Technical Data Sheet

BV421 Mouse Anti-Human CD79a

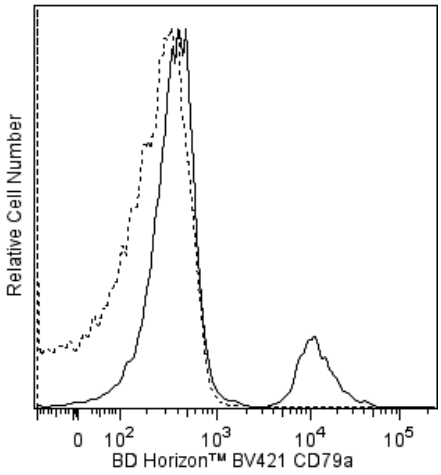
Product Information

Material Number:	**562852**
Alternate Name:	CD79a, immunoglobulin-associated alpha ; CD79A; Ig-alpha; IGA; Igα; MB-1
Size:	50 tests
Vol. per Test:	5 µl
Clone:	HM47
Immunogen:	Human CD79a Peptide
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human Tested in Development: Mouse
Workshop:	V cB017
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The HM47 monoclonal antibody specifically binds to the cytoplasmic domain of CD79a. CD79a is a 47 kDa type 1 transmembrane glycoprotein present on B lymphocytes. CD79a is also referred to as mb-1, IGA and Ig-alpha (Igα). It is expressed on B cells at various stages of differentiation, from pre-B cell stage, probably before expression of cytoplasmic µ chain, to plasma cell stage, in which it is detected only in the cytoplasm. CD79a associates with CD79b to form part of the B-cell receptor complex. It has been suggested that CD79a may play a role in mediating the transport of IgM to the cell surface. This antibody has been found to crossreact with permeabilized A20 cells (mouse B cell line).

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 CD79a expression on human peripheral blood lymphocytes. *Human peripheral blood mononuclear cells were fixed with BD Cytofix™ Fixation Buffer (Cat. No. 554655) and permeabilized with BD Perm/Wash™ Buffer (Cat. No. 554723) and subsequently stained with either BD Horizon™ BV421 Mouse Anti-Human CD79a antibody (Cat. No. 562852; solid line histogram) or BD Horizon™ BV421 Mouse IgG1, κ Isotype Control (Cat. No. 562438; dashed line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.
The antibody was conjugated with BD Horizon™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562438	BV421 Mouse IgG1, k Isotype Control	50 µg	X40
554655	Fixation Buffer	100 ml	(none)
554723	Perm/Wash 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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
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.
7. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
8. Brilliant Violet™ 421 is a trademark of Sirigen.
9. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.

References

Engel P, Wagner N, Tedder TF. CD79 Workshop report. In: Schlossman SF, Boumsell L, Gilks W, et al, ed. *Leucocyte Typing V: White Cell Differentiation Antigens.* New York, NY: Oxford University Press; 1995:667-670. (Clone-specific: Immunoprecipitation)

Mason DY, Cordell JL, Tse AG, et al. The IgM-associated protein mb-1 as a marker of normal and neoplastic B cells. *J Immunol.* 1991; 147(11):2474-2482. (Immunogen: Immunofluorescence, Immunohistochemistry)

Sakaguchi N, Kashiwamura S, Kimoto M, Thalmann P, Melchers F. B lymphocyte lineage-restricted expression of mb-1, a gene with CD3-like structural properties. *EMBO J.* 1988; 7(11):3457-3464. (Biology)

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

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