**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:**

PE

**Applications**

**Verified:**

CellSep, FC

**Reported:**

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; 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 and conjugated with PE under optimal conditions. The solution is free of unconjugated PE and unconjugated antibody.

**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 request a lot-specific Certificate of Analysis from techsupport@stemcell.com.

**Directions for Use:**

For flow cytometry the suggested use of this antibody is ≤0.5 μg per 1 x 10^6 cells in 100 μL volume. It is recommended that the antibody be titrated for optimal performance for each application.
**Data**

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

(B) Flow cytometry analysis of C57BL/6 mouse bone marrow cells processed with the EasySep™ PE Selection Kit for Mouse Cells (Catalog #18554) using Anti-Mouse Sca1 Antibody, Clone E13-161.7, PE. Histograms show labeling of bone marrow (Start) and isolated cells (Isolated). Labeling of start cells with a rat IgG2a, kappa PE isotype control antibody is shown in the bottom panel (open histogram).

**Related Products**

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<th>PRODUCT NAME</th>
<th>CATALOG #</th>
<th>SIZE</th>
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**References**

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)