CD11b antibodies, human and mouse

For research use only

One test corresponds to labeling of up to 10 cells in a total volume of 100 µL

Product	Content	Order no.
CD11b-APC	for 100 tests	130-113-231
CD11b-FITC	for 30 tests	130-113-796
CD11b-FITC	for 100 tests	130-113-234
CD11b-PE	for 30 tests	130-113-797
CD11b-PE	for 100 tests	130-113-235
CD11b-APC	for 30 tests	130-113-793
CD11b-VioBlue	for 30 tests	130-113-800
CD11b-VioBlue	for 100 tests	130-113-238
CD11b-VioGreen	for 30 tests	130-113-801
CD11b-VioGreen	for 100 tests	130-113-239
CD11b-PE-Vio770	for 30 tests	130-113-798
CD11b-PE-Vio770	for 100 tests	130-113-236
CD11b-APC-Vio770	for 30 tests	130-113-794
CD11b-APC-Vio770	for 100 tests	130-113-232
CD11b-PerCP-Vio700	for 30 tests	130-113-799
CD11b-PerCP-Vio700	for 100 tests	130-113-237
CD11b-Biotin	for 30 tests	130-113-795
CD11b-Biotin	for 100 tests	130-113-233

Warnings

Reagents contain sodium azide. Under acidic conditions sodium azide yields hydrazoic acid, which is extremely toxic. Azide compounds should be diluted with running water before discarding. These precautions are recommended to avoid deposits in plumbing where explosive conditions may develop.

Technical data and background information

Antigen	CD11b
Clone	M1/70.15.11.5
Isotype	rat IgG2bκ
Isotype control	Rat IgG2b – isotype control antibodies
Alternative names of antigen	ITGAM, CR3A, Mac-1 α, MAC1A, MO1A, SLEB6, integrin αM
Entrez Gene ID	3684
Molecular mass of antigen [kDa]	125

Cross-reactivity	rhesus monkey (*Macaca mulatta*), cynomolgus monkey (*Macaca fascicularis*)
Distribution of antigen	B cells, dendritic cells, granulocytes, macrophages, monocytes, NK cells, T cells
Product format	Reagents are supplied in buffer containing stabilizer and 0.05% sodium azide.
Fixation	Cells should be stained prior to fixation, if formaldehyde is used as a fixative.
Storage	Store protected from light at 2–8 °C. Do not freeze.

CD11b, also known as Mac-1 α or integrin αM chain, is part of the CD11b/CD18 heterodimer (Mac-1 α, Mβ2 integrin), also known as the C3 complement receptor. It functions as a receptor for complement (C3bi), fibrinogen, or clotting factor X. In humans, CD11b is strongly expressed on myeloid cells and weakly expressed on NK cells and some activated lymphocytes as well as on microglia in the brain. In mice, the CD11b antigen is expressed on monocytes/macrophages and microglia. To a lower extent it is expressed on granulocytes, NK cells, $CD5^{+}$ B-1 cells, and subsets of dendritic cells. The monoclonal M1/70.15.11.5 antibody recognizes the human, mouse, and non-human primate CD11b antigen.

Cross-reactivity

This antibody has been tested to react with

- Rhesus monkey *(Macaca mulatta)*
- Cynomolgus monkey *(Macaca fascicularis)*

Reagent requirements

- Buffer: Prepare a solution containing phosphate-buffered saline (PBS), pH 7.2, 0.5% bovine serum albumin (BSA), and 2 mM EDTA by diluting MACS® BSA Stock Solution (# 130-091-376) 1:20 with autoMACS® Rinsing Solution (# 130-091-222). Keep buffer cold (2−8 °C).
  Note: EDTA can be replaced by other supplements such as anticoagulant citrate dextrose formula-A (ACD-A) or citrate phosphate dextrose (CPD). Buffers or media containing Ca^{2+} or Mg^{2+} are not recommended for use.
- (Optional) FcR Blocking Reagent, human (# 130-059-901) to avoid Fc receptor–mediated antibody labeling.
- (Optional) Fluorochrome-conjugated anti-biotin antibodies, e.g., Anti-Biotin-PE (# 130-090-756) as secondary antibody reagent in combination with biotinylated antibodies.
- (Optional) Propidium Iodide Solution (# 130-093-233) for flow cytometric exclusion of dead cells without fixation.
- (Optional) Fixation and Dead Cell Discrimination Kit (# 130-091-163) for cell fixation and flow cytometric exclusion of dead cells.

