

Alexa Fluor® 700 anti-mouse Ly-6A/E (Sca-1)

Catalog # / Size: 1140710 / 100 µg
1140705 / 25 µg

Clone: D7

Isotype: Rat IgG2a, κ

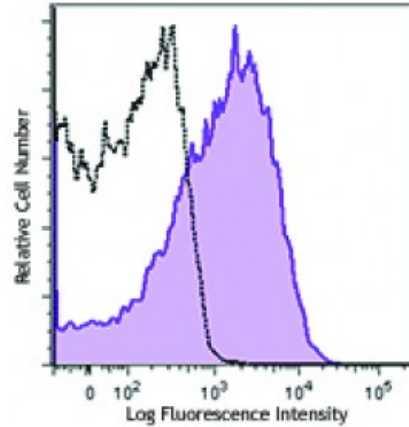
Immunogen: IL-2-dependent mouse T-cell line (CTL-L)

Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 700 under optimal conditions.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Concentration: 0.5



C57BL/6 mouse splenocytes were stained with Ly-6A/E (clone D7) Alexa Fluor® 700 (filled histogram) or rat IgG2a, κ Alexa Fluor® 700 isotype control (open histogram).

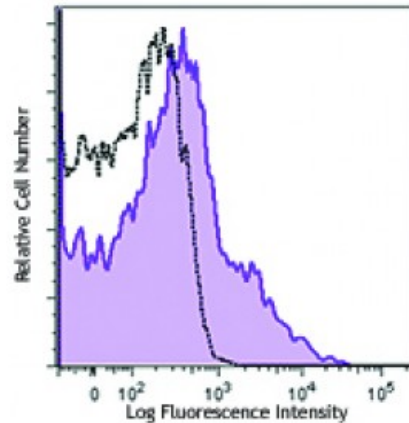
Applications:

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 ≤0.25 microg per million cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.

* Alexa Fluor® 700 has a maximum emission of 719 nm when it is excited at 633 nm / 635 nm. Prior to using Alexa Fluor® 700 conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.

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



C57BL/6 mouse bone marrow cells were stained with Ly-6A/E (clone D7) Alexa Fluor® 700 (filled histogram) or rat IgG2a, κ Alexa Fluor® 700 isotype control (open histogram). Data shown was gated on the lymphoid cell population.

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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 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. Samal R, *et al.* 2013. *J Proteomics.* 75:5304. [PubMed](#)
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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. <