SONY

Product Data Sheet

Brilliant Violet 711™ anti-mouse Ly-6A/E (Sca-1)

Catalog # / Size: 1140655 / 125 µl

Clone: D7

Isotype: Rat IgG2a, κ

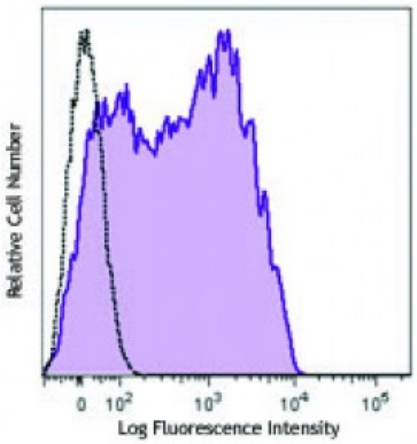
Immunogen: IL-2-dependent mouse T-cell line (CTL-L)

Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 711™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 711™ 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 711™ (filled histogram). Open histogram represents unstained cells.

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.

Brilliant Violet 711™ excites at 405 nm and emits at 711 nm. The bandpass filter 710/50 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 711™ is a trademark of Sirigen Group Ltd.

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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 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, *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. <