

Technical Data Sheet

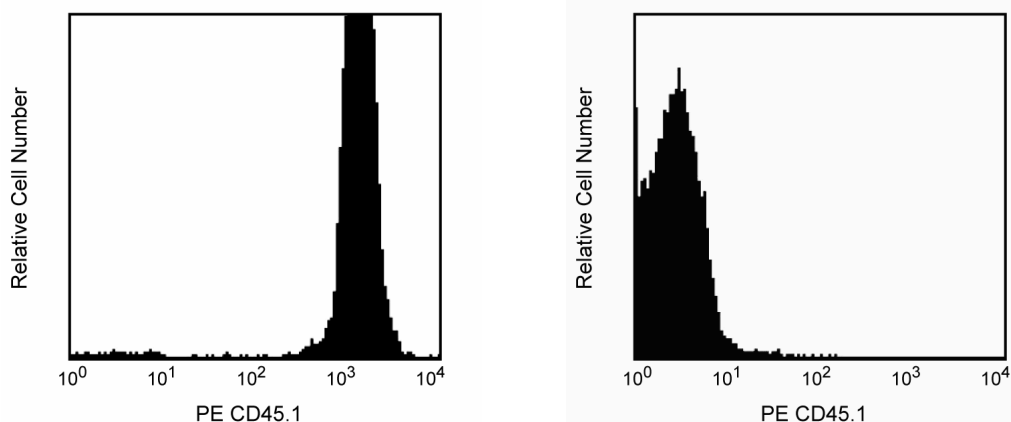
PE Mouse Anti-Mouse CD45.1

Product Information

Material Number:	561872
Size:	25 µg
Concentration:	0.2 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 monoclonal antibody specifically binds to 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.



Differential expression of CD45.1 in SJL and C57BL/6 spleen. Single-cell suspensions of splenocytes from SJL (left panel) and C57BL/6N (right panel) mice were stained with PE-conjugated A20 mAb. Flow cytometry was performed on a BD FACScan™ flow cytometry 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 R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
553457	PE Mouse IgG2a, κ Isotype Control	0.1 mg	G155-178
554656	Stain Buffer (FBS)	500 ml	(none)

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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. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome 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.
5. An isotype control should be used at the same concentration as the antibody of interest.

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)

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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)