CD24 antibodies, human

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.
CD24-Biotin	for 30 tests	130-112-843
CD24-FITC	for 30 tests	130-112-844
CD24-FITC	for 100 tests	130-112-655
CD24-PE	for 30 tests	130-112-845
CD24-PE	for 100 tests	130-112-656
CD24-APC	for 30 tests	130-112-846
CD24-APC	for 100 tests	130-112-657
CD24-VioBlue	for 100 tests	130-112-662
CD24-VioGreen	for 100 tests	130-112-663
CD24-PE-Vio615	for 30 tests	130-112-853
CD24-PE-Vio615	for 100 tests	130-112-664
CD24-PE-Vio770	for 30 tests	130-112-847
CD24-PE-Vio770	for 100 tests	130-112-658
CD24-APC-Vio770	for 30 tests	130-112-848
CD24-APC-Vio770	for 100 tests	130-112-659
CD24-PerCP-Vio700	for 30 tests	130-112-849
CD24-PerCP-Vio700	for 100 tests	130-112-660
CD24-Biotin	for 100 tests	130-112-654

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	CD24
Clone	REA832
Isotype	recombinant human IgG1
Isotype control	REA Control (S) antibodies
Alternative names of antigen	CD24A, BA-1, HAS
Entrez Gene ID	100133941
Molecular mass of antigen [kDa]	3

Distribution of antigen	B cells, breast, cancer stem cells, endothelial cells, epithelial cells, granulocytes, Langerhans cells, leukemia cells, lung, monocytes, ovary, pancreas, ES and iPS cells, red blood cells, thymocytes
Product format	Reagents are supplied in buffer containing stabilizer and 0.05% sodium azide.
Fixation	The antibody is suited for staining of formaldehyde-fixed cells.
Storage	Store protected from light at 2–8 °C. Do not freeze.

Clone REA832 recognizes the human CD24 antigen, which is also known as heat-stable antigen (HSA). CD24 is a glycosylphosphatidylinositol (GPI)-linked sialoglycoprotein that is anchored to the plasma membrane. CD24 has been identified to be a negative marker for breast cancer stem cells and a positive marker for ovarian or pancreatic cancer stem cells. The CD24 antibody can be used, for example, to differentiate $CD44^+CD24^-$ breast cancer stem cells from $CD24^+$ expressing cells from a primary tumor sample. Furthermore, CD24 is found on follicular dendritic cells and different epithelial and hematopoietic cell types. Additional information: Clone REA832 displays negligible binding to Fc receptors.

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) 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.

