Technical Data Sheet

BV480 Mouse Anti-Human IgM

Product Information

Material Number: 566153
Alternate Name: IGHM; MU; Ig mu chain C region; AGM1; VH
Size: 25 Tests
Vol. per Test: 5 µl
Clone: G20-127
Isotype: Mouse IgG1, κ
Reactivity: QC Testing: Human
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

IgM is an important component in the first line of defense against foreign pathogens, but may also play a role in autoimmune diseases. IgM monomers consist of two light and two heavy chains. Unlike the heavy chain of an IgG antibody which contains 3 constant Ig domains, the µ heavy chain of IgM contains 4 constant Ig domains. Five IgM monomers complex with a small polypeptide (J-chain) to form pentameric IgM that can be found in human plasma. In an immune response, the binding of IgM to a cell surface antigen enables C1q to activate interactions with downstream components in the classical complement pathway. Mature B lymphocytes express IgM. The G20-127 monoclonal antibody binds to the heavy chain of human IgM. The G20-127 antibody is not thought to react with other immunoglobulin heavy chain isotypes.

The antibody was conjugated to BD Horizon BV480 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 436-nm and Em Max at 478-nm, BD Horizon BV480 can be excited by the violet laser and detected in the BD Horizon BV510 (525/40-nm) filter set. BV480 has less spillover into the BV605 detector and, in general, is brighter than BV510.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The antibody was conjugated with BD Horizon BV480 under optimum conditions, and unconjugated antibody and free BD Horizon BV480 were removed. The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Two-color flow cytometric analysis of IgM expression on human peripheral blood lymphocytes. Human peripheral blood mononuclear cells were incubated in complete medium overnight in order to minimize subsequent nonspecific immunofluorescent staining. The cells were harvested and stained with APC Mouse Anti-Human CD19 antibody (Cat. No. 555415/561742) and either BD Horizon™ BV480 Mouse IgG1, κ Isotype Control (Cat. No.565652; Left Plot) or BD Horizon™ BV480 Mouse Anti-Human IgM antibody (Cat. No. 566146/566153; Right Plot). Two-color flow cytometric dot plots showing the correlated expression of cell surface IgM (or Ig isotype control staining) versus CD19 were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer System.
**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).

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**Suggested Companion Products**

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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<td>565652</td>
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<td>X40</td>
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<td>100 Tests</td>
<td>G20-127</td>
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<td>554657</td>
<td>Stain Buffer (BSA)</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 $1 \times 10^6$ 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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
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. BD Horizon Brilliant Violet 480 is covered by one or more of the following US patents: 8,575,303; 8,354,239.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

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**References**


