

Technical Data Sheet

BV605 Rat Anti-Mouse CD83

Product Information

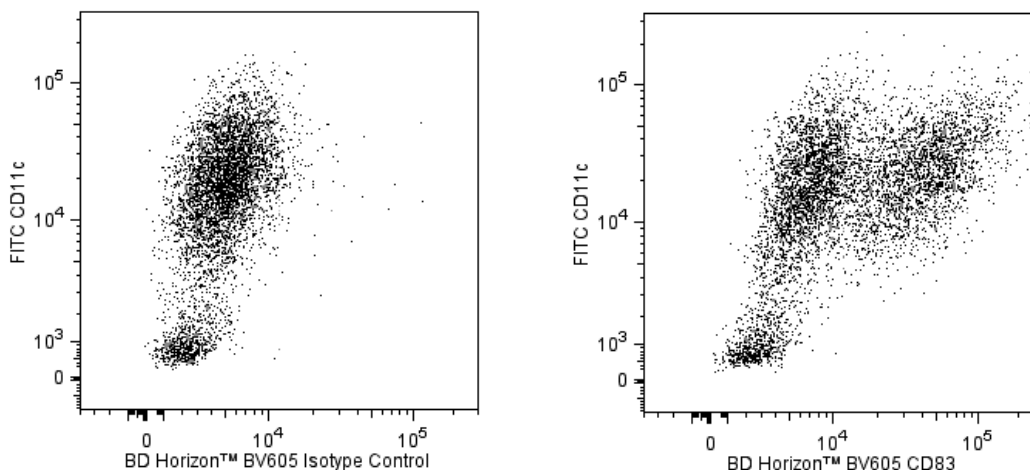
Material Number:	563253
Alternate Name:	Cd83; CD83 antigen
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	Michel-19
Immunogen:	Mouse CD83 Recombinant Protein
Isotype:	Rat IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The Michel-19 monoclonal antibody specifically binds to CD83. CD83 is a type 1 transmembrane glycoprotein and member of the immunoglobulin superfamily. It is expressed on mature dendritic cells and activated T lymphocytes. Furthermore, thymic cortical epithelial cells express *Cd83* transcripts. CD83 is involved in the regulation of T-cell development and immune responses, and its ligand is found on a subpopulation of splenic B lymphocytes.

This antibody is conjugated to BD Horizon BV605 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 407-nm and Em Max of 602-nm, BD Horizon BV605 can be excited by a violet laser and detected with a standard 610/20-nm filter set. BD Horizon BV605 is a tandem fluorochrome of BD Horizon BV421 and an acceptor dye with an Em max at 605-nm. Due to the excitation of the acceptor dye by the green (532 nm) and yellow-green (561 nm) lasers, there will be significant spillover into the PE and BD Horizon PE-CF594 detectors off the green or yellow-green lasers. BD Horizon BV605 conjugates are very bright, often exhibiting brightness equivalent to PE conjugates and can be used as a third color off of the violet laser.

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).



Two-color flow cytometric analysis of CD83 expression by mature mouse dendritic cells. C57BL/6 bone marrow cells were cultured for 6 days with recombinant mouse GM-CSF (Cat. No. 554586) and stimulated for 24 hours with lipopolysaccharide. The bone marrow-derived dendritic cells were harvested and preincubated with Purified Rat Anti-Mouse CD16/CD32 antibody (Mouse BD Fc Block™) (Cat. No. 553141/553142). The cells were then stained with FITC Hamster Anti-Mouse CD11c antibody (Cat. No. 553801/557400/561045) and either BD Horizon™ BV605 Rat IgG1, κ Isotype Control (Cat. No. 562993; Left Panel) or BD Horizon™ BV605 Rat Anti-Mouse CD83 antibody (Cat. No. 563253; Right Panel). Two-color flow cytometric dot plots show the correlated expression patterns of CD11c versus CD83 (or Ig Isotype control staining) for gated events with the forward and side light-scatter characteristics of viable leucocytes. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer System.

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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™ BV605 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV605 were removed.

Application Notes

Application

Flow cytometry

Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
562993	BV605 Rat IgG1, k Isotype Control	50 µg	R3-34
554586	Recombinant Mouse GM-CSF	10 µg	(none)
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
553142	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.5 mg	2.4G2
553801	FITC Hamster Anti-Mouse CD11c	0.5 mg	HL3
557400	FITC Hamster Anti-Mouse CD11c	0.1 mg	HL3
561045	FITC Hamster Anti-Mouse CD11c	25 µg	HL3
563794	Brilliant Stain Buffer	5 mL	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
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/pharming/protocols for technical protocols.
5. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
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. Although every effort is made to minimize the lot-to-lot variation in the efficiency of the fluorochrome energy transfer, differences in the residual emission from BD Horizon™ BV421 may be observed. Therefore, we recommend that individual compensation controls be performed for every BD Horizon™ BV605 conjugate.
9. CF™ is a trademark of Biotium, Inc.

References

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Kretschmer B, Luthje K, Ehrlich S, Osterloh A, Piedavent M, Fleischer B, Breloer M. CD83 on murine APC does not function as a costimulatory receptor for T cells. *Immunol Lett.* 2008; 120(1-2):87-95. (Immunogen: Flow cytometry)

Luthje K, Kretschmer B, Fleischer B, Breloer M. CD83 regulates splenic B cell maturation and peripheral B cell homeostasis. *Int Immunol.* 2008; 20(8):949-960. (Clone-specific: Flow cytometry)

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