

Biotin anti-mouse Ly-6A/E (Sca-1) Antibody

Catalog# / Size	122504 / 500 µg
Clone	E13-161.7
Regulatory Status	RUO
Other Names	Sca-1
Isotype	Rat IgG2a, κ
Description	Ly-6A/E is an 18 kD member of the Ly-6 multigene family also known as Sca-1. 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. The E13-161.7 antibody has been reported to be useful for immunohistochemical staining of frozen sections, immunoprecipitation, flow cytometry, and complement-mediated cytotoxicity.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	mouse pre-T cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	FC - Quality tested
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	Additional reported applications (for the relevant formats) include: complement-mediated cytotoxicity ¹ , immunohistochemical staining of frozen sections ² and Bouin-fixed, paraffin-embedded samples ⁴ , immunofluorescence microscopy ⁴ , and immunoprecipitation ³ . 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. ⁷
Application References	<ol style="list-style-type: none"> 1. Aihara Y, <i>et al.</i> 1986. <i>Eur. J. Immunol.</i> 16:1391. (CMCD) 2. Spangrude GJ, <i>et al.</i> 1988. <i>J. Immunol.</i> 141:3697. (IHC) 3. van de Rijn M, <i>et al.</i> 1989. <i>P. Natl. Acad. Sci. USA</i> 86:4634. (IP) 4. van Bragt MPA, <i>et al.</i> 2005. <i>Biol. Reprod.</i> 73:634. (IHC, IF) 5. Rosas M, <i>et al.</i> 2010. <i>J. Leukoc. Biol.</i> 88:169. PubMed 6. Felthaus O, <i>et al.</i> 2010. <i>Neurosci Lett.</i> 471:179. PubMed 7. Bamezai A and Rock KL. 1995. <i>Proc. Natl. Acad. Sci. USA</i> 92:4294.
Product Citations	<ol style="list-style-type: none"> 1. Ono R, <i>et al.</i> 2017. <i>Mol Cell Biol.</i> 10.1128/MCB.00585-16. PubMed 2. Budai Z, <i>et al.</i> 2021. <i>Cells.</i> 10:. PubMed

Antigen Details

Structure	Ly-6 multigene family, 18 kD
Distribution	Hematopoietic stem cells, activated T cells and B cells, subset of resting B cells and T cells
Function	Regulates B and T cell responses
Cell Type	B cells, Hematopoietic stem and progenitors, Mesenchymal Stem Cells, T cells
Biology Area	Immunology, Stem Cells
Antigen References	<ol style="list-style-type: none">1. Rock KL, <i>et al.</i> 1989. <i>Immunol. Rev.</i> 111:195.2. Morrison SJ, <i>et al.</i> 1994. <i>Immunity</i> 1:661.3. Spangrude GJ, <i>et al.</i> 1988. <i>J. Immunol.</i> 141:3697.4. Malek T, <i>et al.</i> 1986. <i>J. Exp. Med.</i> 164:709.
Gene ID	110454

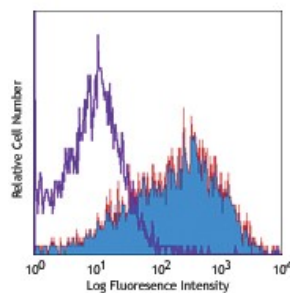
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Purified anti-mouse Ly-6A/E (Sca-1), Biotin anti-mouse Ly-6A/E (Sca-1), FITC anti-mouse Ly-6A/E (Sca-1), PE anti-mouse Ly-6A/E (Sca-1), APC anti-mouse Ly-6A/E (Sca-1), PE/Cyanine7 anti-mouse Ly-6A/E (Sca-1), Alexa Fluor® 488 anti-mouse Ly-6A/E (Sca-1), Alexa Fluor® 647 anti-mouse Ly-6A/E (Sca-1), Pacific Blue™ anti-mouse Ly-6A/E (Sca-1), PerCP/Cyanine5.5 anti-mouse Ly-6A/E (Sca-1), APC/Fire™ 750 anti-mouse Ly-6A/E (Sca-1), PE/Dazzle™ 594 anti-mouse Ly-6A/E (Sca-1)

Product Data



C57BL/6 mouse splenocytes stained with biotinylated E13-161.7, followed by Sav-PE

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