CD5 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.
CD5-APC	for 30 tests	130-111-108
CD5-FITC	for 30 tests	130-111-106
CD5-FITC	for 100 tests	130-110-989
CD5-PE	for 30 tests	130-111-107
CD5-PE	for 100 tests	130-110-990
CD5-APC	for 100 tests	130-110-991
CD5-VioBlue	for 30 tests	130-111-112
CD5-VioBlue	for 100 tests	130-110-995
CD5-PE-Vio615	for 30 tests	130-111-113
CD5-PE-Vio615	for 100 tests	130-110-996
CD5-PE-Vio770	for 30 tests	130-111-109
CD5-PE-Vio770	for 100 tests	130-110-992
CD5-APC-Vio770	for 30 tests	130-111-110
CD5-APC-Vio770	for 100 tests	130-110-993
CD5-PerCP-Vio700	for 30 tests	130-111-111
CD5-PerCP-Vio700	for 100 tests	130-110-994
CD5-Biotin	for 30 tests	130-111-105
CD5-Biotin	for 100 tests	130-110-988

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	CD5
Clone	REA782
Isotype	recombinant human IgG1
Isotype control	REA Control (S) antibodies
Alternative names of antigen	Leu-1, T1, Ly-1, Tp67
Entrez Gene ID	921
Molecular mass of antigen [kDa]	52

Cross-reactivity	cynomolgus monkey (*Macaca fascicularis*), common marmoset (*Callithrix jacchus*), chimpanzee (*Pan troglodytes*), capuchin monkey
Distribution of antigen	B cells, lymphocytes, T 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 REA782 recognizes the human CD5 antigen, a 67 kDa single-chain transmembrane glycoprotein also known as T1 or Leu-1. It is expressed on most thymocytes, the majority of peripheral T cells, a subpopulation of B cells, and B cell chronic lymphocytic leukemia (B-CLL) cells. CD5 is a receptor for the B cell antigen CD72 and plays a role in T cell activation.
Additional information: Clone REA782 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.

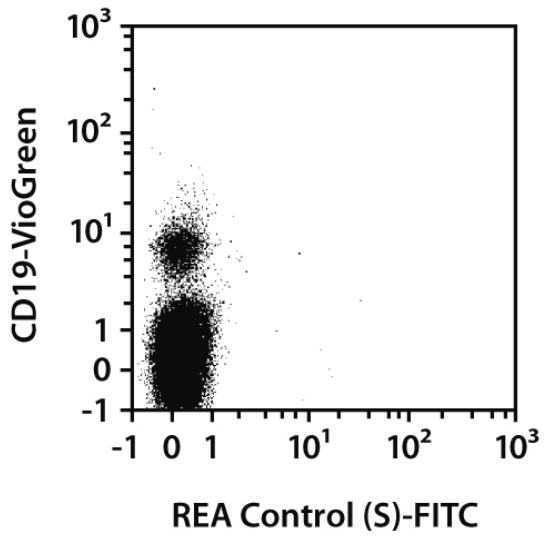
Protocol for cell surface staining

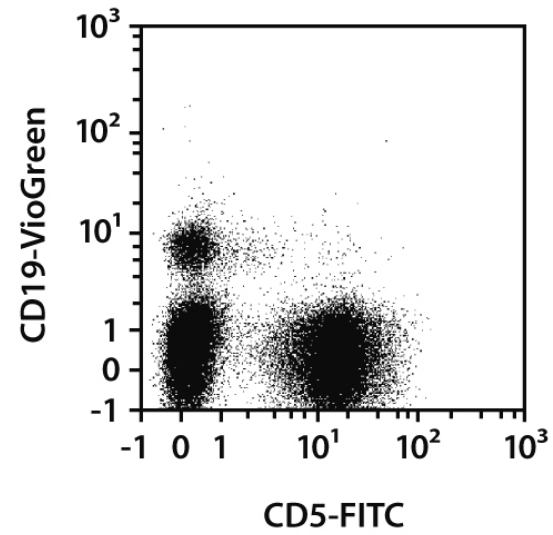
- The recommended antibody dilution for labeling of cells and subsequent analysis by flow cytometry is 1:50 for up to 10^6 cells/100 µL.
- Volumes given below are for up to 10^6 nucleated cells. When working with fewer than 10^6 cells, use the same volumes as indicated. When working with higher cell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

