Technical Data Sheet

# BV711 Rat Anti-Mouse CD83

## Product Information

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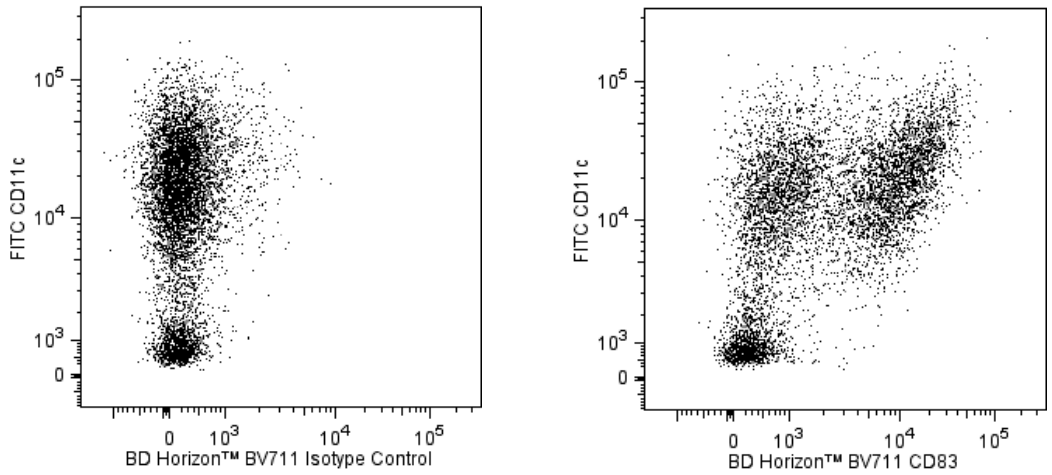
|---|---|
| **Material Number:** | **563136** |
| **Alternate Name:** | Cd83; CD83 antigen |
| **Size:** | 50 µg |
| **Concentration:** | 0.2 mg/ml |
| **Clone:** | Michel-19 |
| **Immunogen:** | Mouse CD83 Recombinant Protein |
| **Isotype:** | Rat IgG1, κ |
| **Reactivity:** | QC Testing: Mouse |
| **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.

The antibody was conjugated to BD Horizon™ BV711 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. This dye is a tandem fluorochrome of BD Horizon™ BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 711-nm. BD Horizon™ BV711 can be excited by the violet laser and detected in a filter used to detect Cy™5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-Cy™5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.




***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™ BV711 Rat IgG1, κ Isotype Control (Cat. No. 563283; Left Panel) or BD Horizon™ BV711 Rat Anti-Mouse CD83 antibody (Cat. No. 563136; 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.*

## 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™ BV711 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV711 were removed.

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| 877.232.8995 | 800.979.9408 | 32.53.720.550 | 0120.8555.90 | 65.6861.0633 | 55.11.5185.9995 |

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## Application Notes

**Application**

| | |
|---|---|
| Flow cytometry | Routinely Tested |

## Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|---|---|---|---|
| 554656 | Stain Buffer (FBS) | 500 ml | (none) |
| 563283 | BV711 Rat IgG1, κ 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 |

## 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/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. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
8. Cy is a trademark of Amersham Biosciences Limited.
9. Brilliant Violet™ 711 is a trademark of Sirigen.

## References


Berchtold S, Muhl-Zurbes P, Heufler C, Winklehner P, Schuler G, Steinkasserer A. Cloning, recombinant expression and biochemical characterization of the murine CD83 molecule which is specifically upregulated during dendritic cell maturation. *FEBS Lett.* 1999; 461:211-216. (Biology)

Cramer SO, Trumpfheller C, Mehlhoop U, More S, Fleischer B, von Bonin A. Activation-induced expression of murine CD83 on T cells and identification of a specific CD83 ligand on murine B cells. *Int Immunol.* 2000; 12(9):1347-1351. (Biology)

Fujimoto Y, Tu L, Miller AS, Bock C, Fujimoto M, Doyle C, Steeber DA, Tedder TF. CD83 expression influences CD4+ T cell development in the thymus. *Cell.* 2002; 108:755-767. (Biology)

Kretschmer B, Kuhl S, Fleischer B, Breloer M. Activated T cells induce rapid CD83 expression on B cells by engagement of CD40. *Immunol Lett.* 2011; 136(2):221-227. (Clone-specific: Flow cytometry)

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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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