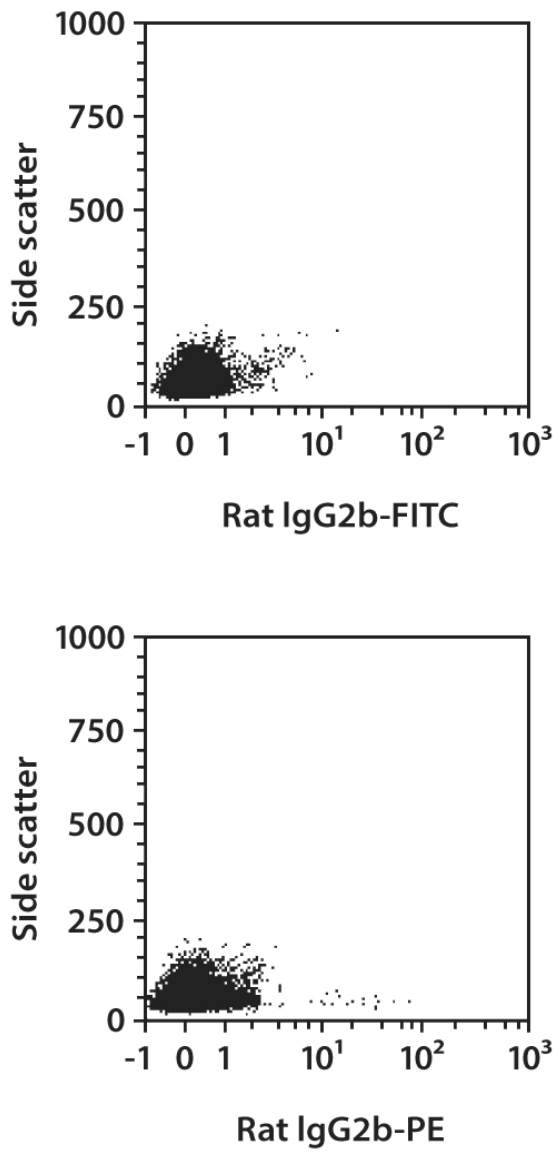
Protocol for cell surface staining

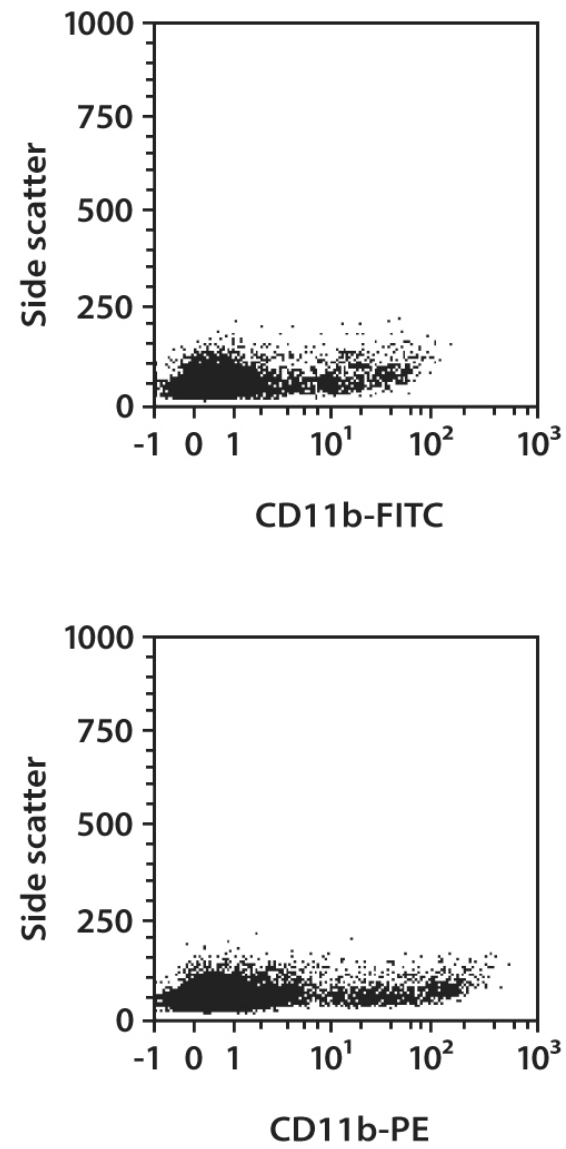
- The recommended antibody dilution for labeling of cells and subsequent analysis by flow cytometry is 1:50 for up to 10^{6} cells/100 µL.
- Volumes given below are for up to 10^{6} nucleated cells. When working with fewer than 10^{6} cells, use the same volumes as indicated. When working with higher cell numbers, scale up all reagent volumes and total volumes accordingly.

