BV421 Rat Anti-Mouse CD38

Product Information
Material Number: 562768
Alternate Name: ADP-ribosyl cyclase 1; Cyclic ADP-ribose hydrolase 1; I-19; NIM-R5
Size: 50 µg
Concentration: 0.2 mg/ml
Clone: 90/CD38 (also known as Ab90)
Immunogen: Mouse Bone Marrow Pre-B cells
Isotype: Rat IgG2a, κ
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description
The 90 monoclonal antibody specifically binds to CD38, a 42 kDa transmembrane glycoprotein on immature and mature, resting and activated, B lymphocytes. In contrast to humans, CD38 expression is down-regulated on mouse germinal center B cells and plasma cells. CD38 is also expressed on a subpopulation of thymic and peripheral T cells, NK cells, and splenic macrophages. Furthermore, CD38 has been detected on bone marrow-derived hematopoietic stem cells. The CD38 molecule is reported to exhibit both cyclase and hydrolase activities and plays a role in lymphocyte activation. CD31, both human and mouse, is reported to be a ligand for human CD38.

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 (eg, 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 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 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

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<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
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<tbody>
<tr>
<td>562602</td>
<td>BV421 Rat IgG2a, κ Isotype Control</td>
<td>50 µg</td>
<td>R35-95</td>
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<tr>
<td>555899</td>
<td>Lysing Buffer</td>
<td>100 mL</td>
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<tr>
<td>553063</td>
<td>PE Hamster Anti-Mouse CD3e</td>
<td>0.1 mg</td>
<td>145-2C11</td>
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<td>553064</td>
<td>PE Hamster Anti-Mouse CD3e</td>
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<td>554657</td>
<td>Stain Buffer (BSA)</td>
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<td>563794</td>
<td>Brilliant Stain Buffer</td>
<td>100 Tests</td>
<td>(none)</td>
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<tr>
<td>566349</td>
<td>Brilliant Stain Buffer Plus</td>
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<td>(none)</td>
</tr>
<tr>
<td>566385</td>
<td>Brilliant Stain Buffer Plus</td>
<td>1000 Tests</td>
<td>(none)</td>
</tr>
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</table>

Product Notices
1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
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. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. BD Horizon Brilliant Violet 421 is covered by one or more of the following US patents: 8,158,444; 8,362,193; 8,575,303; 8,354,239.
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.

References
BD Biosciences Pharmingen. Unpublished results. (Biology)
Oliver AM. Personal Communication. (Biology)