Technical Data Sheet

PE Rat Anti-Mouse CD44

Product Information

Material Number: 553134
Alternate Name: Pgp-1; Ly-24; H-CAM; HERMES; ECMR-III; Hyaluronate Receptor
Size: 0.1 mg
Concentration: 0.2 mg/ml
Clone: IM7
Immunogen: Dexamethasone-induced, SJL mouse spontaneous myeloid leukemia M1 cells
Isotype: Rat IgG2b, \kappa
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The IM7 antibody specifically recognizes 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 fewer 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, and the antibody pair can be used in ELISA to detect soluble CD44. It has been observed that IM7 antibody crossreacts with human, dog, cat, horse, cow, and pig leukocytes. Anti-human CD44, clone G44-26, and IM7 antibody compete for binding to human peripheral blood lymphocytes.

Flow cytometric analysis of CD44 expression on bone-marrow cells. C57BL/6 mouse bone-marrow cells were stained with either PE Rat IgG2b, \kappa Isotype Control (Cat. No. 553989; dashed line histogram) or with the PE Rat Anti-Mouse CD44 antibody (Cat. No. 561860/553134; solid line histogram). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable bone marrow cells.

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 R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry  Routinely Tested
**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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
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.

**References**

- Parish NM, Brennan FR, Cooke A. Anti-CD44 treatment does not prevent the extravasation of autopathogenic T cells to the thyroid in experimental autoimmune thyroiditis. *Immunology.* 1999; 97(3):533-539. (Clone-specific)