Technical Data Sheet

Biotin Mouse Anti-Mouse CD45.1

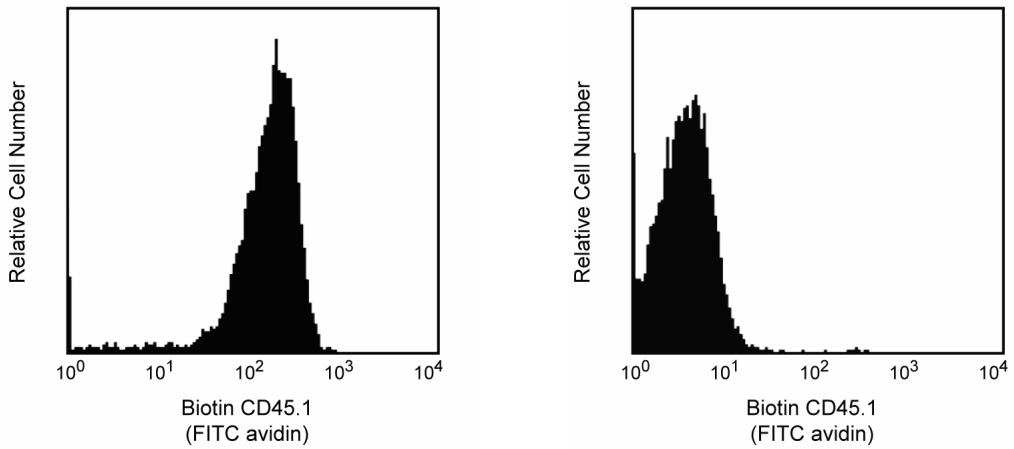
Product Information

Material Number:	**553774**
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	A20
Immunogen:	SJL mouse thymocytes and splenocytes
Isotype:	Mouse (A.SW) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The A20 antibody reacts with CD45 (Leukocyte Common Antigen) on all leukocytes of mouse strains expressing the CD45.1 alloantigen (eg, RIII, SJL/J, STS/A, DA). This alloantigen was originally named Ly-5.2, and this was the designation at the time that the antibody was characterized. The designation was later changed from Ly-5.2 to Ly-5.1 to conform with the convention that the .2 alloantigen designations be assigned to the C57BL/6 strain. mAb A20 has been reported not to react with leukocytes of most other mouse strains, which express the CD45.2 alloantigen. CD45 is a member of the Protein Tyrosine Phosphatase (PTP) family: Its intracellular (COOH-terminal) region contains two PTP catalytic domains, and the extracellular region is highly variable due to alternative splicing of exons 4, 5, and 6 (designated A, B, and C, respectively), plus differing levels of glycosylation. The CD45 isoforms detected in the mouse are cell type-, maturation-, and activation state-specific. The CD45 isoforms play complex roles in T-cell and B-cell antigen receptor signal transduction. The A20 antibody has been reported to inhibit some responses of B cells, from mice expressing the CD45.1 alloantigen, to antigens and LPS.

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.



Differential expression of CD45.1 in RIII and C57BL/6 spleen. *Single-cell suspensions of splenocytes from RIII (left panel) and C57BL/6N (right panel) mice were stained with biotin-conjugated A20 mAb followed by Avidin-FITC (Cat. No. 554057). Flow cytometry was performed on a BD FACScan™ flow cytometry system.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.
Store undiluted at 4° C and protected from prolonged exposure to light. Do not freeze.

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Application Notes

Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Reported

Suggested Companion Products

Catalog Number	Name	Size	Clone
554061	PE Streptavidin	0.5 mg	(none)
553455	Biotin Mouse IgG2a, κ Isotype Control	0.25 mg	G155-178

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
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

Johnson P, Greenbaum L, Bottomly K, Trowbridge IS. Identification of the alternatively spliced exons of murine CD45 (T200) required for reactivity with B220 and other T200-restricted antibodies. *J Exp Med.* 1989; 169(3):1179-1184.(Biology)

Morse HC 3rd, Shen FW, Hammerling U. Genetic nomenclature for loci controlling mouse lymphocyte antigens. *Immunogenetics.* 1987; 25(2):71-78.(Biology)

Shen FW. Monoclonal antibodies to mouse lymphocyte differentiation alloantigens. In: Hammerling GJ, Hammerling U, Kearney JF, ed. *Monoclonal Antibodies and T-cell Hybridomas; Perspectives and Technical Advances.* 1981:25-31.(Immunogen)

Shen FW, Tung JS, Boyse EA. Further definition of the Ly-5 system. *Immunogenetics.* 1986; 24(3):146-149.(Biology)

Suzuki K, Oida T, Hamada H, et al. Gut cryptopatches: direct evidence of extrathymic anatomical sites for intestinal T lymphopoiesis. *Immunity.* 2000; 13(5):691-702.(Biology)

Yakura H, Kawabata I, Shen FW, Katagiri M. Selective inhibition of lipopolysaccharide-induced polyclonal IgG response by monoclonal Ly-5 antibody. *J Immunol.* 1986; 136(8):2729-2733.(Clone-specific: Inhibition)

Yakura H, Shen FW, Bourcet E, Boyse EA. On the function of Ly-5 in the regulation of antigen-driven B cell differentiation. Comparison and contrast with Lyb-2. *J Exp Med.* 1983; 157(4):1077-1088.(Clone-specific: Inhibition)