CD98 antibodies, mouse

For research use only

30 µg equal 100 tests, 150 µg equal 500 tests. One test corresponds to labeling of 10 cells.

Product	Content	Order no.
CD98-Biotin	150 µg in 1 mL	130-114-448
CD98-FITC	30 µg in 200 µL	130-114-640
CD98-FITC	150 µg in 1 mL	130-114-449
CD98-PE	30 µg in 200 µL	130-114-641
CD98-PE	150 µg in 1 mL	130-114-450
CD98-APC	30 µg in 200 µL	130-114-642
CD98-APC	150 µg in 1 mL	130-114-451
CD98-PE-Vio770	30 µg in 200 µL	130-114-643
CD98-PE-Vio770	150 µg in 1 mL	130-114-452
CD98-APC-Vio770	30 µg in 200 µL	130-114-644
CD98-APC-Vio770	150 µg in 1 mL	130-114-453
CD98-Biotin	30 µg in 200 µL	130-114-639

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	CD98
Clone	REA861
Isotype	recombinant human IgG1
Isotype control	REA Control antibodies
Alternative names of antigen	4F2hc, 4F2
Entrez Gene ID	17254
Molecular mass of antigen [kDa]	58
Distribution of antigen	testicle, lung, brain, kidney, spleen
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.

Clone REA861 recognizes the mouse CD98 antigen, also known as 4F2. CD98 is a disulfide-linked heterodimeric cell-surface glycoprotein which plays a role in cellular activation and proliferation and is involved in the regulation of the amino acid transport system. CD98 is found at high levels in adult testis, lung, brain, kidney, and spleen, and at significantly lower levels in

skeletal muscle, adult liver, and cardiac. Additional information: Clone REA861 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.

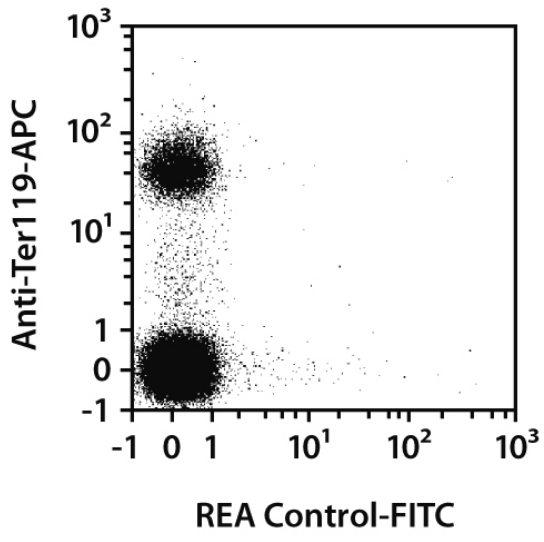
Protocol for cell surface staining

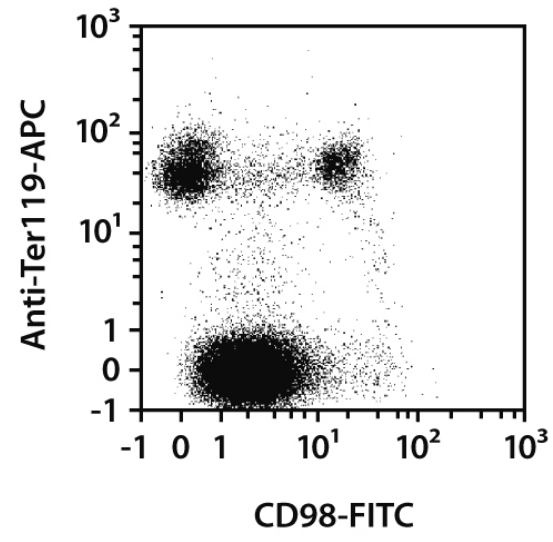
- The recommended antibody dilution for labeling of cells and subsequent analysis by flow cytometry is 1:50 for up to 10^6 cells/100 µL.
- Volumes given below are for up to 10^6 nucleated cells. When working with fewer than 10^6 cells, use the same volumes as indicated. When working with higher cell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

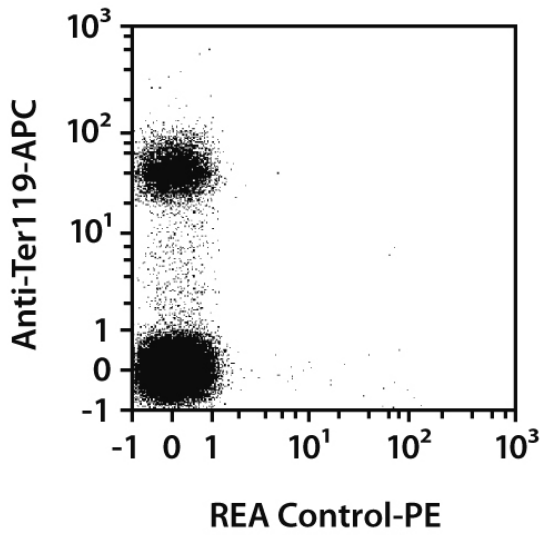
1. Determine cell number.
2. Centrifuge cell suspension at 300×g for 10 minutes. Aspirate supernatant completely.
3. Resuspend up to 10^6 nucleated cells per 98 µL of buffer.
4. Add 2 µL of the antibody.
5. Mix well and incubate for 10 minutes in the dark in the refrigerator (2−8 °C).
   Note: Higher 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.