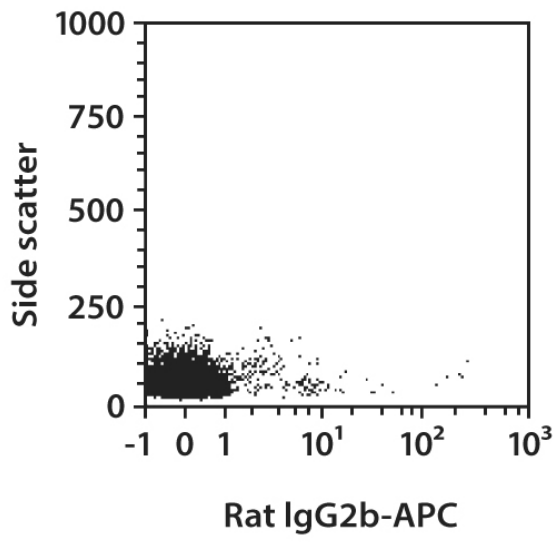
1. Determine cell number.
2. Centrifuge cell suspension at 300×g for 10 minutes. Aspirate supernatant completely.
3. Resuspend up to 10^{6} nucleated cells per 98 µL of buffer.
4. Add 2 µL of the antibody.
5. Mix well and incubate for 10 minutes in the dark in the refrigerator (2−8 °C).
   Note: Higher temperatures and/or longer incubation times may lead to non-specific cell labeling. Working on ice requires increased incubation times.
6. Wash cells by adding 1−2 mL of buffer and centrifuge at 300×g for 10 minutes. Aspirate supernatant completely.
7. (Optional) If biotinylated antibody was used, resuspend the cell pellet in buffer and stain with fluorochrome-conjugated anti-biotin antibody according to the manufacturer's recommendations.
8. Resuspend cell pellet in a suitable amount of buffer for analysis by flow cytometry or fluorescence microscopy.

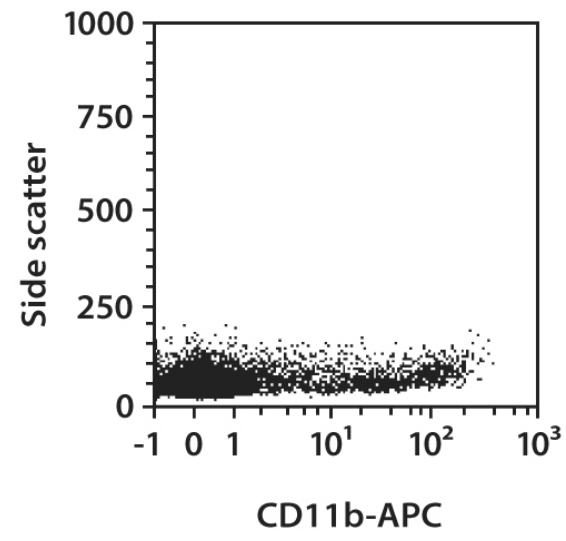
Examples of immunofluorescent staining

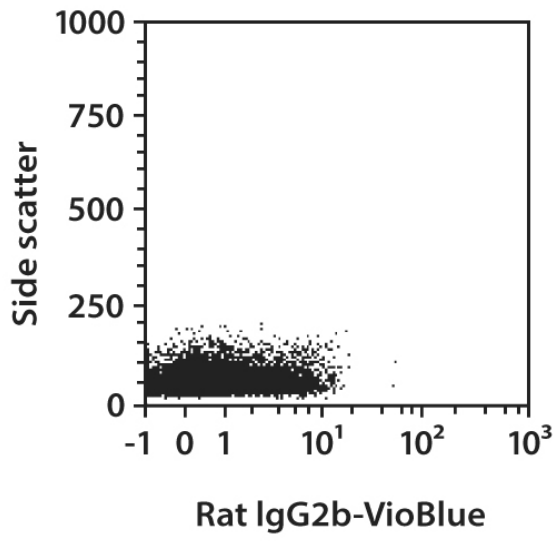
Mouse spleenocytes were stained with CD11b antibodies or with the corresponding isotype control antibodies (left images) and analyzed by flow cytometry using the MACSQuant® Analyzer. Cell debris and dead cells were excluded from the analysis based on scatter signals and propidium iodide fluorescence or 4',6-diamidino-2-phenylindole (DAPI) fluorescence, as in the case of tandem conjugates.