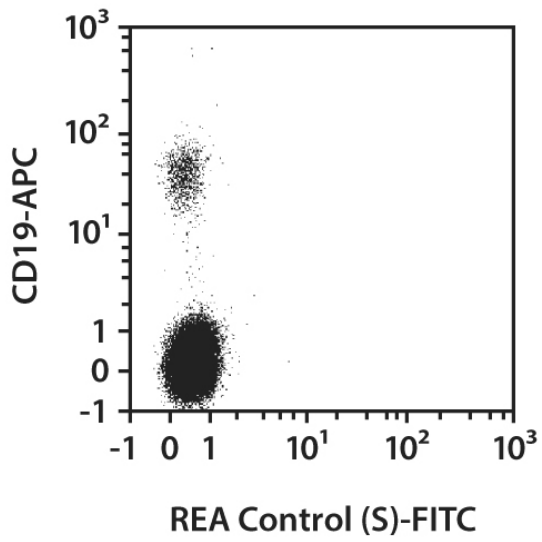
Protocol for cell surface staining

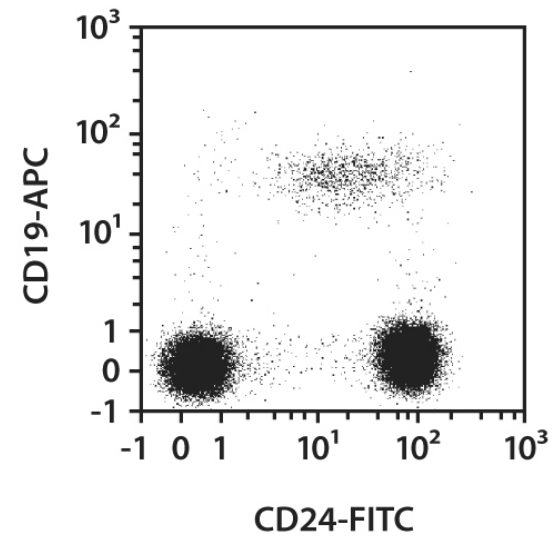
- The recommended antibody dilution for labeling of cells and subsequent analysis by flow cytometry is 1:50 for up to 10^6 cells/100 µL.
- Volumes given below are for up to 10^6 nucleated cells. When working with fewer than 10^6 cells, use the same volumes as indicated. When working with higher cell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

Human peripheral blood cells after erythrocyte lysis were stained with CD24 antibodies or with the corresponding REA Control (S) antibodies (left image) as well as with CD19 antibodies. Flow cytometry was performed using the MACSQuant® Analyzer. The Tandem Signal Enhancer has been used to increase binding specificity of tandem-dye–conjugated antibodies. 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.


