

## MONOCLONAL ANTIBODY

CD5

Cat. No.	Form	Quantity	Presentation
0116	Purified	0.2 mg	Freeze-dried
0467	Purified	100 tests	Liquid 2 mL
0468	FITC	100 tests	Liquid 2 mL
0469	PE	100 tests	Liquid 2 mL
2080	PE-Cy5	100 tests	Liquid 2 mL

<b>Clone</b>	BL1a
<b>Isotype</b>	IgG2a (mouse)
<b>Immunogen</b>	Human thoracic duct lymphocytes (TDL)
<b>Hybridoma</b>	Myeloma SP2/o-Ag1.4 x Balb/c spleen cells
<b>Specificity</b>	<p>The CD5 antigen is a single-chain glycoprotein with a molecular weight of 67 kDa (1, 2).</p> <p>The CD5 molecule is found on all mature T cells and on most thymocytes. CD5 antigen is also present on B cell subset but is not found on granulocytes and monocytes.</p> <p>CD5 is the ligand for the CD72 antigen, which is present on B cells (3).</p> <p>The CD5 / CD72 interactions may be involved in the regulating T and B cells activation and proliferation (4, 5).</p> <p>BL1a antibody has been assigned to the CD5 cluster of differentiation during the third International Workshop on Human Leucocyte Differentiation Antigens in Oxford, 1986 (1, 2).</p>
<b>Applications</b>	<p>Flow cytometry and fluorescence microscopy.</p> <p>Immunoprecipitation.</p> <p>Studies of signaling pathways and / or interactions between B and T-cells.</p> <p>Studies of T-cell activation and / or proliferation.</p> <p>Studies of CD5<sup>+</sup> B-cell activation and / or proliferation.</p>
<b>Buffer</b>	<p>Freeze-dried form: 1 mg/mL bovine serum albumin in phosphate-buffered saline.</p> <p>Liquid forms: 2 mg/mL bovine serum albumin in phosphate-buffered saline containing 0.1% sodium azide.</p>
<b>Conjugation</b>	<p>Fluorescein isothiocyanate (FITC): FITC conjugated (4-7 moles of FITC per mole of IgG).</p> <p>Excitation wavelength: 488 nm</p> <p>Maximum emission wavelength: 525 nm</p> <p>Main emission color: green.</p>

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MAC001

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**IMMUNOTECH**  
 A COULTER COMPANY

 B.P. 177 - 13276 Marseille Cedex 9 France  
 Tel. (33) 91 17 27 00 - Fax. (33) 91 41 958

Phycoerythrin (PE): R-Phycoerythrin conjugated (1 mole of PE per mole of IgG).  
 Excitation wavelength: 488 nm  
 Maximum emission wavelength: 575 nm  
 Main emission color: orange-red.

Phycoerythrin-cyanin 5.1 (PE-Cy5): The IgG is conjugated to a tandem dye, constituted of R-Phycoerythrin covalently linked to cyanin 5.1 (1 mole of PE-Cy5 per mole of IgG).  
 Excitation wavelength: 488 nm  
 Maximum emission wavelength: 670 nm  
 Main emission color: deep-red.

Limitation: PE-Cy5 conjugates are recommended for use only on flow cytometers equipped with a 675 nm band pass filter in front of the fluorescence detector.

**Reconstitution and Storage**

The freeze-dried form may be stored at 2-8°C until the expiration date. Reconstitute with 1 mL of distilled water. No preservative has been added. The reconstituted form may be stored at -20°C until the expiration date. Aliquotting is suggested to avoid multiple freeze-thaw cycles. The addition of sodium azide at 0.1% (w/v) is recommended for storage of the reconstituted form for up to one month at 2-8°C.

The conjugated forms should not be frozen and should be stored in the dark at 2 - 8°C until the expiration date stated on the vial label.

**Recommended Procedures**

Fluorescence microscopy or flow cytometry:

Liquid forms: 20 µL / 5 x 10<sup>5</sup> cells / test or 100 µL whole blood.

Freeze-dried form: 2 µg / 5 x 10<sup>5</sup> cells / test.

**Example data**

The flow cytometry analyzed histogram shown below, (side scatter versus fluorescence 2), illustrates the labelling of peripheral whole blood cells with CD5 PE-Cy5 (Cat. No. 2080).

