Technical Data Sheet

Purified Rat Anti-Mouse CD44

Product Information

Material Number: 553131
Alternate Name: Pgp-1, H-CAM, Ly-24
Size: 0.5 mg
Concentration: 0.5 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 ≤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.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at 4°C.

Application Notes

Application

<table>
<thead>
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<th>Application</th>
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<td>Flow cytometry</td>
<td>Routinely Tested</td>
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<tr>
<td>Cytotoxicity</td>
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<td>Immunoprecipitation</td>
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<td>Immunohistochemistry-frozen</td>
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<td>Immunohistochemistry-paraffin</td>
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**Recommended Assay Procedure:**
For IHC, we recommend the use of purified IM7 mAb in our special formulation for immunohistochemistry, Cat. No. 550538. The alternative anti-mouse CD44 mAb KM114 (Cat. No. 558739) has been reported to be effective for western blot analysis and blocking of hyaluronan binding.

**Suggested Companion Products**

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<tr>
<th>Catalog Number</th>
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<th>Clone</th>
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<tr>
<td>559478</td>
<td>Purified Rat IgG2b, κ Isotype Control</td>
<td>0.25 mg</td>
<td>A95-1</td>
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<tr>
<td>554016</td>
<td>FITC Goat Anti-Rat Ig</td>
<td>0.5 mg</td>
<td>Polyclonal</td>
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**Product Notices**
1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. 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**


Naujokas MF, Morin M, Anderson MS, Peterson M, Miller J. The chondroitin sulfate form of invariant chain can enhance stimulation of T cell responses through interaction with CD44. *Cell.* 1993; 74(2):257-268. (Biology)


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: Blocking)