CD19-APC
REA Control (S)-FITC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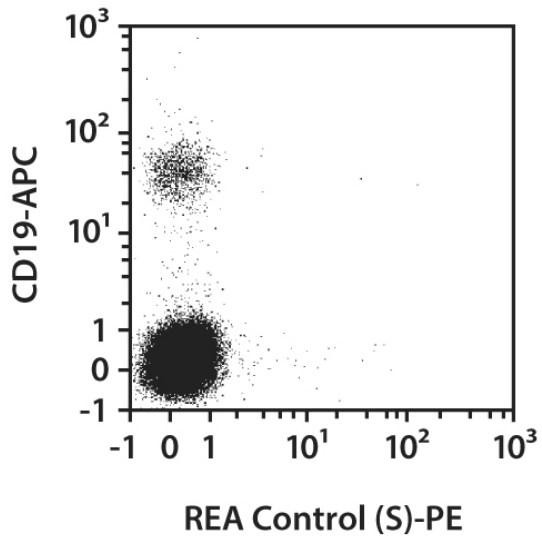
CD24-FITC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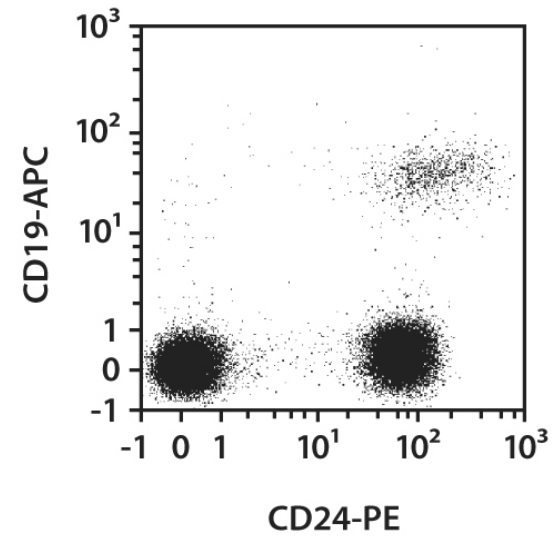
REA Control (S)-PE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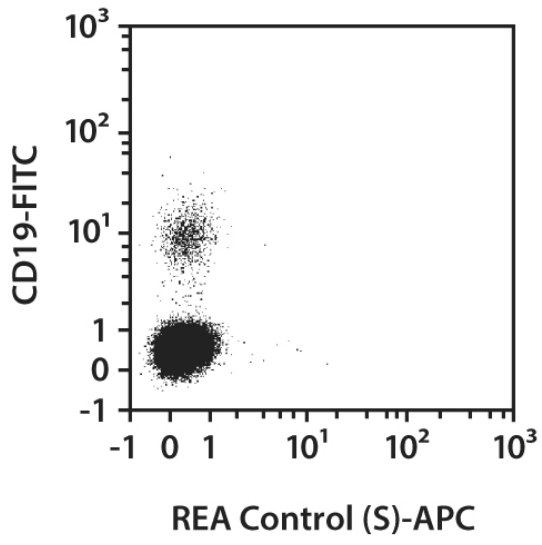
CD24-PE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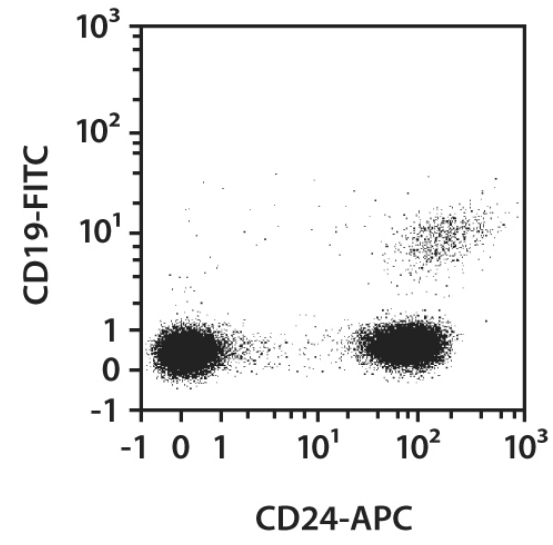
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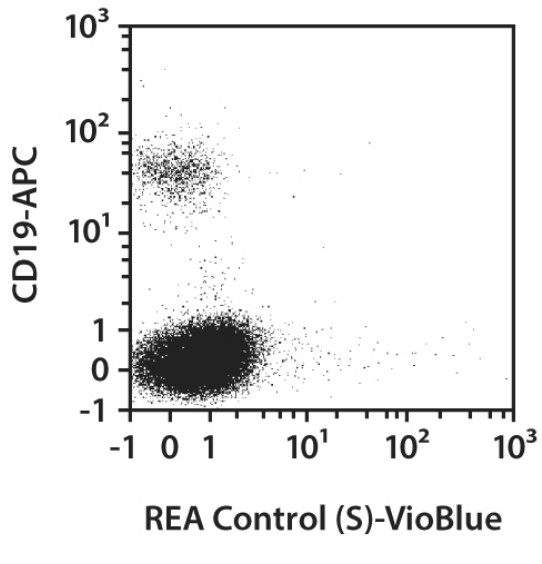
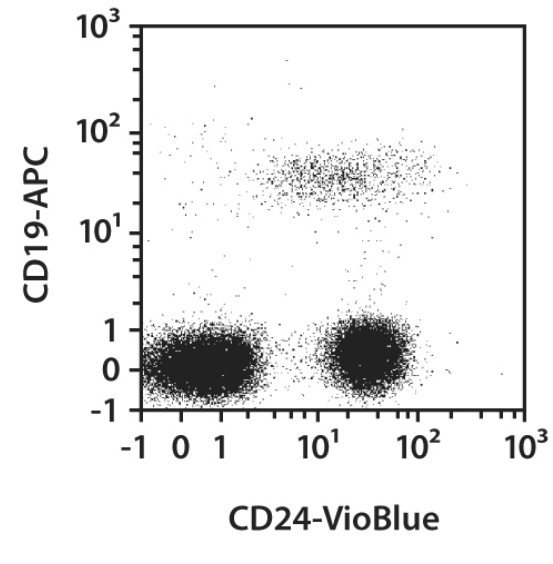
CD24-APC


