

Brilliant Violet 570™ anti-mouse CD45.1 Antibody

Catalog# / Size	110733 / 125 µL
Clone	A20
Regulatory Status	RUO
Other Names	T200, Ly-5.1, LCA
Isotype	Mouse (A.SW) IgG2a, κ
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.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	SJL mouse thymocytes and splenocytes
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).
Preparation	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 570™ under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>Brilliant Violet 570™ excites at 405 nm and emits at 570 nm. The bandpass filter 585/42 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel. Refer to your instrument manual or manufacturer for support. Brilliant Violet 570™ is a trademark of Sirigen Group Ltd.</p> <p>Learn more about Brilliant Violet™.</p> <p>This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.</p>
Excitation Laser	Violet Laser (405 nm)
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 ³ , <i>in vitro</i> blocking of B cell responses ^{1,2} , immunohistochemical staining of

frozen sections: OCT embedded⁷ and acetone-fixed⁴⁻⁶ (direct immunofluorescence detection with fluorochrome conjugated A20 was used in (5) and (6)).

Application References

(PubMed link indicates BioLegend citation)

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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)
4. Suzuki K, *et al.* 2000. *Immunity* 13:691. (IHC-F)
5. Werner N, *et al.* 2002. *Arterioscler. Thromb. Vasc. Biol.* 22:1567. (IHC-F)
6. Lessner SM, *et al.* 2002. *Am. J. Pathol.* 160:2145. (FC, IHC-F)
7. Chen CC, *et al.* 2005. *P. Natl. Acad. Sci. USA* 102:11408 (IHC-F)
8. Pascal V, *et al.* 2007. *J. Immunol.* 179:1751. (FC)
9. Mende I, *et al.* 2006. *Blood* 107:1383. (IHC-F, 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](#)
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14. Takada K, *et al.* 2009. *J. Exp Med.* 206:2253. [PubMed](#)
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](#)

Product Citations

1. Pinho S, *et al.* 2022. *Nat Cell Biol.* 24:290. [PubMed](#)
2. Lu Y, *et al.* 2020. *Immunity.* 52:782. [PubMed](#)

RRID

AB_10895765 (BioLegend Cat. No. 110733)

Antigen Details

Structure	Protein tyrosine phosphatase (PTP) family, 180-240 kD
Distribution	All hematopoietic cells except mature erythrocytes and platelets of the CD45.1 strain of mice
Function	Phosphatase, T and B cell activation
Ligand/Receptor	Galectin-1, CD2, CD3, CD4
Biology Area	Cell Biology, Immunology, Inhibitory Molecules, Neuroscience, Neuroscience Cell Markers
Molecular Family	CD Molecules
Antigen References	<ol style="list-style-type: none">1. Barclay A, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> Academic Press.2. Trowbridge IS, <i>et al.</i> 1993. <i>Annu. Rev. Immunol.</i> 12:85.3. Kishihara K, <i>et al.</i> 1993. <i>Cell</i> 74:143.4. Pulido R, <i>et al.</i> 1988. <i>J. Immunol.</i> 140:3851.
Gene ID	19264

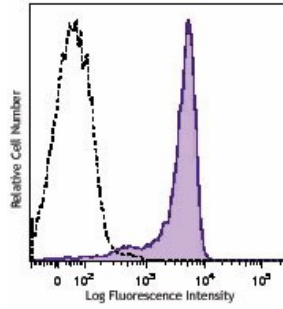
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Biotin anti-mouse CD45.1, FITC anti-mouse CD45.1, PE anti-mouse CD45.1, Purified anti-mouse CD45.1, APC anti-mouse CD45.1, APC/Cyanine7 anti-mouse CD45.1, Alexa Fluor® 488 anti-mouse CD45.1, Alexa Fluor® 647 anti-mouse CD45.1, Pacific Blue™ anti-mouse CD45.1, Alexa Fluor® 700 anti-mouse CD45.1, Brilliant Violet 650™ anti-mouse CD45.1, PerCP anti-mouse CD45.1, PerCP/Cyanine5.5 anti-mouse CD45.1, PE/Cyanine7 anti-mouse CD45.1, Brilliant Violet 421™ anti-mouse CD45.1, Brilliant Violet 570™ anti-mouse CD45.1, Brilliant Violet 605™ anti-mouse CD45.1, Brilliant Violet 711™ anti-mouse CD45.1, Brilliant Violet 510™ anti-mouse CD45.1, Brilliant Violet 785™ anti-mouse CD45.1, Purified anti-mouse CD45.1 (Maxpar® Ready), PE/Dazzle™ 594 anti-mouse CD45.1, Alexa Fluor® 594 anti-mouse CD45.1, APC/Fire™ 750 anti-mouse CD45.1, TotalSeq™-A0178 anti-mouse CD45.1, TotalSeq™-B0178 anti-mouse CD45.1, TotalSeq™-C0178 anti-mouse CD45.1

Product Data



SJL mouse splenocytes were stained with CD45.1 (clone A20) Brilliant Violet 570™ (filled histogram) or mouse IgG2a, κ Brilliant Violet 570™ isotype control (open histogram).

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