

PE/Dazzle™ 594 anti-mouse Ly-6A/E (Sca-1) Antibody

Catalog# / Size	108137 / 25 µg 108138 / 100 µg
Clone	D7
Regulatory Status	RUO
Other Names	Sca-1
Isotype	Rat IgG2a, κ
Description	Ly-6A/E, also known as Sca-1, is an 18 kD member of the Ly-6 multigene family. Ly6A/E is a glycosylphosphatidylinositol (GPI)-linked protein expressed on hematopoietic stem cells. In mice expressing the Ly-6.2 haplotype (e.g., AKR, C57BL, C57BR, DBA/2, SJL, SWR, and 129), Ly-6A/E is also expressed on peripheral B lymphocytes and thymic and peripheral T lymphocytes. Strains expressing the Ly-6.1 haplotype (e.g., BALB/c, CBA, C3H/He, DBA/1, and NZB) have low Ly-6A/E expression on resting peripheral lymphocytes. The expression of Ly-6A/E on lymphocytes is upregulated upon activation from both Ly6.1 and Ly6.2 haplotype mice. Ly-6A/E is thought to be involved in the regulation of both T and B cell responses.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	IL-2-dependent mouse T-cell line (CTL-L)
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with PE/Dazzle™ 594 under optimal conditions.
Concentration	0.2 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 ≤0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application. * PE/Dazzle™ 594 has a maximum excitation of 566 nm and a maximum emission of 610 nm.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	The D7 antibody has been reported to induce T cell activation and inhibit TCR-induced IL-2 production. Additional reported applications (for the relevant formats) include: Western blotting ^{1,2} , immunoprecipitation ¹ , <i>in vitro</i> lymphocyte activation ³⁻⁶ , induction of redirected lysis ⁷ , induction of T cell inhibitory signalling ⁸ , immunofluorescence ⁹ , and immunohistochemical staining of acetone-fixed frozen sections ¹³ and Bouin-fixed, paraffin-embedded samples ⁹ . The two Sca-1 recognizing clones D7 and E13-161.7 have been shown to bind distinct epitopes due to the inability of D7 to block the binding of E13-161.7. ¹⁴
Application References	1. Ortega G, <i>et al.</i> 1986. <i>J. Immunol.</i> 137:3240. (WB, IP) 2. Palfree RGE, <i>et al.</i> 1986. <i>Immunogenetics</i> 23:197. (WB) 3. Codias EK, <i>et al.</i> 1990. <i>J. Immunol.</i> 144:2197. 4. Malek TR, <i>et al.</i> 1986. <i>J. Exp. Med.</i> 164:709.
(PubMed link indicates BioLegend citation)	

5. Codias EK, *et al.* 1990. *J. Immunol.* 145:1407.
6. Ivanov V, *et al.* 1994. *J. Immunol.* 153:2394.
7. Karlhofer FM, *et al.* 1991. *J. Immunol.* 146:3662.
8. Fleming T, *et al.* 1994. *J. Immunol.* 153:1955.
9. van Bragt MPA, *et al.* 2005. *Biol. Reprod.* 73:634. (IF, IHC)
10. Umland O, *et al.* 2007. *J. Immunol.* 178:4147.
11. Cridland SO, *et al.* 2009. *Blood Cell. Mol. Dis.* 45:149. (FC) [PubMed](#)
12. Pronk CJ, *et al.* 2011. *J. Exp Med.* [PubMed](#)
13. English A, *et al.* 2000. *J. Immunol.* 165:3763. (IHC)
14. Bamezai A and Rock KL. 1995. *Proc. Natl. Acad. Sci. USA* 92:4294.
15. Wiesner DL, *et al.* 2015. *PLoS Pathog.* 11:1004701. [PubMed](#)

Product Citations

1. Fang H, *et al.* 2020. *Nat Commun.* 4.661805556. [PubMed](#)

RRID

AB_2564041 (BioLegend Cat. No. 108137)
 AB_2564042 (BioLegend Cat. No. 108138)

Antigen Details

Structure	Ly-6 multigene family, 18 kD
Distribution	Hematopoietic stem cells, activated T cells and B cells, subset of resting B cells and T cells
Function	Regulates B and T cell responses
Cell Type	B cells, Hematopoietic stem and progenitors, Mesenchymal Stem Cells, T cells
Biology Area	Immunology, Stem Cells
Antigen References	<ol style="list-style-type: none"> 1. Rock KL, <i>et al.</i> 1989. <i>Immunol. Rev.</i> 111:195. 2. Morrison SJ, <i>et al.</i> 1994. <i>Immunity</i> 1:661. 3. Spangrude GJ, <i>et al.</i> 1988. <i>J. Immunol.</i> 141:3697. 4. Malek T, <i>et al.</i> 1986. <i>J. Exp. Med.</i> 164:709.

Gene ID

[110454](#)

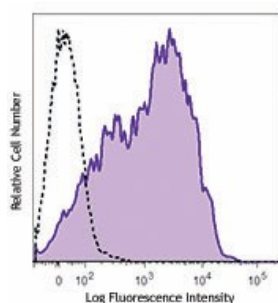
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-mouse Ly-6A/E (Sca-1), Biotin anti-mouse Ly-6A/E (Sca-1), FITC anti-mouse Ly-6A/E (Sca-1), PE anti-mouse Ly-6A/E (Sca-1), PE/Cyanine5 anti-mouse Ly-6A/E (Sca-1), Purified anti-mouse Ly-6A/E (Sca-1), PE/Cyanine7 anti-mouse Ly-6A/E (Sca-1), Alexa Fluor® 488 anti-mouse Ly-6A/E (Sca-1), Alexa Fluor® 647 anti-mouse Ly-6A/E (Sca-1), Pacific Blue™ anti-mouse Ly-6A/E (Sca-1), Brilliant Violet 421™ anti-mouse Ly-6A/E (Sca-1), PerCP anti-mouse Ly-6A/E (Sca-1), PerCP/Cyanine5.5 anti-mouse Ly-6A/E (Sca-1), APC/Cyanine7 anti-mouse Ly-6A/E (Sca-1), Brilliant Violet 510™ anti-mouse Ly-6A/E (Sca-1), Brilliant Violet 711™ anti-mouse Ly-6A/E (Sca-1), Brilliant Violet 605™ anti-mouse Ly-6A/E (Sca-1), Purified anti-mouse Ly-6A/E (Sca-1) (Maxpar® Ready), PE/Dazzle™ 594 anti-mouse Ly-6A/E (Sca-1), Brilliant Violet 785™ anti-mouse Ly-6A/E (Sca-1), Alexa Fluor® 700 anti-mouse Ly-6A/E (Sca-1), Brilliant Violet 650™ anti-mouse Ly-6A/E (Sca-1), APC/Fire™ 750 anti-mouse Ly-6A/E (Sca-1), TotalSeq™-A0130 anti-mouse Ly-6A/E (Sca-1), TotalSeq™-B0130 anti-mouse Ly-6A/E (Sca-1), TotalSeq™-C0130 anti-mouse Ly-6A/E (Sca-1)

Product Data



C57BL/6 mouse splenocytes were stained with Ly-6A/E (clone D7) PE/Dazzle™ 594 (filled histogram) or rat IgG2a, κ PE/Dazzle™ 594 isotype control (open histogram).

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