CD19-APC
REA Control (S)-VioBlue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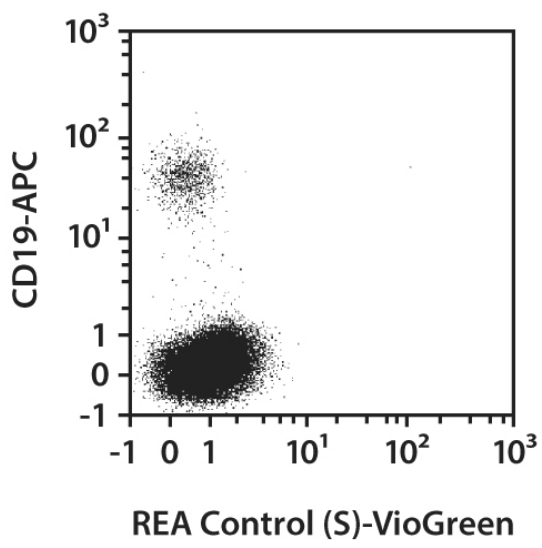
CD24-VioBlue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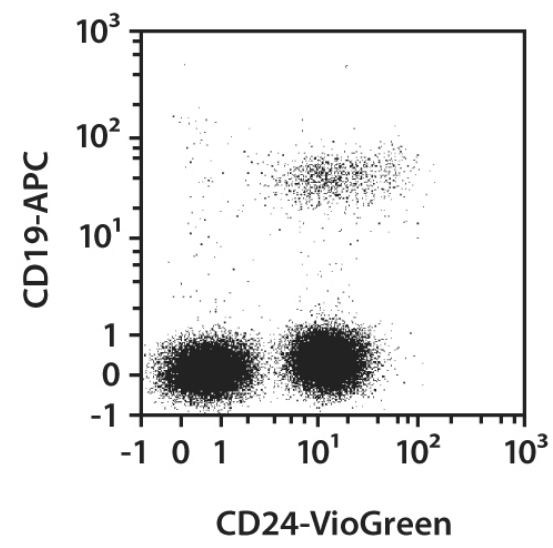
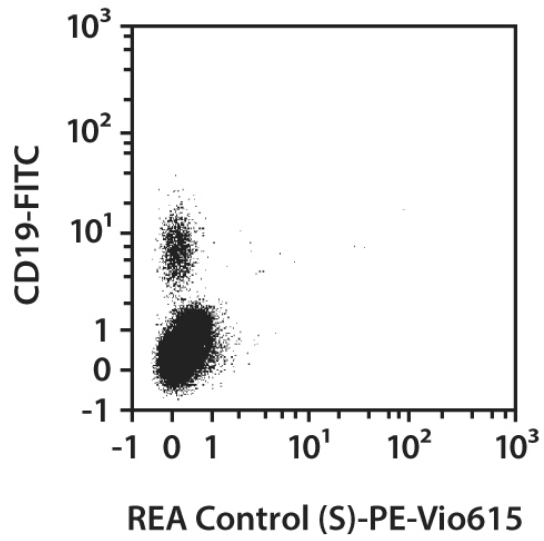

