BUV661 Mouse Anti-Human CD38

Product Information

Material Number: 565070
Alternate Name: T10; ADP-ribosyl cyclase 1; Cyclic ADP-ribose hydrolase 1; gp45
Size: 25 Tests
Vol. per Test: 5 µl
Clone: HIT2
Isotype: Mouse IgG1,κ
Reactivity: QC Testing: Human
Workshop: III T155
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The HIT2 monoclonal antibody specifically binds to CD38. The CD38 antigen is also known as T10, ADP-ribosyl cyclase 1, and cyclic ADP ribose hydrolase 1. CD38 is a 45 kDa type II single-chain transmembrane glycoprotein present on thymocytes, activated T cells and terminally differentiated B cells (plasma cells). CD38 is expressed by other cells including monocytes, macrophages, dendritic cells, NK cells, myeloid and erythroid precursors and some epithelial cells. The CD38 antigen acts as an ectoenzyme that catalyzes the synthesis and hydrolysis of a Ca++ mobilizing agent, cyclic ADP-ribose. This intracellular calcium plays an important role in cell signaling pathways leading to cellular growth, apoptosis, and differentiation. CD38 binds to CD31 and thus plays a role in lymphocyte adhesion to endothelial cells.

The antibody was conjugated to BD Horizon BUV661 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 661-nm. BD Horizon Brilliant BUV661 can be excited by the ultraviolet laser (355 nm) and detected with a 670/25 filter and a 630 nm LP. Due to cross laser excitation of this dye, there may be significant spillover into channels detecting APC-like emissions (eg, 670/30-nm filter).

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 (Catalog number 563794).

Due to spectral differences between labeled cells and beads, using BD™ CompBeads can result in incorrect spillover values when used with BD Horizon BUV661 reagents. Therefore, the use of BD CompBeads or BD CompBeads Plus to determine spillover values for these reagents is not recommended. Different BUV661 reagents (eg, 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.

Multiparameter flow cytometric analysis of CD38 expression on human peripheral blood leucocyte populations. Human whole blood was stained with either BD Horizon™ BUV661 Mouse IgG1,κ Isotype Control (Cat. No. 565064; Left Panel) or BD Horizon BUV661 Mouse Anti-Human CD38 antibody (Cat. No. 565069/565070; Right Panel). The erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). Two-parameter flow cytometric contour plots showing the correlated expression of CD38 (or Ig Isotype control staining) versus side-light scatter (SSC-A) signals were derived from gated events with the forward and side-light scatter characteristics of intact leucocyte populations. 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 BUV661 under optimum conditions, and unconjugated antibody and free BD Horizon BUV661 were removed.

Application Notes

Application

Flow cytometry Routinely Tested

Suggested Companion Products

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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
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<tr>
<td>563794</td>
<td>Brilliant Stain Buffer</td>
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<tr>
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<td>BUV661 Mouse IgG1, k Isotype Control</td>
<td>50 µg</td>
<td>X40</td>
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<td>565069</td>
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<td>100 Tests</td>
<td>HIT2</td>
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<td>Lysing Buffer</td>
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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 x 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. BD Horizon Brilliant Ultraviolet 661 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.
4. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

References