

Technical Data Sheet

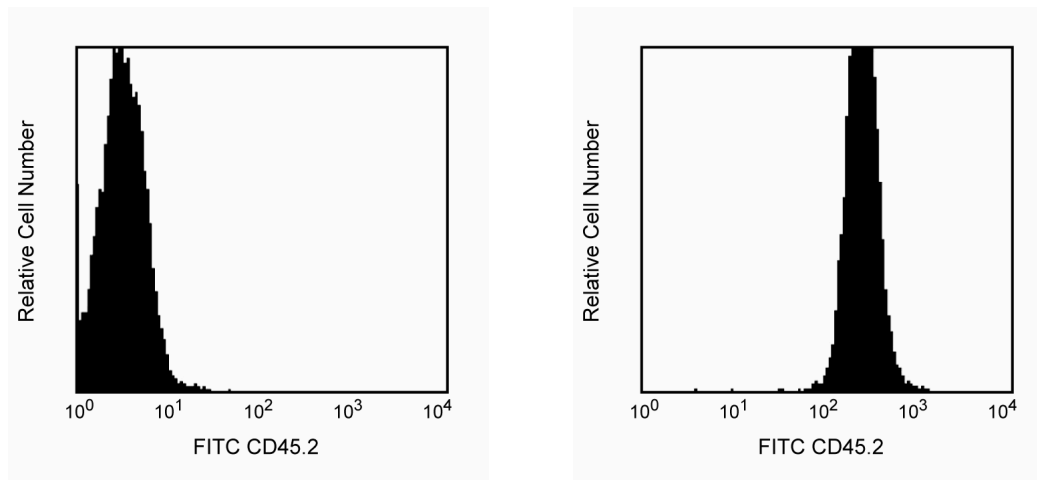
FITC Mouse Anti-Mouse CD45.2

Product Information

Material Number:	561874
Alternate Name:	Ly-5.2; T200; LCA; Leukocyte common antigen; Ptprc
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	104
Immunogen:	B10.S mouse thymocytes and splenocytes
Isotype:	Mouse (SJL) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and $\leq 0.09\%$ sodium azide.

Description

The 104 clone has been reported to react with CD45 (Leukocyte Common Antigen) on all leukocytes of most mouse strains (eg, A, AKR, BALB/c, CBA/Ca, CBA/J, C3H/He, C57BL, C57BR, C57L, C58, DBA/1, DBA/2, NZB, SWR, 129). This alloantigen was originally named Ly-5.1, and this was the designation at the time that the antibody was characterized. The designation was later changed from Ly-5.1 to Ly-5.2 to conform with the convention that the .2 alloantigen designations be assigned to the C57BL/6 strain. mAb 104 has been reported not to react with leukocytes of the mouse strains expressing the CD45.1 alloantigen (eg, RIII, SJL/J, STS/A, and DA). 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 104 antibody has been reported to inhibit some responses of B cells, from mice expressing the CD45.2 alloantigen, to certain antigens and LPS. In addition, reduction of serum IgG levels and amelioration of autoimmune renal pathology were reported in mAb 104-treated systemic lupus erythematosus-prone mice.



Differential expression of CD45.2 in SJL and C57BL/6 spleen. Splenocytes from SJL (left panel) and C57BL/6N (right panel) mice were stained with FITC Mouse anti-Mouse CD45.2. 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 FITC under optimum conditions, and unreacted FITC was removed.

Application Notes

Application

Flow cytometry	Routinely Tested
----------------	------------------

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.268.5430	32.53.720.550	0120.8555.90	65.6861.0633	0800.771.7157

For country-specific contact information, visit bdbiosciences.com/how_to_order/

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2011 BD



Suggested Companion Products

Catalog Number	Name	Size	Clone
553456	FITC Mouse IgG2a, κ Isotype Control	0.25 mg	G155-178
554656	Stain Buffer (FBS)	500 ml	(none)

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.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
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)

Ogimoto M, Mizuno K, Tate G, et al. Regulation of lipopolysaccharide- and IL-4-induced immunoglobulin heavy chain gene activation: differential roles for CD45 and Lyb-2. *Int Immunol*. 1992; 4(6):651-659. (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)

Yakura H, Ashida T, Kawabata I, Katagiri M. Alleviation of autoimmunity in BXSB mice by monoclonal alloantibody to Ly-5 (CD45). *Eur J Immunol*. 1989; 19(8):1505-1508. (Biology)

Yakura H, Kawabata I, Ashida T, Katagiri M. Differential regulation by Ly-5 and Lyb-2 of IgG production induced by lipopolysaccharide and B cell stimulatory factor-1 (IL-4). *J Immunol*. 1988; 141(3):875-880. (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)