Technical Data Sheet

BV421 Mouse Anti-Human CD22

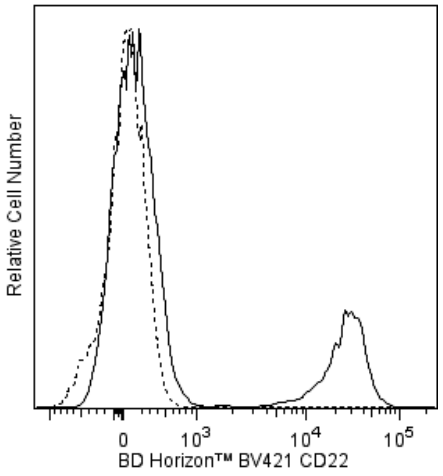
Product Information

Material Number:	**563940**
Alternate Name:	BL-CAM; Siglec-2; Bgp135; Lyb8; LPAP
Size:	100 tests
Vol. per Test:	5 µl
Clone:	HIB22
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	V CD22.14
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The HIB22 monoclonal antibody specifically binds to CD22. CD22 is a 130-140 kDa glycosylated type I integral membrane protein present on the surface of mature B cells. CD22 is expressed in the cytoplasm of virtually all B cells except plasma cells. CD45RO antigen on T cells and CD75 antigen on B cells have been identified as ligands for CD22. CD22 has been reported to participate in B-cell activation and also as an adhesion molecule. Although the immunobiology of this antigen has not been fully elucidated, reports indicate that ligation of CD22 induces constitutive internalization of the molecule followed by complete degradation.

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.



Flow cytometric analysis of CD22 expression on human peripheral blood lymphocytes. *Whole blood was stained with either BD Horizon™ BV421 Mouse IgG1, κ Isotype Control (Cat. No. 562438; dashed line histogram) or BD Horizon BV421 Mouse Anti-Human CD22 antibody (Cat. No. 563940; solid line histogram). Erythrocytes were lysed with BD FACS Lysing Solution (Cat. No. 349202). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometric analysis 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.

Application Notes

Application

Flow cytometry	Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
554657	Stain Buffer (BSA)	500 ml	(none)
562438	BV421 Mouse IgG1, k Isotype Control	50 µg	X40
349202	BD FACS™ Lysing Solution	100 ml	(none)
555899	Lysing Buffer	100 ml	(none)

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. 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.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
6. Brilliant Violet™ 421 is a trademark of Sirigen.
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

Clark EA. CD22, a B cell-specific receptor, mediates adhesion and signal transduction. *J Immunol.* 1993; 150(11):4715-4718. (Biology)

Kehrl JH. CD22 Workshop Panel report. In: Schlossman SF, Boumsell L, Gilks W, et al, ed. *Leucocyte Typing V: White Cell Differentiation Antigens*. Oxford: Oxford University Press; 1995:523-525. (Clone-specific: Flow cytometry, Immunoprecipitation)

Schlossman SF, Boumsell L, Gilks W, et al, ed. *Leukocyte Typing V: White Cell Differentiation Antigens*. Oxford: Oxford University Press; 1995. (Clone-specific: Flow cytometry)

Shan D, Press OW. Constitutive endocytosis and degradation of CD22 by human B cells. *J Immunol*. 1995; 154(9):4466-4475. (Biology)

Stamenkovic I, Sgroi D, Aruffo A, Sy MS, Anderson T. The B lymphocyte adhesion molecule CD22 interacts with leukocyte common antigen CD45RO on T cells and alpha 2-6 sialyltransferase, CD75, on B cells. *Cell.* 1991; 66(6):1133-1144. (Biology)

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