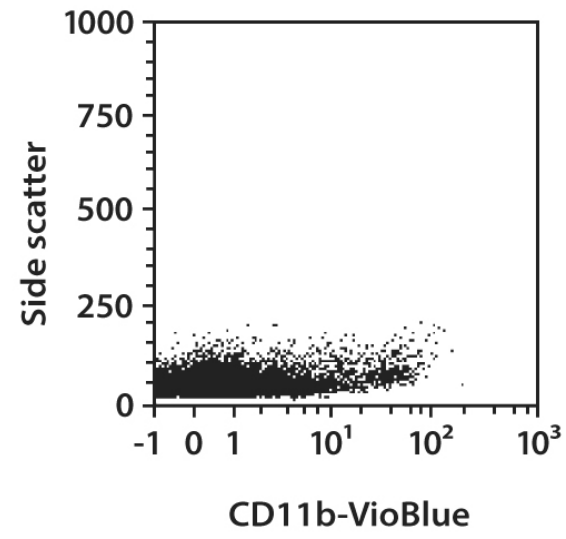


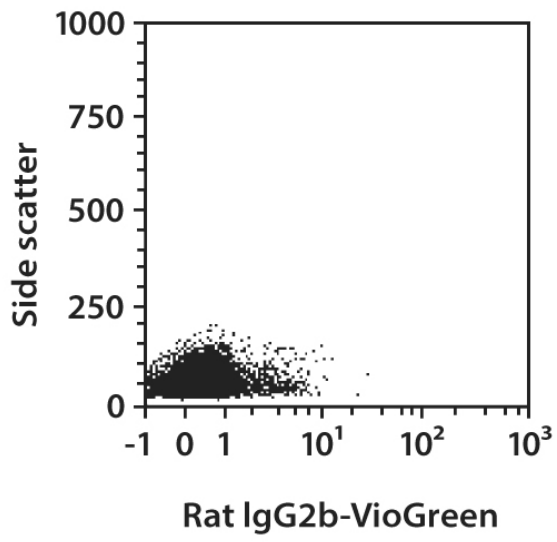








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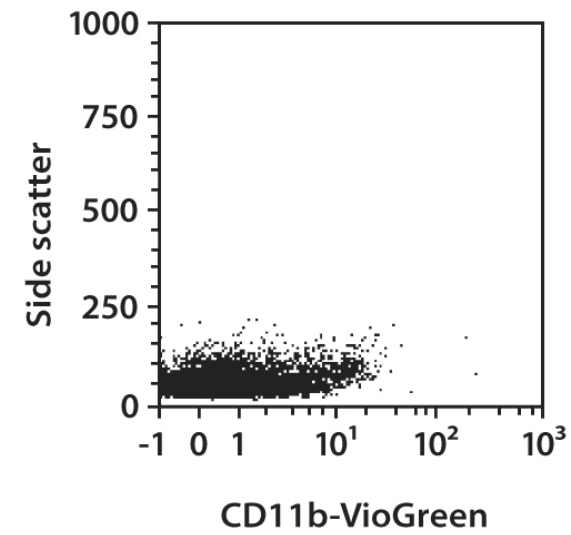
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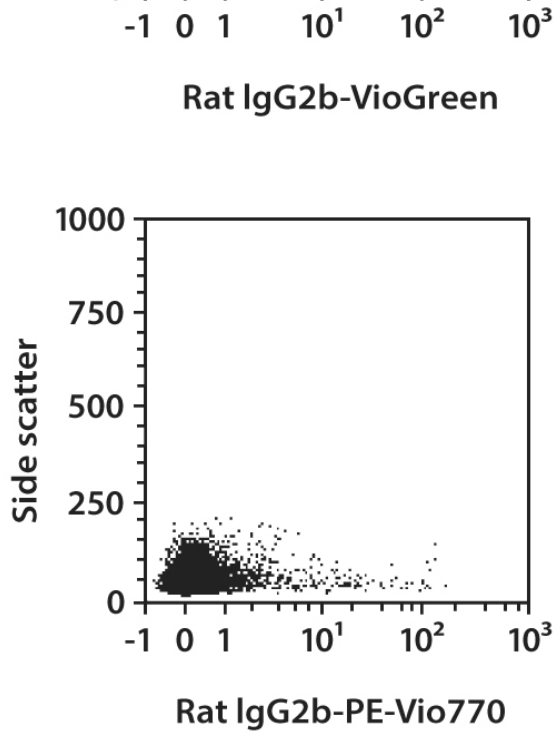
CD11b-VioGreen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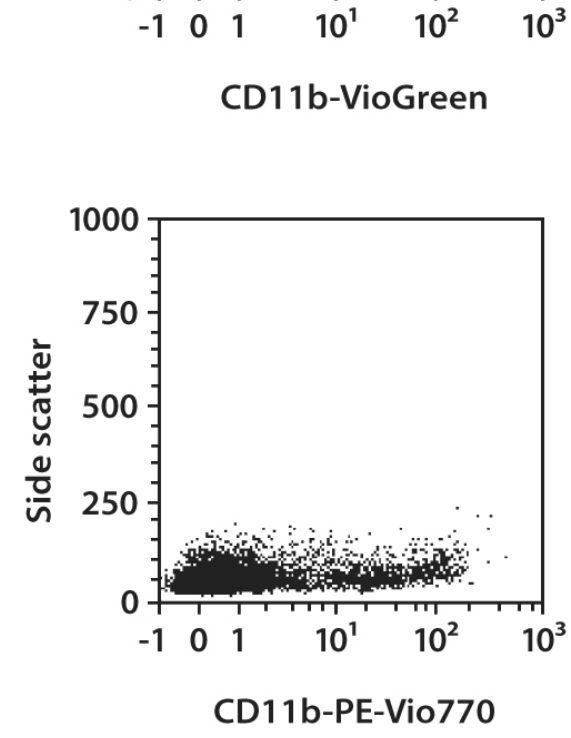
