Antibodies

Anti-Mouse Sca1 Antibody, Clone E13-161.7, FITC

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

Catalog	#60032FI	500 µg	0.5 mg/mL
	#60032FI.1	50 µg	0.5 mg/mL

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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:	FITC

Applications

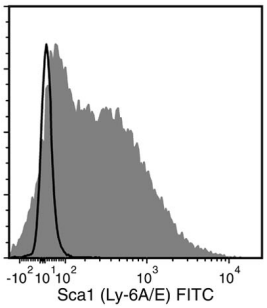
Verified:	FC
Reported:	FACS, FC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Mouse SCA1 Biotin Positive Selection Kit (Catalog #18856).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody was purified by affinity chromatography and conjugated with FITC under optimal conditions. The solution is free of unconjugated FITC.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use:	For flow cytometry the suggested use of this antibody is ≤ 1 µg per 1 x 10^6 cells in 100 µL. It is recommended that the antibody be titrated for optimal performance for each application.

Data



Flow cytometry analysis of C57BL/6 mouse splenocytes labeled with Anti-Mouse Sca1 Antibody, Clone E13-161.7, FITC (filled histogram) or Rat IgG2a, kappa Isotype Control Antibody, Clone RTK2758, FITC (Catalog #60076FI) (solid line histogram).

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

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4. van de Rijn M et al. (1989) Mouse hematopoietic stem-cell antigen Sca-1 is a member of the Ly-6 antigen family. Proc Natl Acad Sci USA 86(12): 4634–8. (FC, IHC, IP)
5. Spangrude GJ et al. (1988) The stem cell antigens Sca-1 and Sca-2 subdivide thymic and peripheral T lymphocytes into unique subsets. J Immunol 141(11): 3697–707. (IHC)
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7. Malek TR et al. (1986) 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.
8. Ortega G et al. (1986) Role of Ly-6 in lymphocyte activation. I. Characterization of a monoclonal antibody to a nonpolymorphic Ly-6 specificity. J Immunol 137(10): 3240–6.