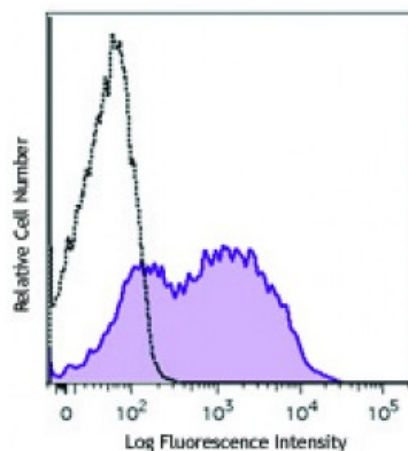


Brilliant Violet 510™ anti-mouse Ly-6A/E (Sca-1)

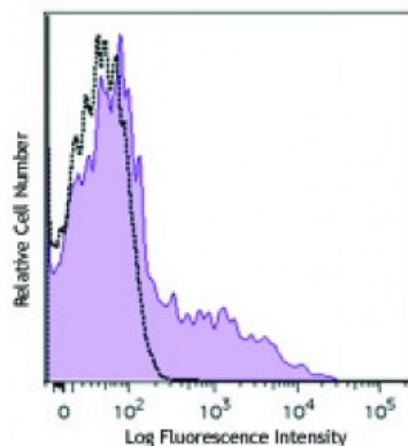
Catalog # / Size:	1140645 / 125 µl
Clone:	D7
Isotype:	Rat IgG2a, κ
Immunogen:	IL-2-dependent mouse T-cell line (CTL-L)
Reactivity:	Mouse
Preparation:	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 510™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 510™ and unconjugated antibody.
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).
Concentration:	Lot-specific



C57BL/6 mouse splenocytes were stained with Ly-6A/E (clone D7) Brilliant Violet 510™ (filled histogram) or rat IgG2a, κ Brilliant Violet 510™ isotype control (open histogram).

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 ≤5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.



C57BL/6 mouse bone marrow cells were stained with Ly-6A/E (clone D7) Brilliant Violet 510™ (filled histogram) or rat IgG2a, κ Brilliant Violet 510™ isotype control (open histogram). Data shown was gated on lymphoid cell population.

Brilliant Violet 510™ excites at 405 nm and emits at 510 nm. The bandpass filter 510/50 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 510™ is a trademark of Sirigen Group Ltd.

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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.

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}, immunoprecipitation¹, *in vitro* lymphocyte activation³⁻⁶, induction of redirected lysis⁷, induction of T cell inhibitory signalling⁸, immunofluorescence⁹, and immunohistochemical staining of acetone-fixed frozen sections¹³ and Bouin-fixed, paraffin-embedded samples⁹.

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, *et al.* 1986. *J. Immunol.* 137:3240. (WB, IP)
 2. Palfree RGE, *et al.* 1986. *Immunogenetics* 23:197. (WB)
 3. Codias EK, *et al.* 1990. *J. Immunol.* 144:2197.
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 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.

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.

- Antigen References:**
1. Rock KL, *et al.* 1989. *Immunol. Rev.* 111:195.
 2. Morrison SJ, *et al.* 1994. *Immunity* 1:661.
 3. Spangrude GJ, *et al.* 1988. *J. Immunol.* 141:3697.
 4. Malek T, *et al.* 1986. <