Technical Data Sheet

BB515 Mouse Anti-Human CD1c

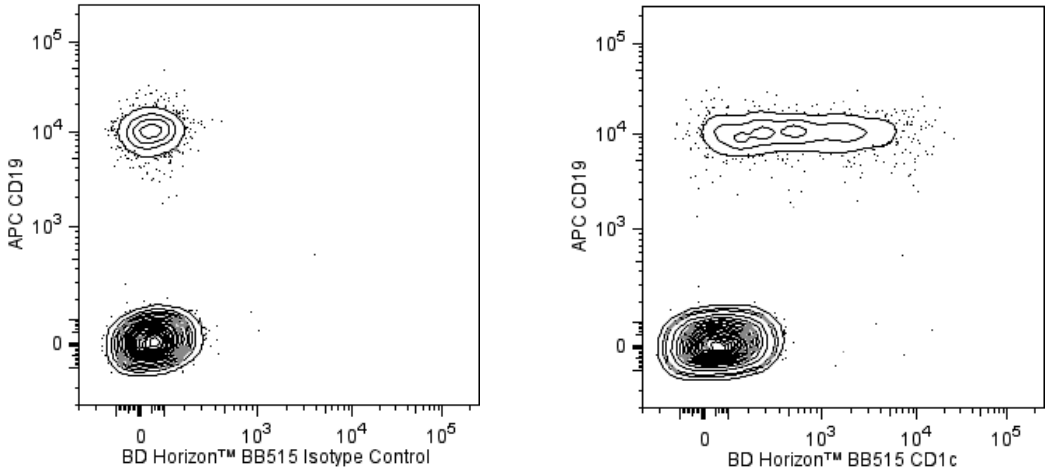
Product Information

Material Number:	**565054**
Alternate Name:	CD1; R7; M241; BDCA1
Size:	100 Tests
Vol. per Test:	5 µl
Clone:	F10/21A3
Immunogen:	GM-CSF- and IL-4-activated Human Monocytes
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The F10/21A3 monoclonal antibody specifically binds to CD1c. The CD1 family of transmembrane glycoproteins are structurally related to the classical major histocompatibility complex (MHC) proteins. CD1c is a type I transmembrane glycoprotein that forms heterodimers with beta-2-microglobulin. CD1c presents lipids and glycolipids of self or microbial origin to T cells. CD1c is expressed by Langerhans cells, dendritic cells, monocytes, cortical thymocytes, T cells, and some B cells.

The antibody was conjugated to BD Horizon BB515 which is part of the BD Horizon Brilliant™ Blue family of dyes. With an Ex Max near 490 nm and an Em Max near 515 nm, BD Horizon BB515 can be excited by the blue laser (488 nm) laser and detected with a 530/30 nm filter. This dye has been exclusively developed by BD Biosciences and is up to seven times brighter than FITC with less spillover into the PE channel. Due to similar excitation and emission properties, BB515, FITC, and Alexa Fluor® 488 cannot be used simultaneously. It is not recommended to use BB515 in cocktails that include Streptavidin conjugates as it may cause high background.



Two-color flow cytometric analysis of CD1c expression on human peripheral blood lymphocytes. *Human whole blood was stained with APC Mouse Anti-Human CD19 antibody (Cat. No. 555415/561742) and either BD Horizon™ BB515 Mouse IgG1, κ Isotype Control (Cat. No. 564416; Left Panel) or BD Horizon BB515 Mouse Anti-Human CD1c (Cat. No. 565054/565055; Right Panel). Erythrocytes were lysed with BD PharmLyse™ Lysing Buffer (Cat. No. 555899). Two-color flow cytometric contour plots showing the correlated expression of CD1c (or Ig Isotype control staining) versus CD19 were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer 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™ BB515 under optimum conditions and unconjugated antibody was removed.

Application Notes

Application

Flow cytometry	Routinely Tested

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	866.979.9408	32.2.400.98.95	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit **bdbiosciences.com/contact**

Recommended Assay Procedure:

BD™ CompBeads can be used as surrogates to assess fluorescence spillover (Compensation). When fluorochrome conjugated antibodies are bound to CompBeads, they have spectral properties very similar to cells. However, for some fluorochromes there can be small differences in spectral emissions compared to cells, resulting in spillover values that differ when compared to biological controls. It is strongly recommended that when using a reagent for the first time, users compare the spillover on cells and CompBead to ensure that BD Comp beads are appropriate for your specific cellular application.

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. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

For optimal results, it is recommended to perform 2 washes after staining with antibodies. Cells may be prepared, stained with antibodies and washed twice with wash buffer per established protocols for immunofluorescence 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
564416	BB515 Mouse IgG1, κ Isotype Control	100 µg	X40
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
563794	Brilliant Stain Buffer	100 Tests	(none)
555899	Lysing Buffer	100 mL	(none)
565055	BB515 Mouse Anti-Human CD1c	25 Tests	F10/21A3
555415	APC Mouse Anti-Human CD19	100 Tests	HIB19
561742	APC Mouse Anti-Human CD19	25 Tests	HIB19
349202	BD FACS™ Lysing Solution	100 mL	(none)
566385	Brilliant Stain Buffer Plus	1000 Tests	(none)
566349	Brilliant Stain Buffer	1000 Tests	(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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. Please refer to http://regdocs.bd.com to access safety data sheets (SDS).
6. 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.
7. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.

References

Delia D, Cattoretti G, Polli N, et al. CD1c but neither CD1a nor CD1b molecules are expressed on normal, activated, and malignant human B cells: identification of a new B-cell subset. *Blood.* 1988; 72(1):241-247. (Biology)

Grant EP, Degano M, Rosat JP, et al. Molecular recognition of lipid antigens by T cell receptors. *J Exp Med.* 1999; 189(1):195-205. (Clone-specific: Blocking, Functional assay, Inhibition)

Moody DB, Ulrichs T, Mühlecker W, et al. CD1c-mediated T-cell recognition of isoprenoid glycolipids in Mycobacterium tuberculosis infection. *Nature.* 2000; 404(6780):884-888. (Clone-specific: Blocking, Functional assay, Inhibition)