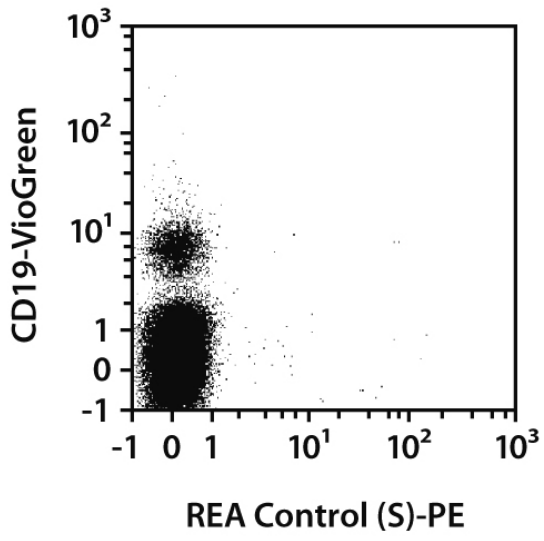
1. Determine cell number.
2. Centrifuge cell suspension at 300×g for 10 minutes. Aspirate supernatant completely.
3. Resuspend up to 10^6 nucleated cells per 98 µL of buffer.
4. Add 2 µL of the antibody.
5. Mix well and incubate for 10 minutes in the dark in the refrigerator (2−8 °C).
   Note: Higher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

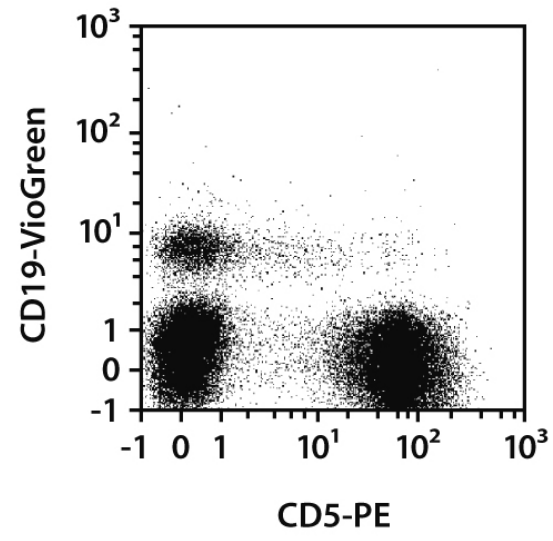
Examples of immunofluorescent staining

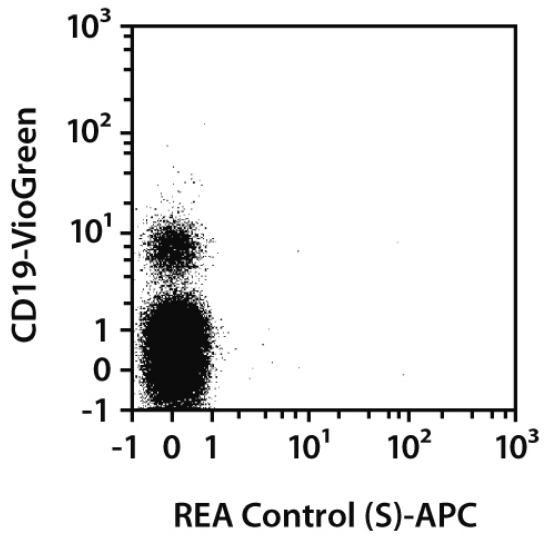
Human peripheral blood mononuclear cells (PBMCs) were stained with CD5 antibodies or with the corresponding REA Control (S) antibodies (left image) as well as with CD19 antibodies. Flow cytometry was performed using the MACSQuant® Analyzer. The Tandem Signal Enhancer has been used to increase binding 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.

