

# Monoclonal Antibodies Detecting Human Antigens

## CD23 (EBVCS-5)

Form	Catalog number
FITC	656148
PE	341007
APC	340935
APC-R700	659125

Product availability varies by region. Contact BD Biosciences Customer Support or your local sales representative for information.

### RESEARCH APPLICATIONS

Research applications include:

- Investigation into the regulation of IgE synthesis<sup>1</sup>
- Examination of B-lymphocyte differentiation<sup>2</sup>
- Analysis of aminoacyl-tRNA-synthetase-interacting multifunctional protein 1 (AIMP1)-induced inflammation<sup>3</sup>
- Characterization of leukemias and lymphomas<sup>4</sup>

### DESCRIPTION

#### Specificity

The CD23 antibody recognizes a 45-kilodalton (kDa) type II membrane glycoprotein, which is a human B-lymphocyte differentiation antigen. The CD23 antigen is also known as the low affinity IgE receptor, Fc epsilon RII, and FcεRII.<sup>2,5-7</sup>

#### Antigen distribution

The CD23 antigen is present at low density on most normal B lymphocytes<sup>8</sup> and at higher levels on activated B lymphocytes, Epstein-Barr virus (EBV)-transformed lymphoblasts, chronic lymphocytic leukemia (CLL) cells of B-lymphocyte origin, and tonsillar B lymphocytes.<sup>6</sup> The human B-lymphoblastoid cell line, RPMI-8866, releases a 25-kDa species into the culture supernatant.<sup>9</sup>

The CD23 antigen density increases on the surface of B lymphocytes shortly after activation.<sup>10</sup> Expression is induced by interleukin-4 (IL-4) and down-regulated by B-cell growth factor (BCGF).<sup>5,9</sup> The antigen is lost after isotype switching to IgA, IgG, or IgE.<sup>2,9</sup> The CD23 antigen is not present on immature bone marrow B lymphocytes or on T lymphocytes,<sup>2</sup> but it has been reported on monocytes, hypodense eosinophils, and a subpopulation of platelets.<sup>11</sup>

#### Clone

The CD23 antibody, clone EBVCS-5 (Leu 20),<sup>7,12</sup> is derived from the hybridization of Sp2/0 mouse myeloma cells with spleen cells isolated from BALB/c mice immunized with an in vitro transformed EBV cell line.<sup>13</sup>

#### Composition

The CD23 antibody is composed of mouse IgG<sub>1</sub> heavy chains and kappa light chains.

#### Product configuration

The following are supplied in phosphate buffered saline (PBS) containing a stabilizer and a preservative.

Form	Number of tests	Volume per test (μL) <sup>a</sup>	Amount provided (μg)	Total volume (mL)	Concentration (μg/mL)	Stabilizer	Preservative
FITC	50	20	12.5	1	12.5	Gelatin	0.1% Sodium azide
PE	50	20	12.5	1	12.5	Gelatin	0.1% Sodium azide

**For Research Use Only. Not for use in diagnostic or therapeutic procedures.**

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Form	Number of tests	Volume per test (µL) <sup>a</sup>	Amount provided (µg)	Total volume (mL)	Concentration (µg/mL)	Stabilizer	Preservative
APC	100	5	12.5	0.5	25	Gelatin	0.1% Sodium azide
APC-R700 <sup>b</sup>	100	5	6.25	0.5	12.5	BSA	ProClin® 300

a. Volume required to stain 10<sup>6</sup> cells.

b. BD Horizon™ APC-R700

**CAUTION** Some APC-R700 conjugates show changes in their emission spectra with prolonged exposure to paraformaldehyde or light. For overnight storage of stained cells, wash and resuspend in buffer without paraformaldehyde after 1 hour of fixation.

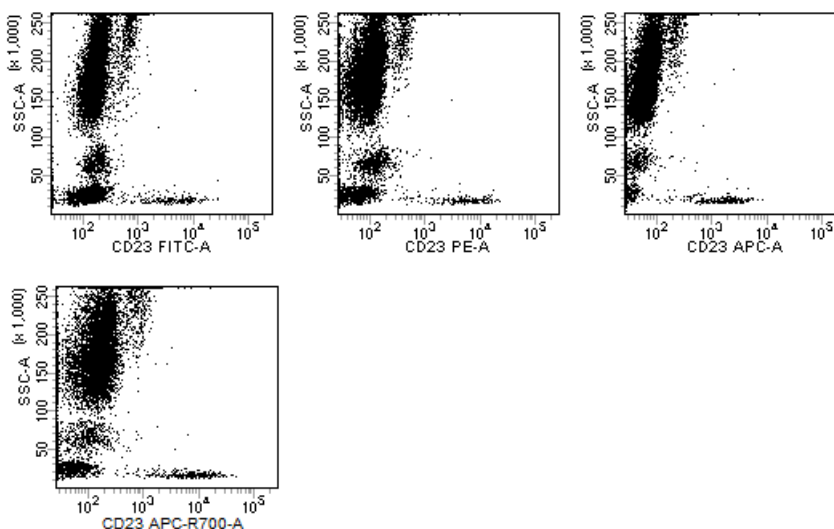
## PROCEDURE

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

## REPRESENTATIVE DATA

Flow cytometric analysis was performed on whole blood stained with the indicated conjugated antibody. Laser excitation was at 488 nm, 635 nm, or 640 nm.

The APC-R700 conjugate is read off the red laser (640 nm) using a 685 longpass mirror with a 712/21 bandpass filter. Representative data analyzed with a BD FACS™ brand flow cytometer is shown in the following plots.



## 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<sup>14,15</sup> 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.

Some reagents are bottled with ProClin 300, and contain 0.003% of a mixture of CMIT/MIT (3:1), CAS number 55965-84-9.



### Warning

H317 May cause an allergic skin reaction.

Wear protective gloves/eye protection. Wear protective clothing. Avoid breathing mist/vapours/spray. If skin irritation or rash occurs: Get medical advice/attention. IF ON SKIN: Wash with plenty of water. Dispose of contents/container in accordance with local/regional/national/international regulations.

## 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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## PATENTS AND TRADEMARKS

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