Technical Data Sheet

BV786 Mouse Anti-Human CD83

Product Information

Material Number: 565336
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
Workshop: VI
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The HB15e monoclonal antibody specifically binds to a 45 kDa type I 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 germinatal 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 BV786 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 786-nm. BD Horizon BV786 can be excited by the violet laser and detected in a filter used to detect Cy™7-like dyes (eg, 780/60-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), and 20 ng/ml Recombinant Human GM-CSF (Cat. No. 550068) proteins for 7 days at 37°C. In addition, 20 ng/ml Recombinant Human TNF (Cat. No. 554618) was added for the last two days of culture. The cells were then stained with either BD Horizon™ BV786 Mouse IgG1, κ Isotype Control (Cat. No. 563330; dashed line histogram) or BD Horizon BV786 Mouse Anti-Human CD83 antibody (Cat. No. 565336; solid line histogram). The fluorescence histogram showing CD83 expression (or Ig Isotype control staining) was 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.

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™ BV786 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV786 were removed.

Application Notes

Application

| Flow cytometry | Routinely Tested |

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Recommended Assay Procedure:
For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes 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).

Suggested Companion Products

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<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tbody>
<tr>
<td>554605</td>
<td>Recombinant Human IL-4</td>
<td>5 µg</td>
<td>(none)</td>
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<tr>
<td>554618</td>
<td>Recombinant Human TNF</td>
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<tr>
<td>550068</td>
<td>Recombinant Human GM-CSF</td>
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<td>563794</td>
<td>Brilliant Stain Buffer</td>
<td>100 Tests</td>
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<td>563330</td>
<td>BV786 Mouse IgG1, k Isotype Control</td>
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<td>554656</td>
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<td>Stain Buffer (BSA)</td>
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<tr>
<td>566349</td>
<td>Brilliant Stain Buffer</td>
<td>1000 Tests</td>
<td>(none)</td>
</tr>
</tbody>
</table>

Product Notices
1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10⁶ 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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Cy is a trademark of GE Healthcare.
7. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
8. 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.
9. BD Horizon Brilliant Violet 786 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.

References
Cao W, Lee SH, Lu J. CD83 is preformed inside monocytes, macrophages and dendritic cells, but it is only stably expressed on activated dendritic cells. Biochem J. 2005; 386(Pt 1):85-93. (Clone-specific: Flow cytometry)