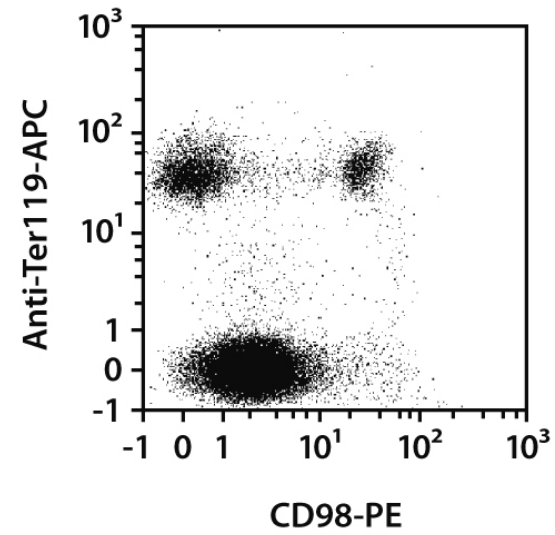
Examples of immunofluorescent staining

Splenocytes from C57BL/6 mice were stained with CD98 antibodies or with the corresponding REA Control antibodies (left image) as well as with Anti-Ter119 antibodies. Flow cytometry was performed 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.






Anti-Ter119-APC
REA Control-PE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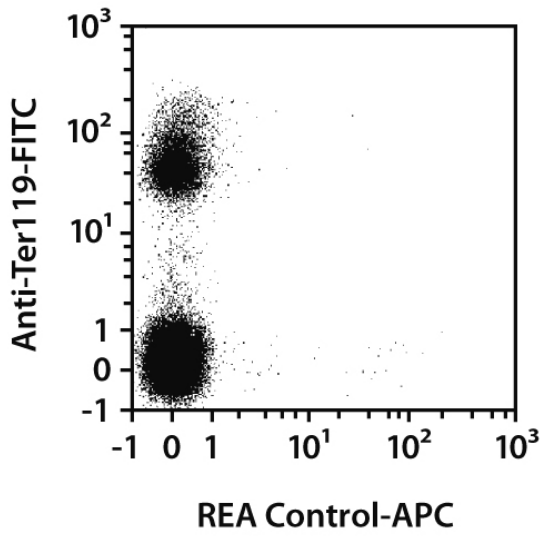
CD98-PE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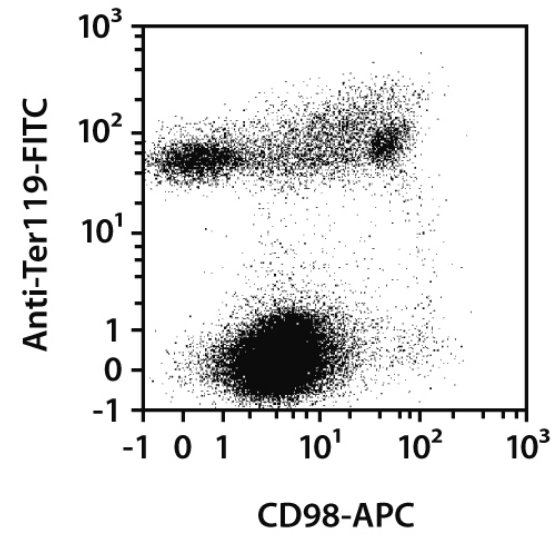
REA Control-APC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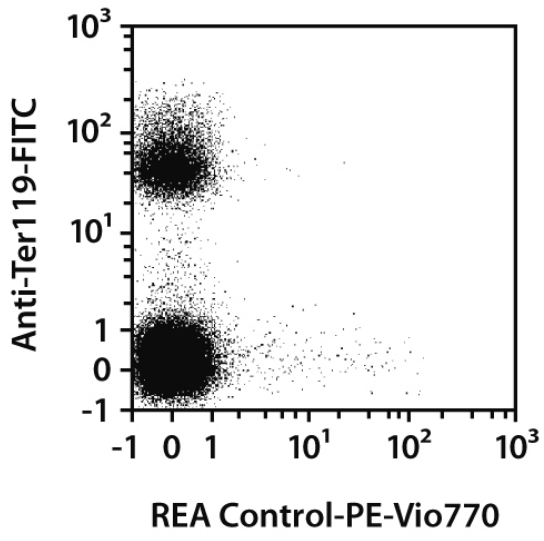
CD98-APC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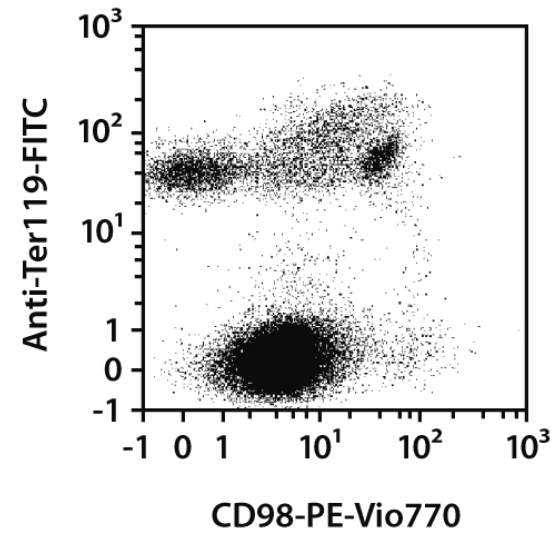
REA Control-PE-Vio770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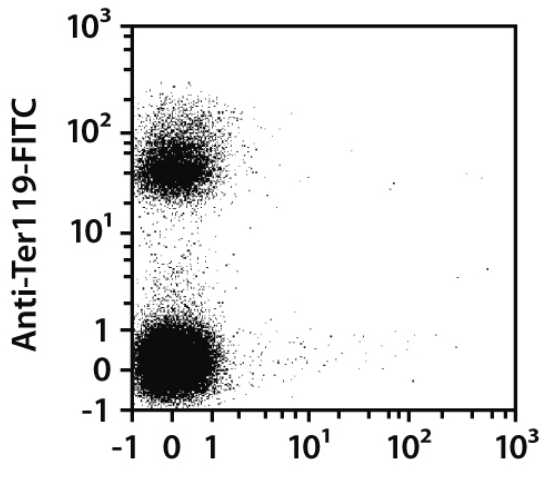
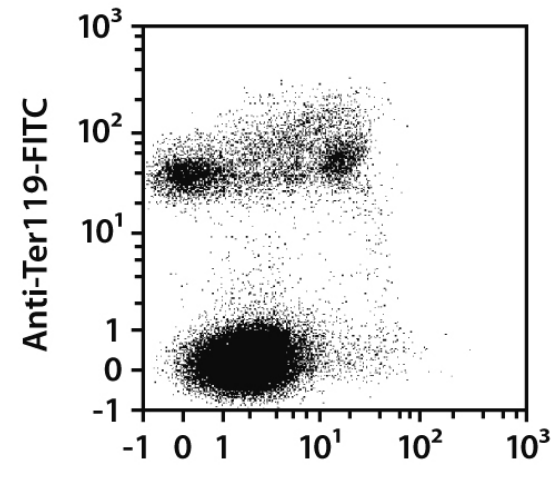

