

**Alexa Fluor® 647 anti-mouse Ly-6A/E (Sca-1)**

**Catalog # / Size:** 1140590 / 100 µg  
1140585 / 25 µg

**Clone:** D7

**Isotype:** Rat IgG2a, κ

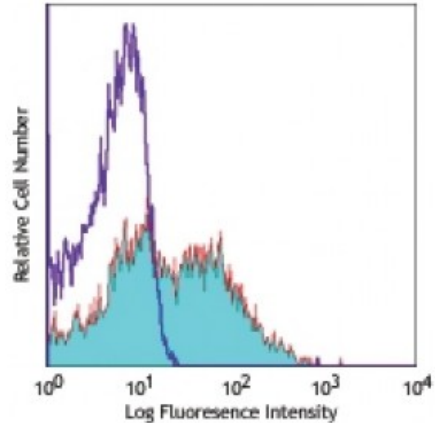
**Immunogen:** IL-2-dependent mouse T-cell line (CTL-L)

**Reactivity:** Mouse

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 647 under optimal conditions.

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

**Concentration:** 0.5



C57BL/6 mouse splenocytes stained with D7 Alexa Fluor® 647

**Applications:**

**Applications:** Immunofluorescence

**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® 647 has a maximum emission of 668 nm when it is excited at 633 nm / 635 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<sup>1,2</sup>, immunoprecipitation<sup>1</sup>, *in vitro* lymphocyte activation<sup>3-6</sup>, induction of redirected lysis<sup>7</sup>, induction of T cell inhibitory signalling<sup>8</sup>, immunofluorescence<sup>9</sup>, and immunohistochemical staining of acetone-fixed frozen sections<sup>13</sup> and Bouin-fixed, paraffin-embedded samples<sup>9</sup>.

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.<sup>14</sup>

- 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.
  4. Malek TR, *et al.* 1986. *J. Exp. Med.* 164:709.
  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.

**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. <