

## Technical Data Sheet

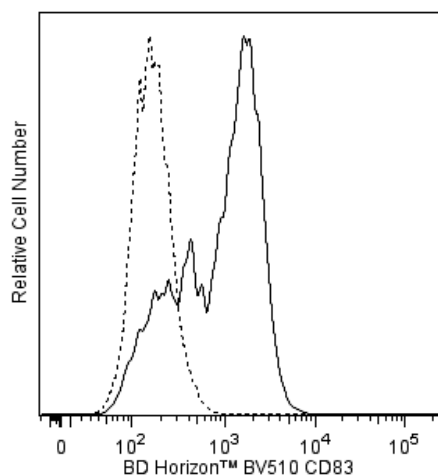
**BV510 Mouse Anti-Human CD83****Product Information**

<b>Material Number:</b>	563223
<b>Alternate Name:</b>	BL11; HB15; B-cell activation protein
<b>Size:</b>	50 tests
<b>Vol. per Test:</b>	5 µl
<b>Clone:</b>	HB15e
<b>Immunogen:</b>	Human CD83 transfected COS cells
<b>Isotype:</b>	Mouse IgG1, κ
<b>Reactivity:</b>	QC Testing: Human
<b>Storage Buffer:</b>	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.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon™ BV510 can be excited by the violet laser and detected in the BD Horizon™ V500 (525/50-nm) filter set. BD Horizon™ BV510 conjugates are useful for the detection of dim markers off the violet laser.



**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), and 20 ng/mL Recombinant Human GM-CSF (Cat. No. 550068) for 5 days. Recombinant Human TNF (Cat. No. 554618; 20 ng/mL) was then added and the cells were cultured for 2 more days at 37°C. The cells were then stained with either BD Horizon™ BV510 Mouse IgG1, κ Isotype Control (Cat. No. 562946; dashed line histogram) or with the BD Horizon™ BV510 Mouse Anti-Human CD83 antibody (Cat. No. 563223; solid line histogram). Flow cytometric histograms were derived from gated events with the forward and side light-scatter characteristics of dendritic cells. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer 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™ BV510 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV510 were 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)
562946	BV510 Mouse IgG1, κ Isotype Control	50 µg	X40
554605	Recombinant Human IL-4	5 µg	(none)
554618	Recombinant Human TNF	10 µg	(none)
550068	Recombinant Human GM-CSF	10 µg	(none)

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## Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  cells in a 100- $\mu$ l 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/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/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](http://www.bdbiosciences.com/colors).
7. Brilliant Violet™ 510 is a trademark of Sirigen.

## References

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- 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. (Biology)
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