**Product Information**

**Material Number:** 566015  
**Alternate Name:** ABCB1; ABC20; CLCS; GP170; MDR1; P-GP; PGY1  
**Size:** 50 Tests  
**Vol. per Test:** 5 µl  
**Clone:** UIC2  
**Immunogen:** Human MDR1 Transfected Cell Line  
**Isotype:** Mouse (BALB/c) IgG2a, κ  
**Reactivity:** QC Testing: Human  
**Workshop:** VII 70364  
**Storage Buffer:** Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

The UIC2 monoclonal antibody specifically binds to an extracellular epitope of CD243, which is also known as ATP-binding cassette subfamily B member 1 (ABCB1), Multidrug resistance protein 1 (MDR1), or P-glycoprotein 1. CD243 is a transmembrane glycoprotein that spans the membrane 12 times. CD243 acts as an ATP-dependent efflux pump for a large variety of lipophilic molecules and drugs. This efflux activity has been suggested to lead to resistance to the drugs used in chemotherapy. CD243 is expressed by epithelial and endothelial cells, and at low levels by T cells, B cells, NK cells, and hematopoietic stem cells. It may be expressed at high levels by multidrug resistant (MDR) tumor cells. The UIC2 antibody reportedly inhibited the efflux of CD243 substrates from MDR cells and increased the cytotoxicity of certain CD243-transported drugs. The UIC2 antibody reportedly does not crossreact with mouse CD243.

The antibody was conjugated to BD Horizon BV421 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (e.g., 450/50-nm filter). BD Horizon BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue conjugates.

**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™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

**Application Notes**

**Application**

<table>
<thead>
<tr>
<th>Flow cytometry</th>
<th>Routinely Tested</th>
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</table>
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).

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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</thead>
<tbody>
<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 mL</td>
<td>(none)</td>
</tr>
<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
<td>500 mL</td>
<td>(none)</td>
</tr>
<tr>
<td>563794</td>
<td>Brilliant Stain Buffer</td>
<td>100 Tests</td>
<td>(none)</td>
</tr>
<tr>
<td>562439</td>
<td>BV421 Mouse IgG2a, k Isotype Control</td>
<td>50 µg</td>
<td>G155-178</td>
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</table>

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).
3. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
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.
6. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
7. An isotype control should be used at the same concentration as the antibody of interest.

References