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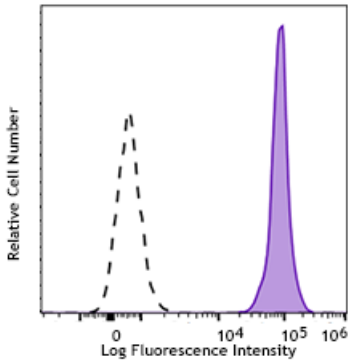
Product Data Sheet

Spark Blue™ 550 anti-mouse CD45.2

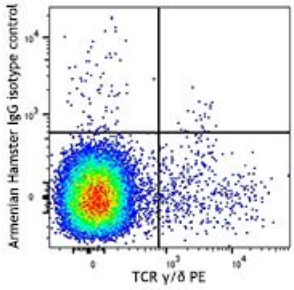
Catalog # / Size:	1149310 / 100 µg 1149305 / 25 µg
Clone:	104
Isotype:	Mouse IgG2a, κ
Immunogen:	B10.S mouse thymocytes and splenocytes
Reactivity:	Mouse
Preparation:	The antibody was purified by affinity chromatography and conjugated with Spark Blue™ 550 under optimal conditions.
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Workshop Number:	750 under optimal conditions.
Concentration:	0.5



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

Applications:

Applications:	Flow Cytometry
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™ 550 has a maximum excitation of 516 nm and a maximum emission of 540 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], *in vivo* and *in vitro* blocking of B cell responses[1,2], and immunohistochemical staining of acetone-fixed frozen sections[3].



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Application References:

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

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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.

Antigen References:

1. Suzuki K, *et al.* 2000. *Immunity* 13:691.

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