Monoclonal Antibodies Detecting Human Antigens

BD Oncomark™

Anti-Lambda/Anti-Kappa/CD20

Catalog No. 346596  50 Tests  20 μL/test  Not for sale in the US.

RESEARCH APPLICATIONS

This combination of reagents can be useful in studying the presence and extent of clonal expansion in B-lymphoproliferative disorders. Abnormal kappa/lambda ratios or intensities are strong indicators of clonal processes.1-3 Additional information might also be obtained by simultaneous analysis using the CD194,5 or CD56-8 APC antigens. Other reagents that might be useful for characterization of abnormal B-cell populations include CD10, CD103, CD23, and FMC7.9,19

DESCRIPTION

Specificity

Anti-Lambda is specific for lambda light chains of human immunoglobulins.20

Anti-Kappa is specific for kappa light chains of human immunoglobulins.

The CD20 antibody recognizes an antigen that is a phosphoprotein with a molecular weight of 35 or 37 kilodaltons (kDa), depending on the degree of phosphorylation.21 The antigen is not glycosylated.21

Antigen distribution

Immunoglobulins bearing lambda light chains are present on approximately 40% of normal B lymphocytes and on Igλ neoplastic cells.2,3,22-26 In serum, Anti-Lambda reacts with immunoglobulins bearing lambda light chains as well as free lambda light chains.

Immunoglobulins bearing kappa light chains are present on approximately 60% of normal B lymphocytes and on Igκ + neoplastic cells.2,3,22-26 In serum, Anti-Kappa reacts with immunoglobulins bearing kappa light chains as well as free kappa light chains.

The CD20 antigen is expressed on B lymphocytes synchronous with the expression of surface IgM.21,27 The antigen is present on both resting and activated B lymphocytes but is lost prior to differentiation into plasma cells.21 The CD20 antigen is found in both mantle-zone and germinal center areas of secondary follicles of lymphoid tissue and can be expressed on follicular dendritic cells (FDC) in germinal centers.21 Low-level expression of the CD20 antigen has been detected on a subpopulation of T lymphocytes.28

Clones

Anti-Lambda, clone 1-155-2,* is derived from hybridization of P3-X63-Ag8.653 mouse myeloma cells with cells from BALB C/J mice immunized with human IgA1-λ myeloma protein.

Anti-Kappa, clone TB28-2,* is derived from hybridization of P3-X63-Ag8.653 mouse myeloma cells with cells from CB6 (BC57b x BALB/c) mice immunized with human IgG-κ myeloma protein.

* This clone has not been submitted to any previous workshop on human leucocyte differentiation antigens.

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CD20, clone L27, is derived from hybridization of Sp2/0 mouse myeloma cells with spleen cells from BALB/c mice immunized with the LB lymphoblastoid cell line.

**Composition**

Anti-Kappa and CD20 are each composed of mouse IgG\textsubscript{1} heavy chains and kappa light chains.

Anti-Lambda is composed of mouse IgG\textsubscript{1} heavy chains and lambda light chains.

The BD Oncomark\textsuperscript{TM} Anti-Lambda/Anti-Kappa/CD20 reagent is supplied as a combination of Anti-Lambda FITC, Anti-Kappa PE, and CD20 PerCP-Cy\textsuperscript{TM}5.5 in 1 mL of phosphate-buffered saline (PBS) containing bovine serum albumin and 0.1% sodium azide.

**PROCEDURE**

Visit our website (bdbiosciences.com) or contact your local BD representative for the lyse/wash protocol for direct immunofluorescence.

To avoid serum interference when using this reagent:

1. Prewash the whole blood sample using at least 25 volumes of excess 1X PBS with 0.1% sodium azide (For example, 48 mL of 1X PBS with sodium azide per 2 mL of whole blood to be washed) and mix well.

2. Pellet cells by centrifugation.

3. Resuspend in 1X PBS with 0.1% sodium azide to the original volume.

**REPRESENTATIVE DATA**

Performed on normal peripheral blood stained and lysed using BD FACS\textsuperscript{TM} lysis solution (Cat. No. 349202).

**Figure 1** Representative data analyzed with a BD FACS\textsuperscript{TM} brand flow cytometer

![Representative data analyzed with a BD FACS\textsuperscript{TM} brand flow cytometer](image)

**HANDLING AND STORAGE**

Store vials at 2°C–8°C. Conjugated forms should not be frozen. Protect from exposure to light. Each reagent is stable until the expiration date shown on the bottle label when stored as directed.

**WARNING**

All biological specimens and materials coming in contact with them are considered biohazards. Handle as if capable of transmitting infection\textsuperscript{29,30} and dispose of with proper precautions in accordance with federal, state, and local regulations. Never pipette by mouth. Wear suitable protective clothing, eyewear, and gloves.

**CHARACTERIZATION**

To ensure consistently high-quality reagents, each lot of antibody is tested for conformance with characteristics of a standard reagent. Representative flow cytometric data is included in this data sheet.
WARRANTY

Unless otherwise indicated in any applicable BD general conditions of sale for non-US customers, the following warranty applies to the purchase of these products.

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REFERENCES


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