Product Information

**Material Number:** 563114  
**Alternate Name:** Pgp-1; Ly-24; H-CAM; HERMES; ECMR-III; Hyaluronate Receptor  
**Size:** 50 µg  
**Concentration:** 0.2 mg/ml  
**Clone:** IM7  
**Immunogen:** Dexamethasone-induced cells of the SJL mouse spontaneous myeloid leukemia M1  
**Isotype:** Rat IgG2b, κ  
**Reactivity:** QC Testing: Mouse  
**Storage Buffer:** Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

The IM7 antibody reacts with an epitope on both alloantigens and all isoforms of the CD44 glycoprotein (Pgp-1, Ly-24). The standard form of CD44, lacking variable exons and referred to as CD44H or CD44s, is widely expressed on hematopoietic and non-hematopoietic cells. CD44 isoforms encoded by variable exons are expressed on epithelial cells, but only at low levels on most leukocytes. Mice with the Ly-24.1 alloantigen (e.g., BALB/c, CBA/J, DBA/1, DBA/2) have relatively large subsets of CD44H+ T lymphocytes, while Ly-24.2 strains (e.g., A, AKR, CBA/N, C3H/He, C57BL, C57BR, C57L, C58, NZB, SJL, SWR, 129) have few CD44H+ T cells. CD44 is a cell adhesion receptor, and its principal ligand, hyaluronate, is a common component of extracellular matrices. Differential glycosylation of CD44 influences its binding to hyaluronate. Additional ligands include the cell-surface form of CD74 and the cytokine osteopontin (Eta-1). Bone marrow- and thymus-derived progenitor cells capable of repopulating the thymus express CD44. In the periphery, the level of CD44 expression increases upon activation of B lymphocytes, CD4+ T cells, and CD8+ T cells; memory cells can be recognized by their CD44[hi] phenotype. The IM7 mAb inhibits established collagen-induced arthritis in DBA/1 mice. Moreover, it prevents CNS inflammation and clinical symptoms of experimental autoimmune encephalomyelitis. In contrast, the same antibody exacerbates experimental autoimmune thyroiditis in CBA/J mice. The IM7 mAb recognizes a different epitope from that recognized by mAb KM114 (Cat. No. 558739), and the antibody pair can be used in ELISA to detect soluble CD44. It has been observed that IM7 antibody cross-reacts with human, dog, cat, horse, cow, and pig leukocytes. Anti-human CD44, clone G44-26 (Cat. No. 555476), and IM7 antibody compete for binding to human peripheral blood lymphocytes.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon™ BV510 can be excited by the violet laser and detected in the BD Horizon™ V500 (525/50-nm) filter set. BD Horizon™ BV510 conjugates are useful for the detection of dim markers off the violet laser.

**Flow cytometric analysis of CD44 expression on mouse bone-marrow cells.** BALB/c mouse bone-marrow cells were stained with either BD Horizon™ BV510 Rat IgG2b, κ Isotype Control (Cat. No. 562951; dashed line histogram) or with the BD Horizon™ BV510 Rat Anti-Mouse CD44 antibody (Cat. No. 563114; solid line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable bone marrow cells. Flow cytometry was performed using a BD LSRFortessa™ Cell Analyzer 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™ BV510 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV510 were removed.

Application Notes

Applications
Flow cytometry Routinely Tested

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>554656</td>
<td>Stain Buffer (FBS) k</td>
<td>500 ml</td>
<td>(none)</td>
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<tr>
<td>562951</td>
<td>BV510 Rat IgG2b, x Isotype Control</td>
<td>50 µg</td>
<td>R35-38</td>
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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Brilliant Violet™ 510 is a trademark of Sirigen.

References

MacDonald HR, Budd RC, Cerettini CJ. Pgp-1 (Ly-2) as a marker of murine memory T lymphocytes. Curr Top Microbiol Immunol. 1990; 159:97-109. (Biology)