Technical Data Sheet

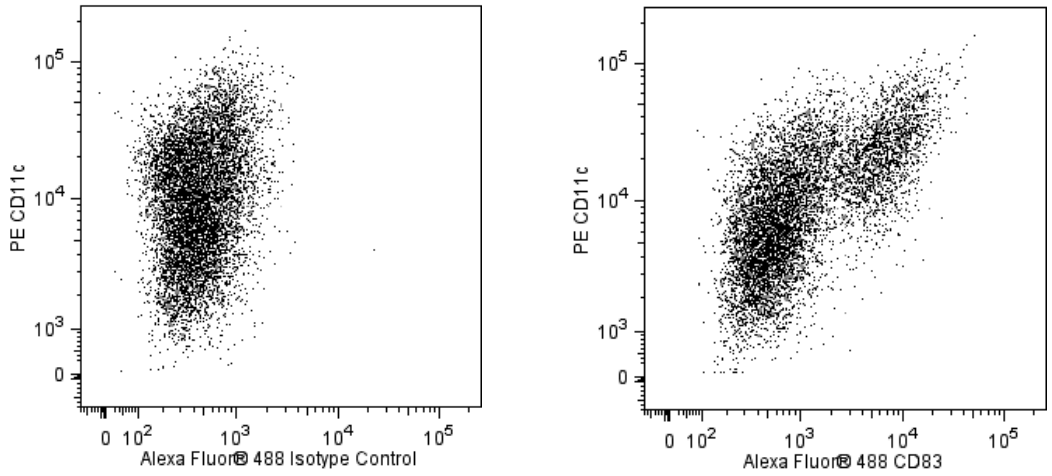
Alexa Fluor® 488 Rat Anti-Mouse CD83

Product Information

Material Number:	**563539**
Alternate Name:	Cd83; CD83 antigen
Size:	0.1 mg
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 ≤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.



Two-color flow cytometric analysis of CD83 expression by mature mouse dendritic cells. *Mouse 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 PE Hamster Anti-Mouse CD11c antibody (Cat. No. 553802/557401/561044) and either Alexa Fluor® 488 Rat IgG1, κ Isotype Control (Cat. No. 557720; Left Panel) or Alexa Fluor® 488 Rat Anti-Mouse CD83 antibody (Cat. No. 563539; 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 to Alexa Fluor® 488 under optimum conditions, and unreacted Alexa Fluor® 488 was 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)
557720	Alexa Fluor® 488 Rat IgG1 κ Isotype Control	0.1 mg	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
553802	PE Hamster Anti-Mouse CD11c	0.2 mg	HL3
557401	PE Hamster Anti-Mouse CD11c	0.1 mg	HL3
561044	PE Hamster Anti-Mouse CD11c	25 µg	HL3

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
4. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
5. Alexa Fluor® 488 fluorochrome emission is collected at the same instrument settings as for fluorescein isothiocyanate (FITC).
6. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
7. 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.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

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)

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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)

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Wolenski M, Cramer SO, Ehrlich S, Steeg C, Fleischer B, von Bonin A. Enhanced activation of CD83-positive T cells. *Scand J Immunol.* 2003; 58(3):306-311. (Biology)

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