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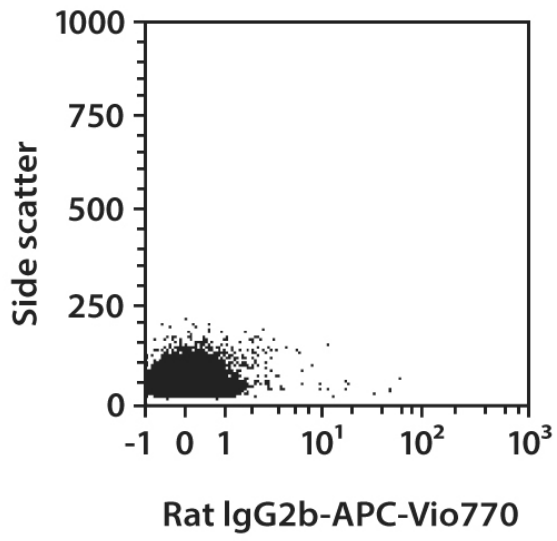
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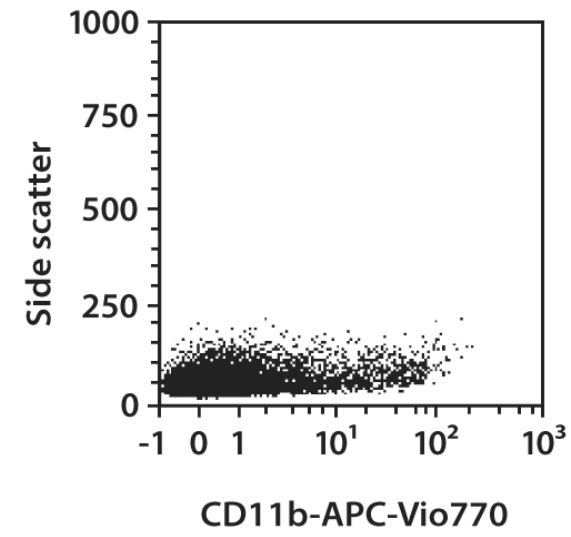
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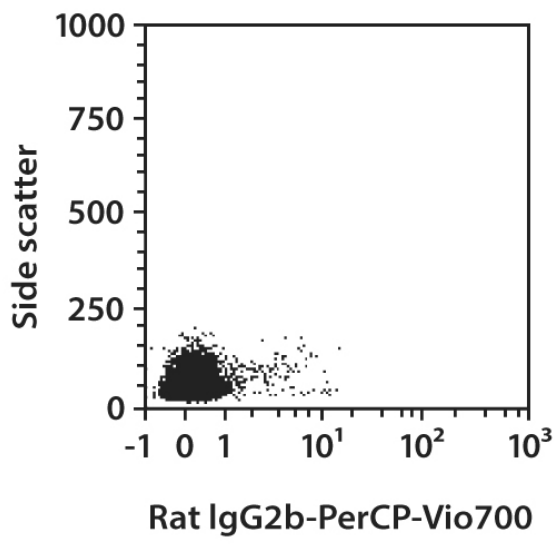
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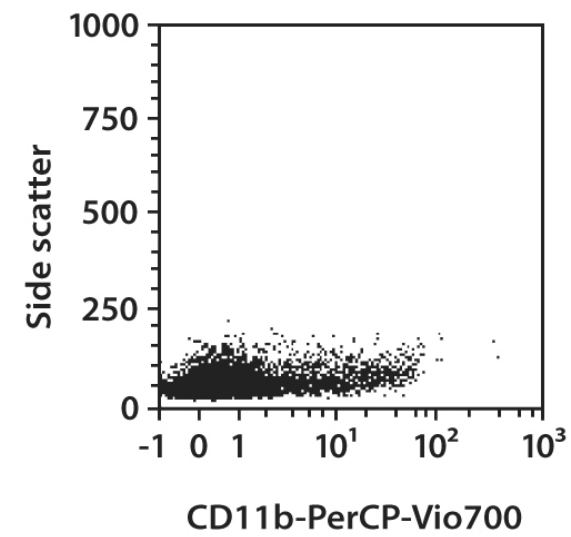
