

Technical Data Sheet

PE-CF594 Mouse Anti-Human CD83

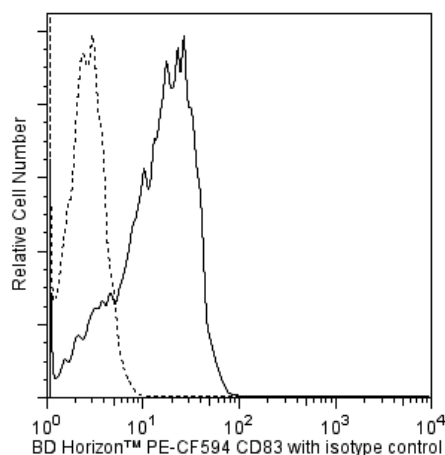
Product Information

| | |
|-------------------------|---|
| Material Number: | 562631 |
| Alternate Name: | BL11; HB15; B-cell activation protein |
| Size: | 50 tests |
| Vol. per Test: | 5 µl |
| Clone: | HB15e |
| Immunogen: | Human CD83 transfected COS cells |
| Isotype: | Mouse IgG1, κ |
| Reactivity: | QC Testing: Human |
| Storage Buffer: | Aqueous buffered solution containing BSA and ≤0.09% sodium azide. |

Description

The HB15e monoclonal antibody specifically binds to a 45 kDa type 1 transmembrane glycoprotein member of the Ig superfamily. CD83 is composed of a single V-type Ig extracellular domain with a C-terminal cytoplasmic tail. Cell surface CD83 is expressed mainly by follicular dendritic cells, circulating dendritic cells, interdigitating dendritic cells in lymphoid tissues, in vitro-generated dendritic cells and thymic dendritic cells. However, its expression is not restricted to dendritic cells. CD83 is also expressed on some germinal center B cells and some lymphoblastoid cell lines. Although its function is not known, it may play a role in cell-cell interaction during antigen presentation.

This antibody is conjugated to BD Horizon™ PE-CF594, which has been developed exclusively by BD Biosciences as a better alternative to PE-Texas Red®. PE-CF594 excites and emits at similar wavelengths to PE-Texas Red® yet exhibits improved brightness and spectral characteristics. Due to PE having maximal absorption peaks at 496 nm and 564 nm, PE-CF594 can be excited by the blue (488-nm), green (532-nm) and yellow-green (561-nm) lasers and can be detected with the same filter set as PE-Texas Red® (eg 610/20-nm filter).



Flow cytometric analysis of CD83 expression on cultured human dendritic cells. Human peripheral blood monocytes were treated with 20 ng/mL of Recombinant Human IL-4 (Cat. No. 554605), 20 ng/mL Recombinant Human TNF (Cat. No. 554618) and 20 ng/mL Recombinant Human GM-CSF (Cat. No. 550068) for 7 days at 37°C. The cells were then stained with either a BD Horizon™ PE-CF594 Mouse IgG1, κ Isotype Control (Cat. No. 562292; dashed line histogram) or with the BD Horizon™ PE-CF594 Mouse Anti-Human CD83 antibody (Cat. No. 562631; solid line histogram). Flow cytometric histograms were derived from gated events based on the forward and side light-scatter characteristics of dendritic cells. Flow cytometry was performed using a BD™ LSR II Flow Cytometry 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™ PE-CF594 under optimum conditions, and unconjugated antibody and free PE-CF594 were removed.

Application Notes

Application

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

Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|----------------|--|--------|--------|
| 562292 | PE-CF594 Mouse IgG1, κ Isotype Control | 0.1 mg | X40 |
| 554656 | Stain Buffer (FBS) | 500 ml | (none) |

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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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| | | | |
|--------|--------------------------|-------|--------|
| 554605 | Recombinant Human IL-4 | 5 µg | (none) |
| 554618 | Recombinant Human TNF | 10 µg | (none) |
| 550068 | Recombinant Human GM-CSF | 10 µg | (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. 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. Texas Red is a registered trademark of Molecular Probes, Inc., Eugene, OR.
9. CF™ is a trademark of Biotium, Inc.
10. When excited by the yellow-green (561-nm) laser, the fluorescence may be brighter than when excited by the blue (488-nm) laser.
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12. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using multi-laser cytometers, which may directly excite both PE and CF™594.

References

Hart DN. Dendritic cells: unique leukocyte populations which control the primary immune response. *Blood*. 1997; 90(9):3245-3287. (Biology)

Kishimoto T, von dem Borne AEG, Goyert SM, et al., ed. *Leucocyte Typing VI: White Cell Differentiation Antigens*. London: Garland Publishing; 1997. (Biology)

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Summers KL, Daniel PB, O'Donnell JL, Hart DN. Dendritic cells in synovial fluid of chronic inflammatory arthritis lack CD80 surface expression. *Clin Exp Immunol*. 1995; 100(1):81-89. (Biology)

Weissman D, Li Y, Ananworanich J, et al. Three populations of cells with dendritic morphology exist in peripheral blood, only one of which is infectable with human immunodeficiency virus type 1. *Proc Natl Acad Sci U S A*. 1995; 92(3):826-830. (Biology)

Zhou LJ, Schwarting R, Smith HM, Tedder TF. A novel cell-surface molecule expressed by human interdigitating reticulum cells, Langerhans cells, and activated lymphocytes is a new member of the Ig superfamily. *J Immunol*. 1992; 149(2):735-742. (Clone-specific)

Zhou LJ, Tedder TF. Human blood dendritic cells selectively express CD83, a member of the immunoglobulin superfamily. *J Immunol*. 1995; 154(8):3821-3835. (Biology)

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