

Alexa Fluor® 594 anti-mouse CD45.2 Antibody

Catalog# / Size	109850 / 100 µg
Clone	104
Regulatory Status	RUO
Other Names	Ly-5.2, LCA
Isotype	Mouse (SJL) IgG2a, κ
Description	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

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	B10.S mouse thymocytes and splenocytes
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 594 under optimal conditions.
Concentration	0.5 mg/ml
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	IHC-F - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunohistochemical staining on frozen tissue sections. For immunohistochemistry, a concentration range of 5.0 - 10 µg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Alexa Fluor® 594 has an excitation maximum of 590 nm, and a maximum emission of 617 nm.</p> <p>Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p>View full statement regarding label licenses</p>
Application Notes	The 104 antibody does not react with mouse cells expressing the CD45.1 alloantigen. Additional reported applications (for the relevant formats) include: immunoprecipitation ⁴ , <i>in vivo</i> and <i>in vitro</i> blocking of B cell responses ^{1,2} , and immunohistochemical staining of acetone-fixed frozen sections ³ .
Application References	<ol style="list-style-type: none">1. Yakura H, <i>et al.</i> 1983. <i>J. Exp. Med.</i> 157:1077. (Block)2. Yakura H, <i>et al.</i> 1986. <i>J. Immunol.</i> 136:2729. (Block)3. Suzuki K, <i>et al.</i> 2000. <i>Immunity</i> 13:691. (IHC)4. Shen FW, <i>et al.</i> 1986. <i>Immunogenetics</i> 24:146. (IP)5. Baldwin TA and Hogquist KA. 2007. <i>J. Immunol.</i> 179:837.6. Pascal V, <i>et al.</i> 2007. <i>J. Immunol.</i> 179:1751.7. Burman AC, <i>et al.</i> 2007. <i>Blood</i> 110:1064.8. Kincaid EZ, <i>et al.</i> 2007. <i>J. Immunol.</i> 179:3187.9. Phan TG, <i>et al.</i> 2007. <i>Nature Immunol.</i> 8:992.
(PubMed link indicates BioLegend citation)	

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](#)

Product Citations

1. Faulhaber LD, *et al.* 2022. *Neurophotonics.* 9:031917. [PubMed](#)

RRID

AB_2629589 (BioLegend Cat. No. 109850)

Antigen Details

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

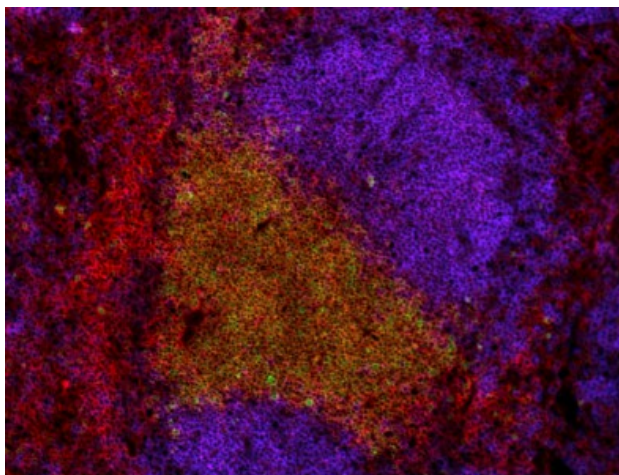
Related Protocols

[Immunohistochemistry Protocol for Frozen Sections](#)

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



BALB/C mouse frozen spleen section was fixed with 4% paraformaldehyde (PFA) for ten minutes at room temperature and blocked with 5% rat serum + FBS for one hour at room temperature. Then the section was stained with 10 µg/ml of CD45.2 (clone 104) Alexa Fluor® 594 (red), 5 µg/ml of CD3 (clone 17A2) Alexa Fluor® 647 (green), and 5 µg/ml of B220 (clone RA3-6B2) Alexa Fluor® 488 (blue) at room temperature for two hours. The image was captured with a 10X objective.

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