

Spark Blue™ 574 anti-mouse CD45.2 Antibody

Catalog# / Size	109871 / 25 µg 109872 / 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 Spark Blue™ 574 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	FC - Quality tested
Recommended Usage	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 ≤ 0.5 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application. * Spark Blue™ 574 has a maximum excitation of 506 nm and a maximum emission of 574 nm.
Excitation Laser	Blue Laser (488 nm)
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

(PubMed link indicates
BioLegend citation)

1. Yakura H, *et al.* 1983. *J. Exp. Med.* 157:1077. (Block)
2. Yakura H, *et al.* 1986. *J. Immunol.* 136:2729. (Block)
3. Suzuki K, *et al.* 2000. *Immunity* 13:691. (IHC)
4. Shen FW, *et al.* 1986. *Immunogenetics* 24:146. (IP)
5. Baldwin TA and Hogquist KA. 2007. *J. Immunol.* 179:837.
6. Pascal V, *et al.* 2007. *J. Immunol.* 179:1751.
7. Burman AC, *et al.* 2007. *Blood* 110:1064.
8. Kincaid EZ, *et al.* 2007. *J. Immunol.* 179:3187.
9. Phan TG, *et al.* 2007. *Nature Immunol.* 8:992.
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](#)

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

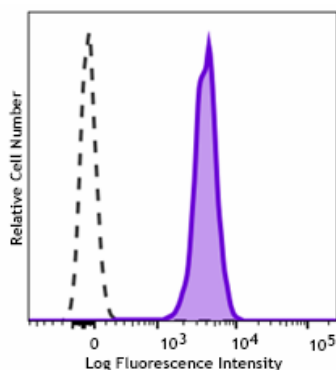
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Spark Red™ 718 anti-mouse CD45.2 (Flexi-Fluor™), Purified anti-mouse CD45.2 (Maxpar® Ready), Brilliant Violet 711™ anti-mouse CD45.2, APC/Fire™ 750 anti-mouse CD45.2, Alexa Fluor® 594 anti-mouse CD45.2, PE/Cyanine7 anti-mouse CD45.2, FITC anti-mouse CD45.2, Biotin anti-mouse CD45.2, Brilliant Violet 650™ anti-mouse CD45.2, Purified anti-mouse CD45.2, Brilliant Violet 510™ anti-mouse CD45.2, PE anti-mouse CD45.2, Brilliant Violet 421™ anti-mouse CD45.2, Brilliant Violet 785™ anti-mouse CD45.2, Spark UV™ 387 anti-mouse CD45.2, Spark YG™ 581 anti-mouse CD45.2 (Flexi-Fluor™), Spark YG™ 593 anti-mouse CD45.2 (Flexi-Fluor™) Antibody, PE/Dazzle™ 594 anti-mouse CD45.2, Alexa Fluor® 488 anti-mouse CD45.2, APC/Cyanine7 anti-mouse CD45.2, PerCP/Cyanine5.5 anti-mouse CD45.2, TotalSeq™-A0157 anti-mouse CD45.2, TotalSeq™-B0157 anti-mouse CD45.2, TotalSeq™-C0157 anti-mouse CD45.2, Spark Blue™ 550 anti-mouse CD45.2, Spark NIR™ 685 anti-mouse CD45.2, Brilliant Violet 605™ anti-mouse CD45.2, Alexa Fluor® 647 anti-mouse CD45.2, Alexa Fluor® 700 anti-mouse CD45.2, PerCP anti-mouse CD45.2, Brilliant Violet 570™ anti-mouse CD45.2, APC anti-mouse CD45.2, Spark Blue™ 574 anti-mouse CD45.2, Pacific Blue™ anti-mouse CD45.2, Brilliant Violet 750™ anti-mouse CD45.2

Product Data



C57BL/6 mouse splenocytes were stained with anti-mouse CD45.2 (clone 104) Spark Blue™ 574 (filled histogram) or mouse IgG2a, κ Spark Blue™ 574 isotype control (open histogram).

For Research Use Only. Not for diagnostic or therapeutic use.

This product is supplied subject to the terms and conditions, including the limited license, located at www.biolegend.com/terms ("Terms") and may be used only as provided in the Terms. Without limiting the foregoing, BioLegend products may not be used for any Commercial Purpose as defined in the Terms, resold in any form, used in manufacturing, or reverse engineered, sequenced, or otherwise studied or used to learn its design or composition without express written approval of BioLegend. Regardless of the information given in this document, user is solely responsible for determining any license requirements necessary for user's intended use and assumes all risk and liability arising from use of the product. BioLegend is not responsible for patent infringement or any other risks or liabilities whatsoever resulting from the use of its products.

BioLegend, the BioLegend logo, and all other trademarks are property of BioLegend, Inc. or their respective owners, and all rights are reserved.

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587