

# Technical Data Sheet

## BB700 Mouse Anti-Human CD23

### Product Information

Material Number:	746213
Size:	50 µg
Clone:	EBVCS-5 (also known as EBVCS 5)
Alternative Name:	CD23A; Fc-epsilon-RII; FCER2; FCE2; IGEBF; BLAST-2; CLEC4J; Leu-20
Reactivity:	Human (Tested in Development)
Isotype:	Mouse BALB.B IgG1, κ
Immunogen:	Epstein-Barr Virus Transformed Cell Line
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	2208
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

### Description

The EBVCS-5 antibody specifically binds to human CD23, the low affinity receptor for human IgE (Fc epsilon RII or FcεRII), which is also known as C-type lectin domain family 4 member J (CLEC4J). CD23 is expressed as a ~45 kDa type II membrane glycoprotein that is present at low density on most normal B lymphocytes 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. CD23 expression is induced on B cells by interleukin-4 (IL-4) and is lost after isotype switching to IgA, IgG, or IgE. The CD23 antigen is not present on immature bone marrow B lymphocytes or on T lymphocytes. CD23 may also be differentially expressed on monocytes, macrophages, eosinophils, platelets, dendritic cells, and Langerhans cells. CD23 can mediate IgE-dependent cytotoxicity and phagocytosis by macrophages and eosinophils. Soluble CD23 (sCD23) can be released by CD23-positive cells as a result of proteolytic cleavage of membrane CD23. Larger fragments of sCD23 (eg, 25-37 kDa) retain their IgE-binding capacity whereas smaller fragments (ie, ≤ 12 kDa) do not. Soluble CD23 may have immunoregulatory effects on the growth and differentiation of B cells and other cell types.

The antibody was conjugated to BD Horizon™ BB700, which is part of the BD Horizon Brilliant™ Blue family of dyes. It is a polymer-based tandem dye developed exclusively by BD Biosciences. With an excitation max of 485 nm and an emission max of 693 nm, BD Horizon BB700 can be excited by the 488 nm laser and detected in a standard PerCP-Cy™5.5 set (eg, 695/40-nm filter). This dye provides a much brighter alternative to PerCP-Cy5.5 with less cross laser excitation off the 405 nm and 355 nm lasers.

### Preparation and Storage Section

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze. The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated with BD Horizon BB700 under optimal conditions that minimize unconjugated dye and antibody.

### Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794 or 566349).

When setting up compensation, it is recommended to compare spillover values obtained from cells and BD™ CompBeads to ensure that beads will provide sufficiently accurate spillover values.

For optimal results, it is recommended to perform two washes after staining with antibodies. Cells may be prepared, stained with antibodies and washed twice with wash buffer per established protocols for immunofluorescent staining prior to acquisition on a flow cytometer. Performing fewer than the recommended wash steps may lead to increased spread of the negative population.

## Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS) RUO	500 mL	
554657	Stain Buffer (BSA) RUO	500 mL	
563794	Brilliant Stain Buffer RUO	100 Tests	
555899	Lysing Buffer RUO	100 mL	
349202	Lysing Solution 10X Concentrate IVD	100 NA	
564219	Human BD Fc Block™ RUO	50 mg	

## Product Notices

1. This antibody was developed for use in flow cytometry.
2. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
7. Please refer to [www.bdbiosciences.com/us/s/resources](http://www.bdbiosciences.com/us/s/resources) for technical protocols.
8. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
9. BD Horizon Brilliant Blue 700 is covered by one or more of the following US patents: 8,455,613 and 8,575,303.
10. Cy is a trademark of GE Healthcare.

## References

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