

Technical Data Sheet

BUV737 Mouse Anti-Human CD83**Product Information**

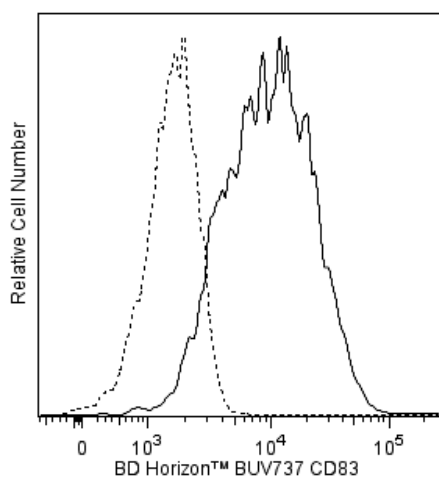
| | |
|-------------------------|--|
| Material Number: | 564441 |
| Alternate Name: | BL11; HB15; B-cell activation protein |
| Size: | 50 Tests |
| Vol. per Test: | 5 µl |
| Clone: | HB15e |
| Immunogen: | Human CD83 transfected COS cells |
| Isotype: | Mouse IgG1, κ |
| Reactivity: | QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon |
| Workshop: | VI |
| Storage Buffer: | Aqueous buffered solution containing ≤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™ BUV737 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome of BD Horizon BUV395 with an Ex Max of 348-nm and an acceptor dye with an Em Max at 737-nm. BD Horizon Brilliant BUV737 can be excited by the ultraviolet laser (355 nm) and detected with a 740/35 filter. Due to the excitation of the acceptor dye by other laser lines, there may be significant spillover into channels detecting Alexa Fluor® 700-like dyes (e.g., 712/20-nm filter).

Due to spectral differences between labeled cells and beads, using BD™ CompBeads can result in incorrect spillover values when used with BD Horizon BUV737 reagents. Therefore, the use of BD CompBeads or BD CompBeads Plus to determine spillover values for these reagents is not recommended. Different BUV737 reagents (e.g., CD4 vs. CD45) can have slightly different fluorescence spillover therefore, it may also be necessary to use clone specific compensation controls when using these reagents.



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 BD Horizon™ BUV737 Mouse IgG1, κ Isotype Control (Cat. No. 564299; dashed line histogram) or BD Horizon BUV737 Mouse Anti-Human CD83 antibody (Cat. No. 564441; solid line histogram). Fluorescence histograms showing CD83 expression (or Ig Isotype control staining) were derived from gated events with the forward and side light-scatter characteristics of viable dendritic cells. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometry 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™ BUV737 under optimum conditions, and unconjugated antibody and free BD Horizon BUV737 were removed.

Application Notes

Application

Flow cytometry

Routinely Tested

Recommended Assay Procedure:

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD Optibuild Brilliant reagents) 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. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|----------------|--------------------------------------|------------|--------|
| 563794 | Brilliant Stain Buffer | 100 Tests | (none) |
| 554656 | Stain Buffer (FBS) | 500 mL | (none) |
| 554657 | Stain Buffer (BSA) | 500 mL | (none) |
| 564299 | BUV737 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) |
| 566349 | Brilliant Stain Buffer | 1000 Tests | (none) |
| 566385 | Brilliant Stain Buffer Plus | 1000 Tests | (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. An isotype control should be used at the same concentration as the antibody of interest.
3. 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.
4. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. BD Horizon Brilliant Ultraviolet 737 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,575,303; 8,354,239.
7. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
8. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
9. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

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