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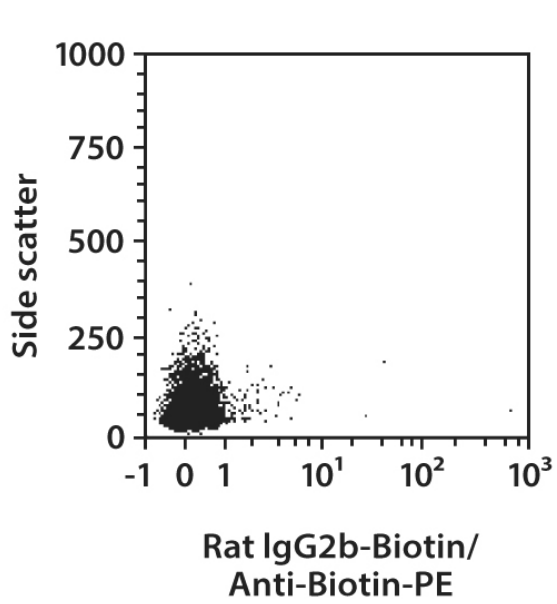
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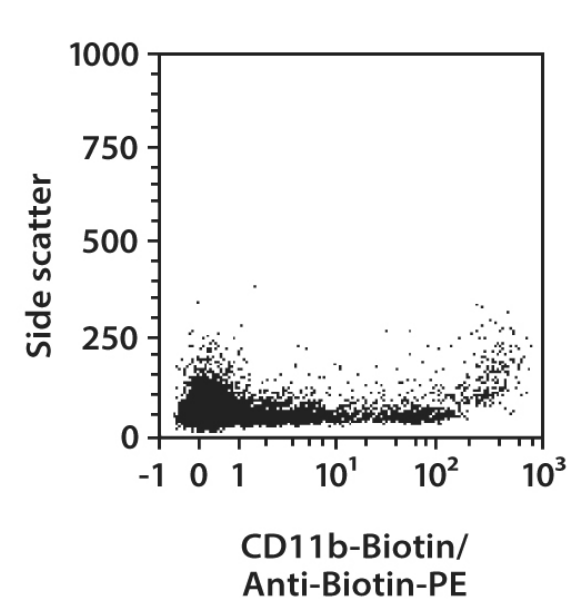
Rat IgG2b-Biotin/
Anti-Biotin-PE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CD11b-Biotin/
Anti-Biotin-PE

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