Antibodies

Anti-Mouse Sca1 Antibody, Clone E13-161.7

Rat monoclonal IgG2a antibody against mouse Sca1 (Ly-6A/E), unconjugated

Catalog #60032

500 µg 0.5 mg/mL

STEMCELL™ TECHNOLOGIES
Scientists Helping Scientists™ | WWW.STEMCELL.COM
TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM
FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Product Description

The E13-161.7 antibody reacts with Sca1 (Stem Cell Antigen-1 or Ly-6A/E), an 18 kDa GPI-linked protein belonging to the lymphocyte activation protein-6 (Ly-6) family. Sca1 is expressed on the surface of hematopoietic stem and progenitor cells, myeloid cells, and peripheral B and T lymphocytes. Sca1 is expressed by mice with either the Ly-6.1 or Ly-6.2 allotypes but the pattern of expression differs in the circulating cell population according to the allotype. Ly-6.2 strains (e.g., AKR, C57BL, C57BR, C57L, DBA/2, PL, SJL, SWR, 129) possess relatively high numbers of Sca1+ resting lymphocytes compared to Ly-6.1 strains (e.g. A, BALB/c, CBA, C3H/He, DBA/1, NZB). Sca1 expression levels are strongly upregulated in all strains upon cellular activation. Sca1 is involved in the regulation of T and B cell responses and is believed to play roles in the differentiation, proliferation, and survival of a variety of stem cells. Sca1 has emerged as a phenotypic marker of choice for identifying and isolating hematopoietic stem and progenitor cells.

Target Antigen Name:	Sca1 (Ly-6A/E)
Alternative Names:	Ly-6A/E, Sca-1
Gene ID:	110454
Species Reactivity:	Mouse
Host Species:	Rat
Clonality:	Monoclonal
Clone:	E13-161.7
Isotype:	IgG2a, kappa
Immunogen:	Mouse pre-T cells
Conjugate:	Unconjugated

Applications

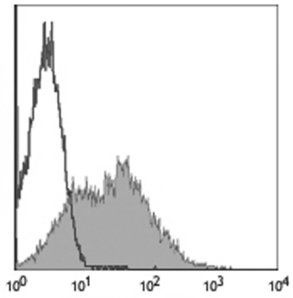
Verified:	FC
Reported:	FA, FC, ICC, IF, IHC, IP
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Mouse SCA1 Biotin Positive Selection Kit (Catalog #18856).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody was purified by affinity chromatography.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. For product expiry date, please request a lot-specific Certificate of Analysis from techsupport@stemcell.com.
Directions for Use:	For flow cytometry the suggested use of this antibody is ≤ 0.25 µg per 1 x 10e6 cells in 100 µL volume. It is recommended that the antibody be titrated for optimal performance for each application.

Data



Sca1 (Ly-6A/E) FITC

Flow cytometry analysis of C57BL/6 mouse splenocytes labeled with Anti-Mouse Sca1 Antibody, Clone E13-161.7, followed by anti-rat IgG, FITC (filled histogram) or a rat IgG2a, kappa isotype control antibody followed by anti-rat IgG, FITC (open histogram).

Related Products

PRODUCT NAME	CATALOG #	SIZE
Anti-Mouse Sca1 Antibody, Clone E13-161.7	60032	500 µg
Anti-Mouse Sca1 Antibody, Clone E13-161.7, PE	60032PE	200 µg
Anti-Mouse Sca1 Antibody, Clone E13-161.7, PE	60032PE.1	50 µg
Anti-Mouse Sca1 Antibody, Clone E13-161.7, Alexa Fluor® 488	60032AD	100 µg
Anti-Mouse Sca1 Antibody, Clone E13-161.7, Alexa Fluor® 488	60032AD.1	25 µg

References

1. Aihara Y, et al. An attempt to produce ``pre-T'' cell hybridomas and to identify their antigens. Eur J Immunol 16(11): 1391-99, 1986 (FA)
2. Ortega GP, et al. Role of Ly-6 in lymphocyte activation. I. Characterization of a monoclonal antibody to a nonpolymorphic Ly-6 specificity. J Immunol 137(10): 3240-46, 1986
3. Malek TR, et al. Role of Ly-6 in lymphocyte activation. II. Induction of T cell activation by monoclonal anti-Ly-6 antibodies. J Exp Med 164(3): 709-22, 1986
4. Spangrude GJ, et al. The stem cell antigens Sca-1 and Sca-2 subdivide thymic and peripheral T lymphocytes into unique subsets. J Immunol 141(11): 3697-07, 1988 (IHC)
5. van de Rijn M, et al. Mouse hematopoietic stem-cell antigen Sca-1 is a member of the Ly-6 antigen family. Proc Natl Acad Sci USA 86(12): 4634-38, 1989 (IF)
6. van Bragt MPA, et al. LY6A/E (SCA-1) expression in the mouse testis. Biol Reprod 73(4): 634-38, 2005 (IF, IHC)
7. Rosas M, et al. The myeloid 7/4antigen defines recently generated inflammatory macrophages and is synonymous with Ly6B. J Leukoc Biol 88(1): 169-80, 2010
8. Treviño-Villarreal JH, et al. Host-derived pericytes and Sca-1+ cells predominate in the MART-1- stroma fraction of experimentally induced melanoma. J Histochem Cytochem 59(12): 1060-75, 2011 (IHC)