

Monoclonal Antibody CD5

PN IM0116 – Purified – Freeze-dried – 0.2 mg – Clone BL1a

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

SPECIFICITY

The CD5 antigen is a single-chain transmembrane glycoprotein with a molecular weight of 67 kDa (1, 2).

The CD5 molecule is expressed at the surface of mature T lymphocytes, by the majority of thymocytes and by a sub-population of B lymphocytes (1–3). Its expression is not found in granulocytes, monocytes and platelets (3). The CD5 antigen is the ligand for the B-lymphocytes cell-surface protein CD72 (4). The CD5 / CD72 interactions contribute to T and B lymphocyte communication by cell-cell contact. These interactions are involved in the regulation of T and B lymphocyte activation and proliferation (5, 6).

B lymphocytes can be divided into so-called B-1 lymphocytes and B-2 (or conventional B) lymphocytes based on differential anatomical localization, functional characteristics and gene expression (7). The B-1 lymphocyte subset is divided into B-1a and B-1b subpopulations, which do or do not express the CD5 antigen respectively (7).

The B-1a lymphocytes may arise from a non conventional B lineage (independent of bone marrow) (7–9). This CD5+ B lymphocyte subset expresses immunoglobulin with inherent low affinities for self-antigens (8, 9). MAb BL1a was assigned to CD5 during the 3rd HLDA Workshop on Human Leucocyte Differentiation Antigens, held in Oxford, England, in 1986 (Code WS: 520, Section T) (1, 2).

REAGENT

Monoclonal Antibody CD5

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Clone	BL1a
Isotype	IgG2a
Immunogen	Human thoracic duct lymphocytes (TDL)
Hybridoma	SP2/0-Ag14 x Balb/c spleen cells
Species	Mouse
Source	ascites fluid
Purification	Protein A affinity chromatography

REAGENT CONTENTS

1 mg/ml bovine serum albumin in phosphate buffered saline.

STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be

handled as if capable of transmitting infection and disposed of with proper precautions.

- Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
- Do not use reagent beyond the expiration date on the vial label.
- Avoid microbial contamination of reagent or erroneous results may occur.
- Use good laboratory practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This reagent is stable up to the expiration date on the vial label when stored at 2–8°C. The reconstituted form may be stored at –20°C until the expiration date. Aliquoting 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. Minimize exposure to light and warmth.

REAGENT PREPARATION

Reconstitute with 1 mL of distilled water. No preservative has been added.

APPLICATIONS

Flow cytometry, Immunoprecipitation

For each application, it is recommended to establish the right range of antibody dilutions to be used for the experiment.

SELECTED RESEARCH REFERENCES

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- Disanto, J.P., Small, T.N., Dupont, B., Flomenberg, N., Knowles, R.W., "Analysis of human CD8 and CD5 antigens expressed on mouse L-lines", 1987, Leucocyte Typing III, White Cell Differentiation Antigens, McMichael A.J., et al., Eds., Oxford University Press, 210-214.
- Reiter, C., "Cluster report : CD5", 1989, Leucocyte Typing IV, White Cell Differentiation Antigens. W. Knapp, et

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- Tarakhovskiy, A., Kanner, S.B., Hombach, J., Ledbetter, J.A., Müller, W., Killeen, N., Rajewsky, K., "A role for CD5 in TCR-mediated signal transduction and thymocyte selection", 1995, Science, 269, 535-537.
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PRODUCT AVAILABILITY

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Manufactured by:
Immunotech, a Beckman Coulter Company
130, avenue de Lattre de Tassigny, B.P. 177
13276 Marseille Cedex 9, France

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