CD19-APC
CD24-VioGreen


CD19-FITC
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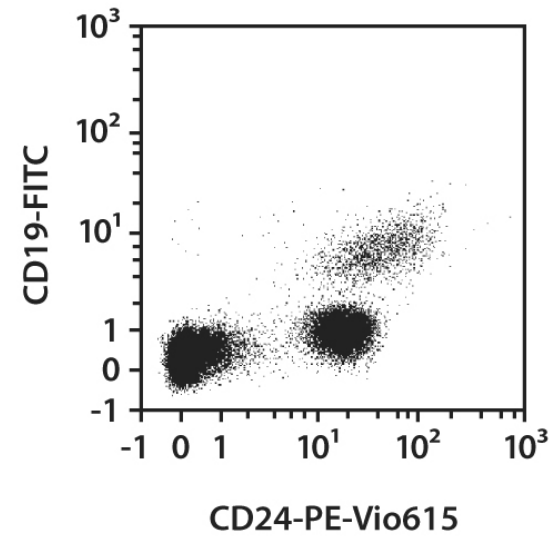
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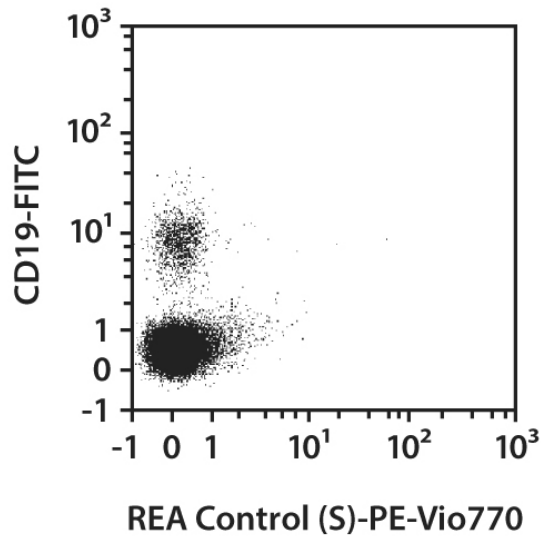
CD24-PE-Vio615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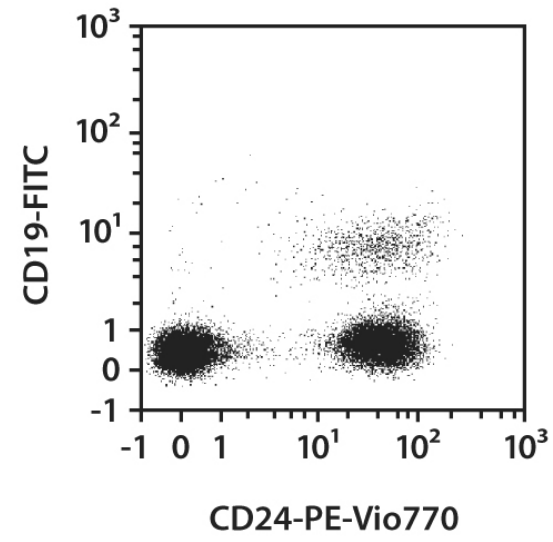
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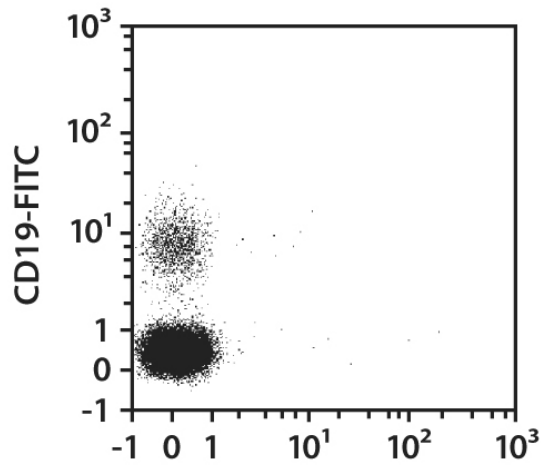
CD24-PE-Vio770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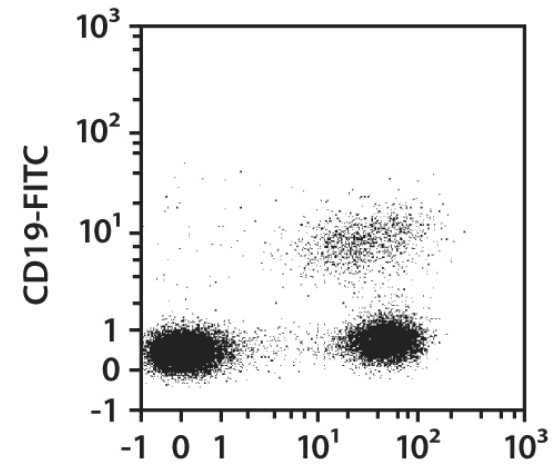
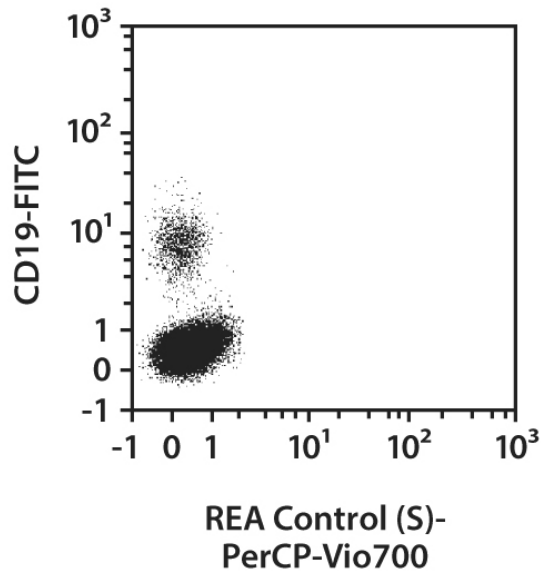
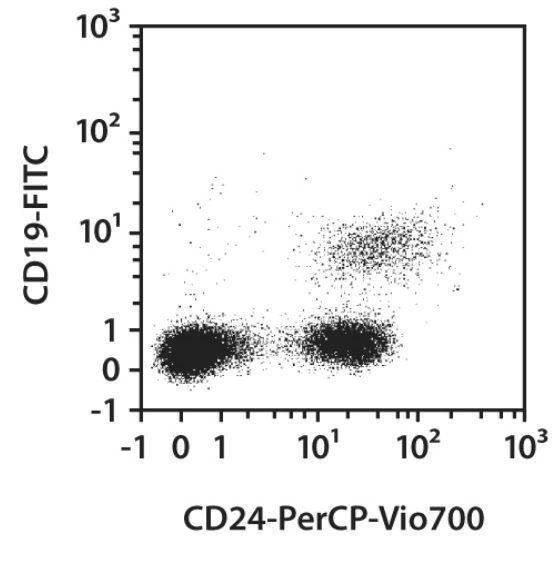

