

## Spark Blue™ 550 anti-mouse CD45.2 Antibody

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| <b>Catalog# / Size</b>   | 109861 / 25 µg<br>109862 / 100 µg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Clone</b>             | 104                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Regulatory Status</b> | RUO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Other Names</b>       | Ly-5.2, LCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Isotype</b>           | Mouse (SJL) IgG2a, κ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Description</b>       | CD45.2 is an alloantigen of CD45, expressed by Ly5.2 bearing mouse strains (e.g., A, AKR, BALB/c, CBA/Ca, CBA/J, C3H/He, C57BL, C57BR, C57L, C58, DBA/1, DBA/2, NZB, SWR, 129). CD45, a member of the protein tyrosine phosphatase (PTP) family, is a 180-240 kD glycoprotein expressed on all hematopoietic cells except mature erythrocytes and platelets. There are multiple isoforms in the mouse that play key roles in TCR and BCR signal transduction. These isoforms are very specific to the activation and maturation states of the cell as well as specific cell type. The primary ligands for CD45 are galectin-1, CD2, CD3, CD4, TCR, CD22, and Thy-1. |

### Product Details

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Verified Reactivity</b>    | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Antibody Type</b>          | Monoclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Host Species</b>           | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Immunogen</b>              | B10.S mouse thymocytes and splenocytes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Formulation</b>            | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Preparation</b>            | The antibody was purified by affinity chromatography and conjugated with Spark Blue™ 550 under optimal conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Concentration</b>          | 0.5 mg/mL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Storage &amp; Handling</b> | The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Application</b>            | <a href="#">FC - Quality tested</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Recommended Usage</b>      | Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is ≤ 0.5 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.<br><br>* Spark Blue™ 550 has a maximum excitation of 516 nm and a maximum emission of 540 nm.                                                                                                                                                                                                                                                                                   |
| <b>Excitation Laser</b>       | Blue Laser (488 nm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Application Notes</b>      | The 104 antibody does not react with mouse cells expressing the CD45.1 alloantigen. Additional reported applications (for the relevant formats) include: immunoprecipitation <sup>4</sup> , <i>in vivo</i> and <i>in vitro</i> blocking of B cell responses <sup>1,2</sup> , and immunohistochemical staining of acetone-fixed frozen sections <sup>3</sup> .                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Application References</b> | <ol style="list-style-type: none"> <li>1. Yakura H, <i>et al.</i> 1983. <i>J. Exp. Med.</i> 157:1077. (Block)</li> <li>2. Yakura H, <i>et al.</i> 1986. <i>J. Immunol.</i> 136:2729. (Block)</li> <li>3. Suzuki K, <i>et al.</i> 2000. <i>Immunity</i> 13:691. (IHC)</li> <li>4. Shen FW, <i>et al.</i> 1986. <i>Immunogenetics</i> 24:146. (IP)</li> <li>5. Baldwin TA and Hogquist KA. 2007. <i>J. Immunol.</i> 179:837.</li> <li>6. Pascal V, <i>et al.</i> 2007. <i>J. Immunol.</i> 179:1751.</li> <li>7. Burman AC, <i>et al.</i> 2007. <i>Blood</i> 110:1064.</li> <li>8. Kincaid EZ, <i>et al.</i> 2007. <i>J. Immunol.</i> 179:3187.</li> <li>9. Phan TG, <i>et al.</i> 2007. <i>Nature Immunol.</i> 8:992.</li> </ol> |

10. Nakano-Yokomizo T, *et al.* 2011. *J. Exp Med.* 208:1661. [PubMed](#)  
11. Wen T, *et al.* 2013. *PNAS.* 110:6067. [PubMed](#)  
12. Kohlmeier JE, *et al.* 2008. *Immunity.* 29:101. (FC) [PubMed](#)

**RRID** AB\_2860625 (BioLegend Cat. No. 109861)  
AB\_2860626 (BioLegend Cat. No. 109862)

## Antigen Details

|                           |                                                                                                          |
|---------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Structure</b>          | Protein tyrosine phosphatase (PTP) family, 180-240 kD                                                    |
| <b>Distribution</b>       | All hematopoietic cells except mature erythrocytes and platelets of the CD45.2 strain of mice            |
| <b>Function</b>           | Phosphatase, T and B cell activation                                                                     |
| <b>Ligand/Receptor</b>    | Galectin-1, CD2, CD3, CD4                                                                                |
| <b>Biology Area</b>       | Cell Biology, Immunology, Inhibitory Molecules, Innate Immunity, Neuroscience, Neuroscience Cell Markers |
| <b>Molecular Family</b>   | CD Molecules                                                                                             |
| <b>Antigen References</b> | 1. Suzuki K, <i>et al.</i> 2000. <i>Immunity</i> 13:691.                                                 |
| <b>Gene ID</b>            | <a href="#">19264</a>                                                                                    |

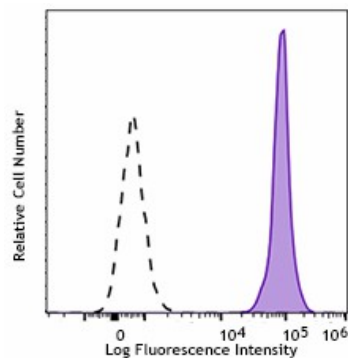
## Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

## Other Formats

Biotin anti-mouse CD45.2, FITC anti-mouse CD45.2, PE anti-mouse CD45.2, Purified anti-mouse CD45.2, APC anti-mouse CD45.2, Alexa Fluor® 488 anti-mouse CD45.2, Alexa Fluor® 647 anti-mouse CD45.2, Pacific Blue™ anti-mouse CD45.2, Alexa Fluor® 700 anti-mouse CD45.2, APC/Cyanine7 anti-mouse CD45.2, PerCP anti-mouse CD45.2, PerCP/Cyanine5.5 anti-mouse CD45.2, PE/Cyanine7 anti-mouse CD45.2, Brilliant Violet 421™ anti-mouse CD45.2, Brilliant Violet 570™ anti-mouse CD45.2, Brilliant Violet 650™ anti-mouse CD45.2, Brilliant Violet 510™ anti-mouse CD45.2, Brilliant Violet 785™ anti-mouse CD45.2, Brilliant Violet 605™ anti-mouse CD45.2, Purified anti-mouse CD45.2 (Maxpar® Ready), PE/Dazzle™ 594 anti-mouse CD45.2, Brilliant Violet 711™ anti-mouse CD45.2, Alexa Fluor® 594 anti-mouse CD45.2, APC/Fire™ 750 anti-mouse CD45.2, TotalSeq™-A0157 anti-mouse CD45.2, TotalSeq™-B0157 anti-mouse CD45.2, TotalSeq™-C0157 anti-mouse CD45.2, Brilliant Violet 750™ anti-mouse CD45.2, Spark Blue™ 550 anti-mouse CD45.2, Spark NIR™ 685 anti-mouse CD45.2

## Product Data



C57BL/6 mouse splenocytes were stained with CD45.2 (clone 104) Spark Blue™ 550 (filled histogram). Open histogram represents unstained cells.

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