Technical Data Sheet

BV421 Mouse Anti-Human CD23

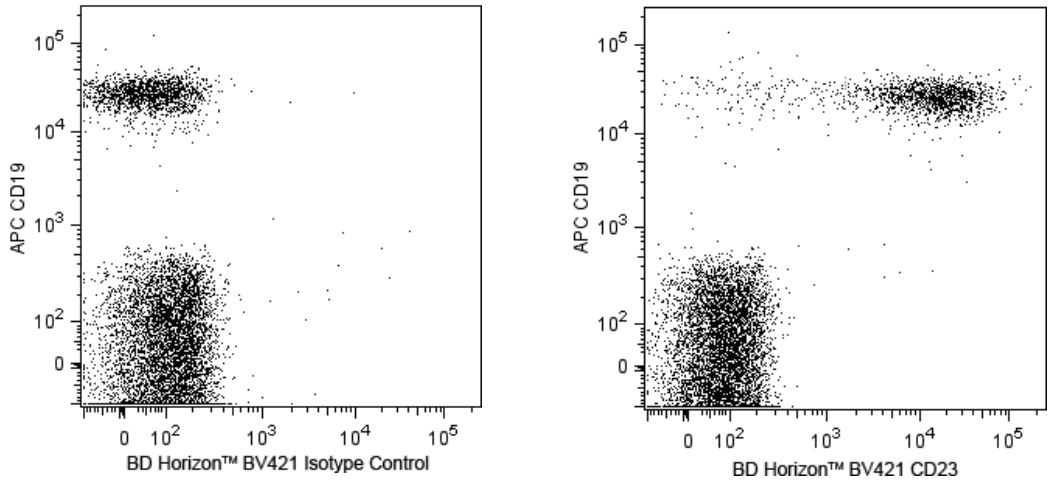
Product Information

Material Number:	**562707**
Alternate Name:	FCER2; FcεRII; Low affinity immunoglobulin epsilon Fc receptor; BLAST-2
Size:	100 tests
Vol. per Test:	5 µl
Clone:	M-L233
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	V CD23.15
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The M-L233 antibody specifically binds to human CD23, the low affinity receptor for human IgE (FcεRII). CD23 is a type II membrane glycoprotein that can be expressed by B cells, monocytes, macrophages, eosinophils, platelets and dendritic 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 (e.g., 25-37 kDa) retain their IgE-binding capacity whereas smaller fragments (i.e., ≤ 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™ BV421 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon™ BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon™ BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue™ conjugates.



Multicolor flow cytometric analysis of CD23 expression on human peripheral blood lymphocytes. *Whole blood was stained with APC Mouse Anti-Human CD19 (Cat. No. 555415/561742) and either a BD Horizon™ BV421 Mouse IgG1, κ Isotype Control (Cat. No. 562438; Left Panel) or BD Horizon™ BV421 Mouse Anti-Human CD23 antibody (Cat. No. 562707; Right Panel). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The two-color flow cytometric dot plots were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.*

Preparation and Storage

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™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

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Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
562438	BV421 Mouse IgG1, k Isotype Control	50 µg	X40
554656	Stain Buffer (FBS)	500 ml	(none)
555899	Lysing Buffer	100 ml	(none)
555415	APC Mouse Anti-Human CD19	100 tests	HIB19
561742	APC Mouse Anti-Human CD19	25 tests	HIB19

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Brilliant Violet™ 421 is a trademark of Sirigen.
4. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Barclay NA, Brown MH, Birkeland ML, et al, ed. *The Leukocyte Antigen FactsBook.* San Diego, CA: Academic Press; 1997. (Biology)

Delespesse G, Hofstetter H, Sarfati M. Low-affinity receptor for IgE (FcERII, CD23) and its soluble fragments. *Int Arch Allergy Immunol.* 1989; 90(1):41-44. (Biology)

Gordon J, Millsum MJ, Flores-Romo L, Gillis S. Regulation of resting and cycling human B lymphocytes via surface IgM and the accessory molecules interleukin-4, CD23 and CD40. *Immunology.* 1989; 68(4):526-531. (Biology)

Saeland S, Duvert V, Moreau I, Banchereau J. Human B cell precursors proliferate and express CD23 after CD40 ligation. *J Exp Med.* 1993; 178(1):113-120. (Biology)

Schlossman S, Boumell L, et al, ed. *Leucocyte Typing V.* New York: Oxford University Press; 1995. (Clone-specific)

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