

**DESCRIPTION**

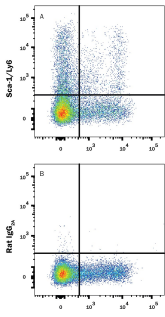
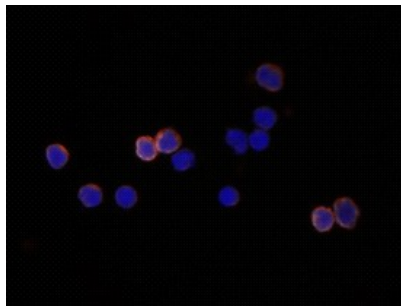
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse Sca-1/Ly6 in direct ELISAs.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 177228
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse Sca-1/Ly6 C-terminally truncated Ly-6E allele Leu27-Gly119 Accession # CAA28351
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	0.25 µg/10 <sup>6</sup> cells	See Below
<b>Immunocytochemistry</b>	8-25 µg/mL	See Below
<b>CyTOF-ready</b>	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

**DATA**

<p><b>Flow Cytometry</b></p>  <p><b>Detection of Sca-1/Ly6 in Mouse Splenocytes by Flow Cytometry.</b> Mouse splenocytes gated on hematopoietic lineage negative cells were stained with Rat Anti-Mouse CD117/c-kit PE-conjugated Monoclonal Antibody (Catalog # FAB1356P) and either (A) Rat Anti-Mouse Sca-1/Ly6 Monoclonal Antibody (Catalog # MAB1226) or (B) Rat IgG<sub>2A</sub> Isotype Control (Catalog # MAB006) followed by Phycoerythrin-conjugated Anti-Rat IgG Secondary Antibody (Catalog # F0105B).</p>	<p><b>Immunocytochemistry</b></p>  <p><b>Sca-1/Ly6 in Mouse Splenocytes.</b> Sca-1/Ly6 was detected in immersion fixed mouse splenocytes using 10 µg/mL Rat Anti-Mouse Sca-1/Ly6 Monoclonal Antibody (Catalog # MAB1226) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). View our protocol for <a href="#">Fluorescent ICC Staining of Non-adherent Cells</a>.</p>
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**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

Stem Cell Antigen-1 (Sca-1) is encoded by the strain-specific *Ly-6 E/A* allelic gene. Its expression on multipotent hematopoietic stem cells (HSC) has been used as a marker of HSC in mice of both Ly-6 haplotypes (2, 3). This antibody is frequently used in combination with lineage depletion antibodies to identify and isolate murine HSC. Sca-1-positive HSC can be found in the adult bone marrow, fetal liver and mobilized peripheral blood and spleen in the adult animal (2-7). However, Sca-1 has also been discovered in several non-hematopoietic tissues (1) and can be used to enrich progenitor cell populations other than HSC (8). It is suggested that Sca-1 could be involved in regulating both B and T cell activation (9-12).

**References:**

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