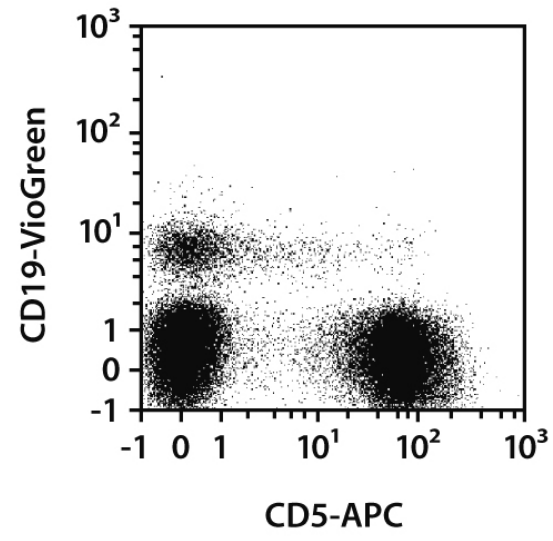

CD19-VioGreen
REA Control (S)-FITC

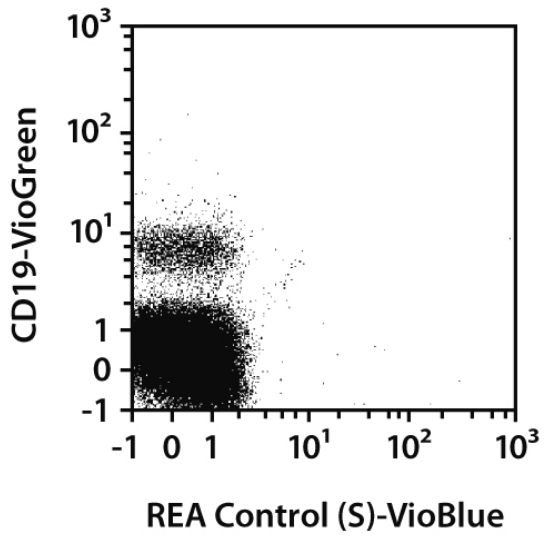

CD19-VioGreen
CD5-FITC


CD19-VioGreen
REA Control (S)-PE


CD19-VioGreen
CD5-PE


CD19-VioGreen
REA Control (S)-APC


CD19-VioGreen
CD5-APC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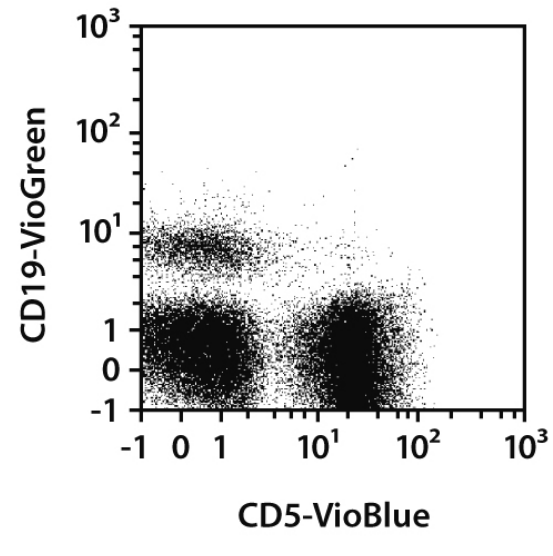
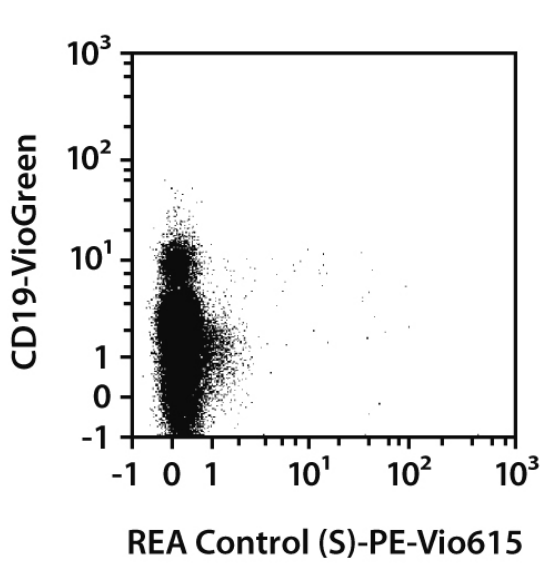
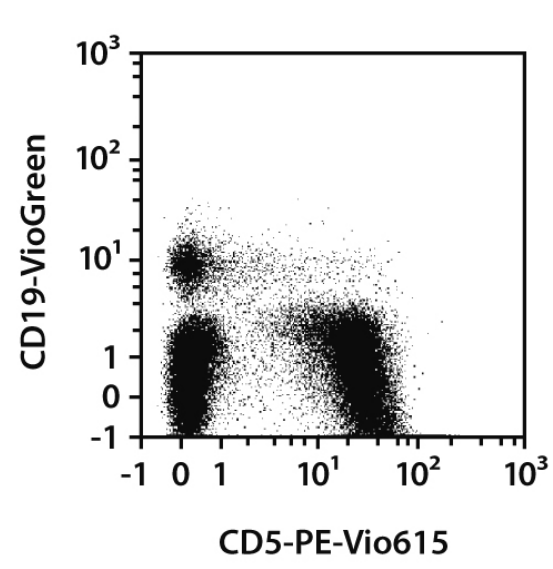
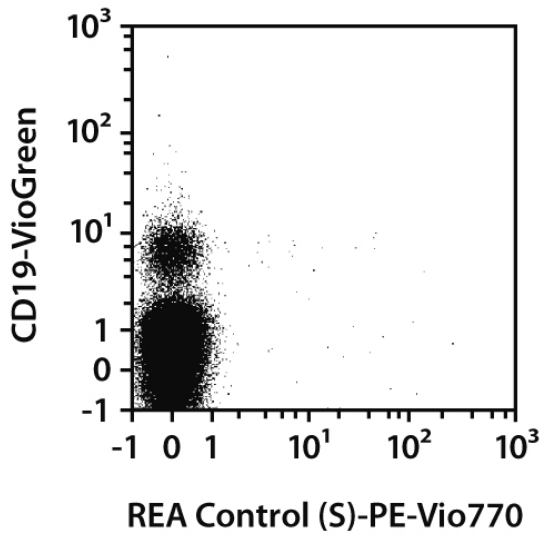
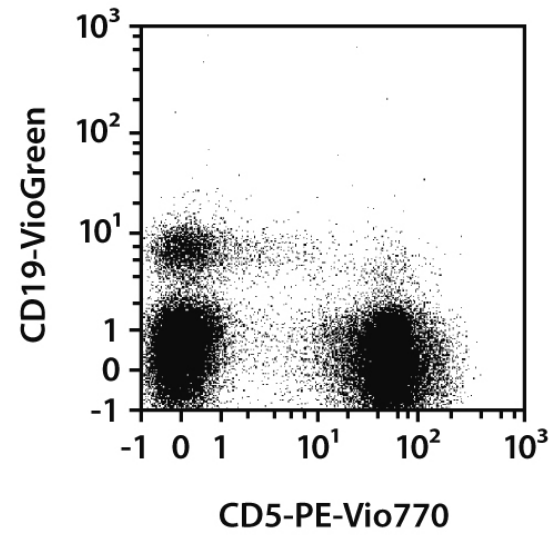
REA Control (S)-VioBlue

