SONY

# Product Data Sheet

## PE/Cyanine7 anti-mouse Ly-6A/E (Sca-1)

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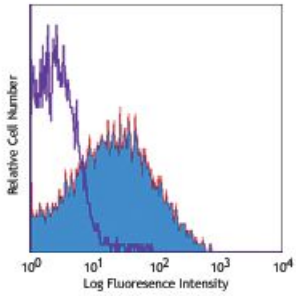
|---|---|
| **Catalog # / Size:** | 1140570 / 100 µg<br>1140565 / 25 µg |
| **Clone:** | D7 |
| **Isotype:** | Rat IgG2a, κ |
| **Immunogen:** | IL-2-dependent mouse T-cell line (CTL-L) |
| **Reactivity:** | Mouse |
| **Preparation:** | The antibody was purified by affinity chromatography, and conjugated with PE/Cy7 under optimal conditions. |
| **Formulation:** | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide. |
| **Workshop Number:** | IV T-186 |
| **Concentration:** | 0.2 |




C57BL/6 mouse splenocytes stained with D7 PE/Cy7

## Applications:

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| **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 µg per $10^6$ cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application. |
| **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], *in vitro* 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].<br><br>The two Sca-1 recognizing clones D7 and clone 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] |

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**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.
15. Wiesner DL, *et al.* 2015. *PLoS Pathog.* 11:1004701. 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. *J. Exp. Med.* 164:709.



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