Anti-Ter119-FITC
REA Control-APC-Vio770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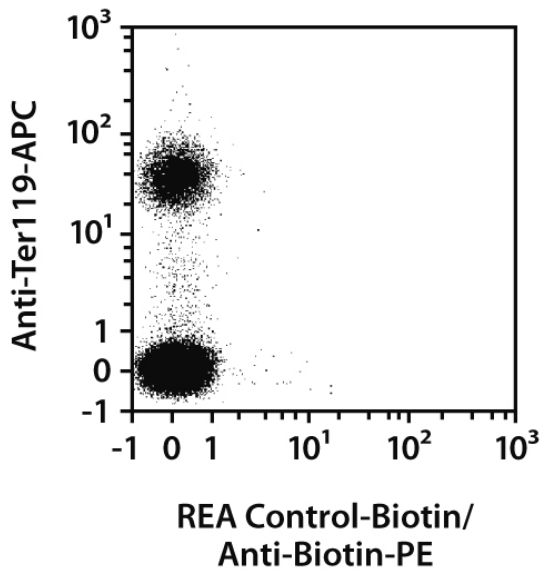
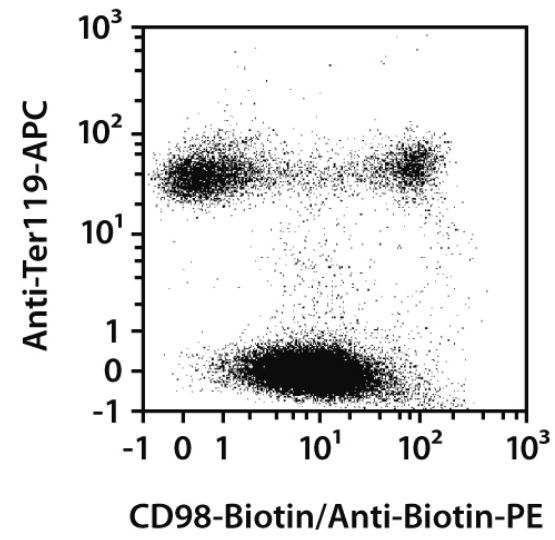
CD98-APC-Vio770


Anti-Ter119-APC
REA Control-Biotin/
Anti-Biotin-PE


Anti-Ter119-APC
CD98-Biotin/Anti-Biotin-PE

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