

## Technical Data Sheet

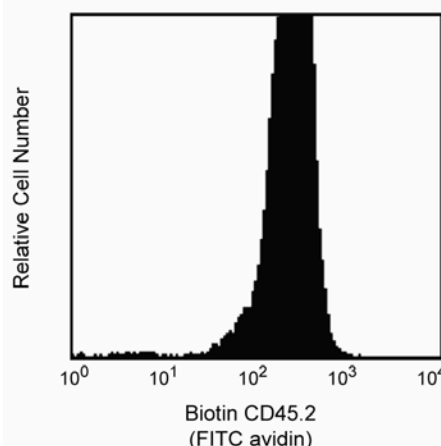
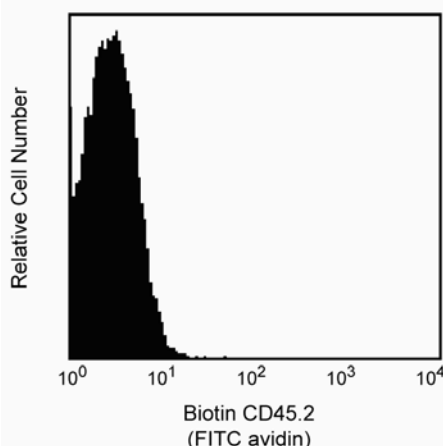
## Biotin Mouse Anti-Mouse CD45.2

## Product Information

|                         |                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------|
| <b>Material Number:</b> | 553771                                                                                  |
| <b>Alternate Name:</b>  | Ly-5.2; T200; LCA; Leukocyte common antigen; Ptprc                                      |
| <b>Size:</b>            | 0.5 mg                                                                                  |
| <b>Concentration:</b>   | 0.5 mg/ml                                                                               |
| <b>Clone:</b>           | 104                                                                                     |
| <b>Immunogen:</b>       | B10.S mouse thymocytes and splenocytes                                                  |
| <b>Isotype:</b>         | Mouse (SJL) IgG2a, $\kappa$                                                             |
| <b>Reactivity:</b>      | QC Testing: Mouse                                                                       |
| <b>Storage Buffer:</b>  | 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/6 (right panel) mice were stained with Biotin Mouse anti-Mouse CD45.2, followed by Avidin FITC (Cat. No. 554057). Flow cytometry was performed on a BD FACScan™ flow cytometry system.

## Preparation and Storage

Store undiluted at 4°C.

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.

## Application Notes

## Application

|                             |                  |
|-----------------------------|------------------|
| Flow cytometry              | Routinely Tested |
| Immunohistochemistry-frozen | Reported         |

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## Suggested Companion Products

| Catalog Number | Name                                  | Size    | Clone    |
|----------------|---------------------------------------|---------|----------|
| 554057         | Avidin FITC                           | 0.5 mg  | (none)   |
| 553455         | Biotin 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/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.
3. An isotype control should be used at the same concentration as the antibody of interest.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).

## References

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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)

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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: Immunohistochemistry)

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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)

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