

Technical Data Sheet

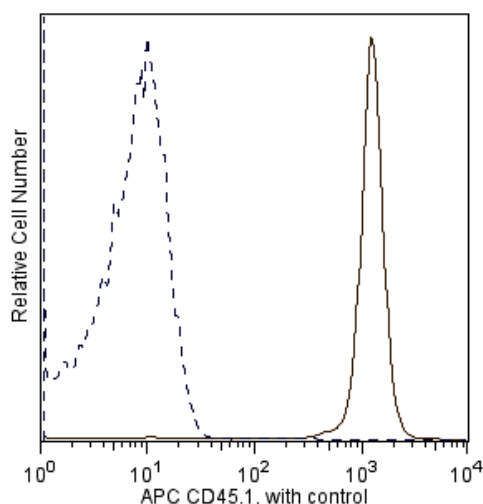
APC Mouse anti-Mouse CD45.1

Product Information

Material Number:	558701
Alternate Name:	Ly-5; Lyt4; CD45R; LCA; Ptpcr; Protein tyrosine phosphatase receptor type C
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	A20
Isotype:	Mouse (A.SW) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ 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 APC-conjugated anti-mouse CD45.1 on splenocytes from SJL and BALB/c mice. Splenocytes from SJL (solid line) or BALB/c (dashed line) mice were stained with APC anti-CD45.1(clone A20, Cat. No. 558701, and analyzed by flow cytometry. Flow cytometry was performed on a BD FACSCalibur™ instrument and the histograms were derived from the gated events based on light scattering characteristics of viable splenocytes.

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 to APC under optimum conditions, and unconjugated antibody and free APC were removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
550882	APC Mouse IgG2a κ Isotype Control	0.1 mg	G155-178

Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results.

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2. 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.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
4. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.

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. (Biology)
- 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. (Biology)