM, Gor DO, Ding X, Karp DR, Greenspan NS, et al. Complement component C3d-antigen complexes can either augment or inhibit B lymphocyte activation and humoral immunity in mice depending on the degree of CD21/CD19 complex engagement. *J Immunol.* 2005;175:8011-23. (FC, IP, Activ)

Spectral Red<sup>®</sup> is a registered trademark of Southern Biotechnology Associates, Inc.

Spectral Red<sup>®</sup> is a PE/CY5 tandem conjugate.

Cy<sup>®</sup> is a registered trademark of GE Healthcare.