

**Brilliant Violet 421™ anti-mouse CD45.1**

**Catalog # / Size:** 1153655 / 125 µl  
1153660 / 50 µg

**Clone:** A20

**Isotype:** Mouse IgG2a, κ

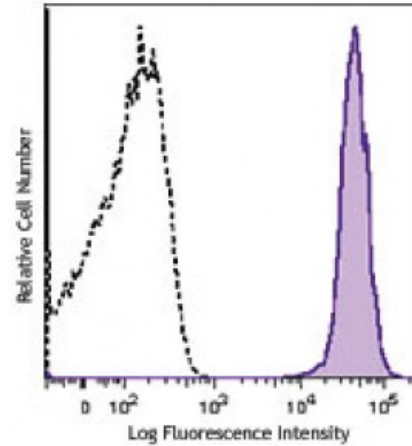
**Immunogen:** SJL mouse thymocytes and splenocytes

**Reactivity:** Mouse

**Preparation:** The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 421™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 421™ and unconjugated antibody.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).

**Concentration:** microg sizes: 0.2 mg/ml  
microL sizes: lot-specific

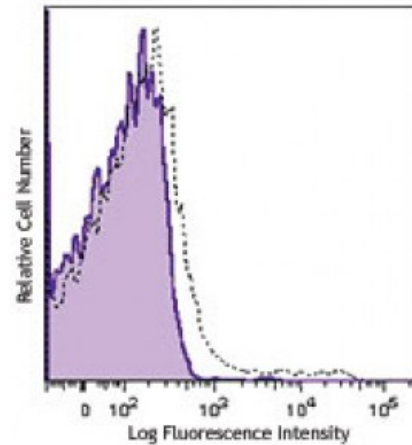


SJL mouse splenocytes were stained with CD45.1 (clone A20) Brilliant Violet 421™ (filled histogram) or mouse IgG2a Brilliant Violet 421™ isotype control (open histogram).

**Applications:**

**Applications:** Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining using the microg size, the suggested use of this reagent is ≤0.5 microg per million cells in 100 microL volume. For immunofluorescent staining using the microL size, the suggested use of this reagent is ≤5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.



C57BL/6 mouse splenocytes were stained with CD45.1 (clone A20) Brilliant Violet 421™ (filled histogram) or mouse IgG2a Brilliant Violet 421™ isotype control (open histogram).

Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd.

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prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.

**Application Notes:** The A20 antibody does not react with leukocytes or mouse cells expressing the CD45.2 alloantigen. Additional reported applications (for relevant formats of this clone) include: immunoprecipitation<sup>3</sup>, *in vitro* blocking of B cell responses<sup>1,2</sup>, immunohistochemical staining of frozen sections: OCT embedded<sup>7</sup> and acetone-fixed<sup>4-6</sup> (direct immunofluorescence detection with fluorochrome conjugated A20 was used in (5) and (6)), and immunofluorescence microscopy<sup>9</sup>.

**Application References:**

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2. Yakura H, *et al.* 1986. *J. Immunol.* 136:2729. (Block)
3. Shen FW, *et al.* 1986. *Immunogenetics* 24:146. (IP)
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5. Werner N, *et al.* 2002. *Arterioscler. Thromb. Vasc. Biol.* 22:1567. (IHC)
6. Lessner SM, *et al.* 2002. *Am. J. Pathol.* 160:2145. (FC, IHC)
7. Chen CC, *et al.* 2005. *P. Natl. Acad. Sci. USA* 102:11408 (IHC)
8. Pascal V, *et al.* 2007. *J. Immunol.* 179:1751. (FC)
9. Mende I, *et al.* 2006. *Blood* 107:1383. (IF, IHC, FC)
10. Phan TG, *et al.* 2007. *Nature Immunol.* 8:992. (FC)
11. Wither DR, *et al.* 2009. *J. Immunol.* 183:5079. [PubMed](#)
12. Pascal V, *et al.* 2007. *J. Immunol.* 179:1751. [PubMed](#)
13. Lee SW, *et al.* 2009. *J. Immunol.* 182:6753. [PubMed](#)
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15. Beamer CA, *et al.* 2007. *Am. J. Respir. Cell. Mol. Biol.* 37:729. (FC) [PubMed](#)
16. Li LX, *et al.* 2010. *J. Immunol.* 184:1728. [PubMed](#)
17. Hosoi A, *et al.* 2008. *Cancer Res.* 68:3941. (FC) [PubMed](#)
18. Kenna TJ, *et al.* 2008. *Blood* 111:2091. [PubMed](#)
19. Kohlmeier JE, *et al.* 2008. *Immunity.* 29:101. (FC) [PubMed](#)

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**Description:** CD45.1 is an alloantigen of CD45, expressed by Ly5.1 bearing mouse strains (e.g., RIII, SJL/J, STS/A, DA). 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 mice 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 types. The primary ligands for CD45 are galectin-1, CD2, CD3, CD4, TCR, CD22, and Thy-1.

**Antigen References:**

1. Barclay A, *et al.* 1997. *The Leukocyte Antigen FactsBook* Academic Press.
2. Trowbridge IS, *et al.* 1993. *Annu. Rev. Immunol.* 12:85.
3. Kishihara K, *et al.* 1993. *Cell* 74:143.
4. Pulido R, <