CD19-FITC
CD24-APC-Vio770


CD19-FITC
REA Control (S)-
PerCP-Vio700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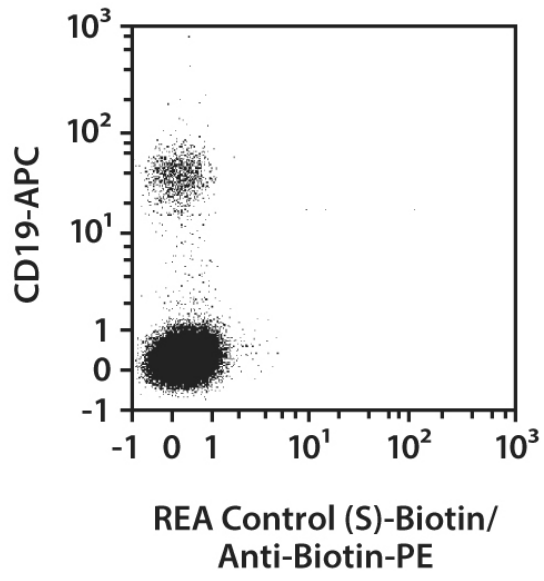
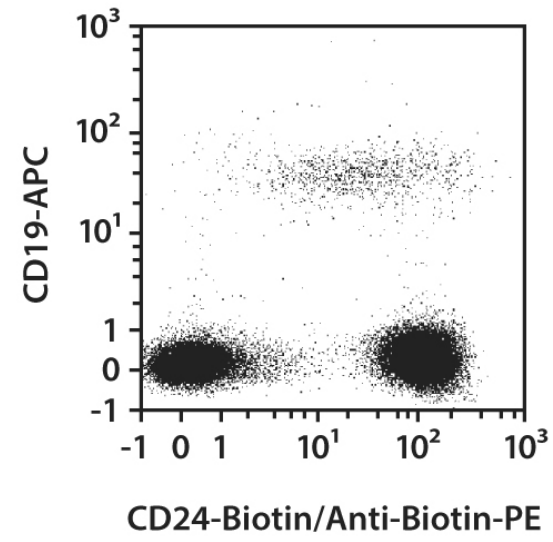
CD24-PerCP-Vio700


CD19-APC
REA Control (S)-Biotin/
Anti-Biotin-PE


CD19-APC
CD24-Biotin/Anti-Biotin-PE

Warranty

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