Biotinylated Anti-mouse Sca-1/Ly6 Antibody

ORDERING INFORMATION

Catalog Number: BAF1226

Lot Number: IDZ01

Size: 50 μg

Formulation: 0.2 μm filtered solution in PBS with BSA

Storage: -20° C

Reconstitution: sterile 0.1% BSA in TBS

Specificity: mouse Sca-1/Ly6

Immunogen: NS0-derived rmSca-1

Ig Type: mouse Sca-1 specific goat IgG

Applications: Western blot
Immunohistochemistry

Preparation

Produced in goats immunized with purified, NS0-derived, recombinant C-terminally truncated Ly-6E allele of the mouse stem cell antigen-1 (rmSca-1, amino acid residues Leu 27 - Gly 119). Mouse Sca-1 specific IgG was purified by mouse Sca-1 affinity chromatography and then biotinylated.

Formulation

Lyophilized from a 0.2 μm filtered solution in phosphate-buffered saline (PBS) containing 50 μg of bovine serum albumin (BSA) per 1 μg of antibody.

Reconstitution

Reconstitute with sterile Tris-buffered saline pH 7.3 (20 mM Trizma base, 150 mM NaCl) containing 0.1% BSA. If 1 mL of buffer is used, the antibody concentration will be 50 μg/mL.

Storage

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C **in a manual defrost freezer** for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

Specificity

This antibody reacts with Sca-1, an 18 kDa phosphatidylinositol-anchored protein that is a member of the lymphocyte antigen 6 (Ly-6) family.[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]

Applications

Western Blot - This antibody can be used at 0.1 - 0.2 μg/mL with the appropriate secondary reagents to detect mouse Sca-1. The detection limit for rmSca-1 is approximately 5 ng/lane and 20 ng/lane under non-reducing and reducing conditions, respectively.

Immunohistochemistry - This antibody will detect Sca-1 in cells and tissues. The working dilution is 2 - 15 μg/mL. For chromogenic detection of labeling, use R&D Systems' Cell and Tissue Staining Kits (CTS Series).

Optimal dilutions should be determined by each laboratory for each application.

References

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