**Technical Data Sheet**

**BV421 Mouse Anti-Human CD59**

**Product Information**

**Material Number:** 565982

**Alternate Name:**
- HRF-20; MAC-inhibitory protein; MAC-IP; MACIF; MEM43; MIRL; Protectin; 1F5

**Size:** 25 Tests

**Vol. per Test:** 5 µl

**Clone:** p282 (H19)

**Immunogen:** Human Erythrocytes

**Isotype:** Mouse IgG2a, κ

**Reactivity:** QC Testing: Human

**Workshop:** V S006

**Storage Buffer:** Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

The p282 (H9) monoclonal antibody specifically binds to CD59, a 19 kDa glycosylphosphatidylinositol (GPI)-anchored glycoprotein, expressed on hematopoietic and non-hematopoietic cells. Because of its interaction with complement activated products, CD59 has been termed membrane-attack-complex-inhibitory factor (MACIF), homologous restriction factor (HRF20), membrane inhibitor of reactive lysis (MIRL) and Protectin. It inhibits the cytolytic activity of the complement system by binding to C8 and C9, thereby blocking the assembly of the membrane attack complex. CD59 also participates in spontaneous T-cell/erythrocyte adhesion, interacts with CD2, and plays a role in T-cell activation.

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.

**Flow cytometric analysis of CD59 expression on human peripheral blood leucocytes.** Whole blood was stained with either BD Horizon™ BV421 Mouse IgG2a, κ Isotype Control (Cat. No. 562439; Left Panel) or BD Horizon BV421 Mouse Anti-Human CD59 antibody (Cat. No. 564329/565982; Right Panel). Erythrocytes were lysed with BD FACS Lysing Solution (Cat. No. 349202). Two-parameter flow cytometric contour plots showing the correlated expression of CD59 (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 Cytometer 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™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon BV421 were removed.

Application Notes

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

<table>
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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tbody>
<tr>
<td>564329</td>
<td>BV421 Mouse Anti-Human CD59</td>
<td>100 Tests</td>
<td>p282 (H19)</td>
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<tr>
<td>562439</td>
<td>BV421 Mouse IgG2a, k Isotype Control</td>
<td>50 µg</td>
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<td>349202</td>
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<td>554657</td>
<td>Stain Buffer (BSA)</td>
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<td>563794</td>
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<td>566349</td>
<td>Brilliant Stain Buffer</td>
<td>1000 Tests</td>
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<tr>
<td>566385</td>
<td>Brilliant Stain Buffer Plus</td>
<td>1000 Tests</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 × 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. 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. 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 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.
9. 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
Kishimoto T, Tadamitsu Kishimoto .. et al., ed. Leucocyte typing VI : white cell differentiation antigens : proceedings of the sixth international workshop and conference held in Kobe, Japan, 10-14 November 1996. New York: Garland Pub.; 1997(Biology)