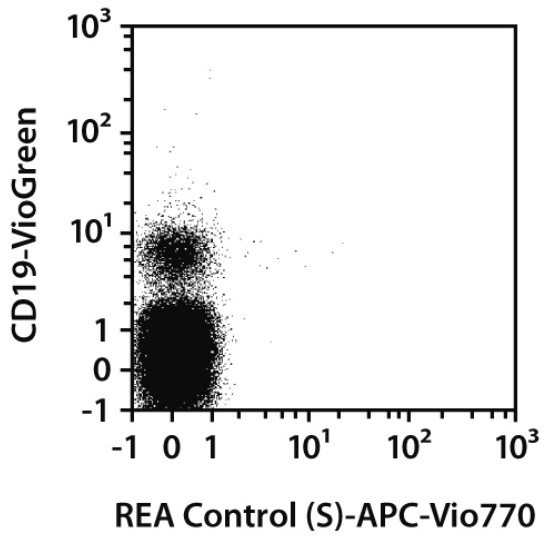

CD19-VioGreen
CD5-VioBlue

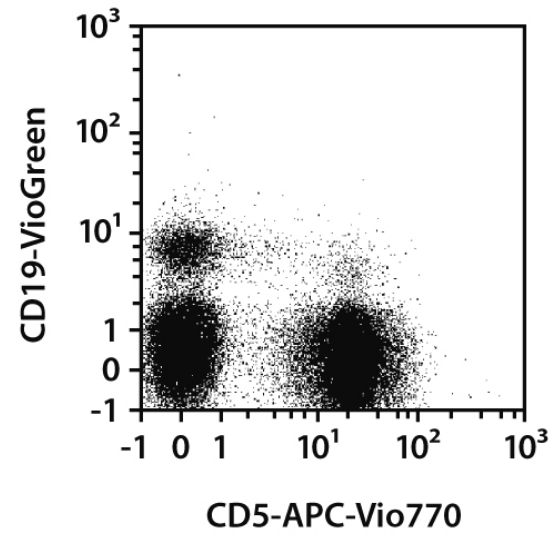

CD19-VioGreen
REA Control (S)-PE-Vio615

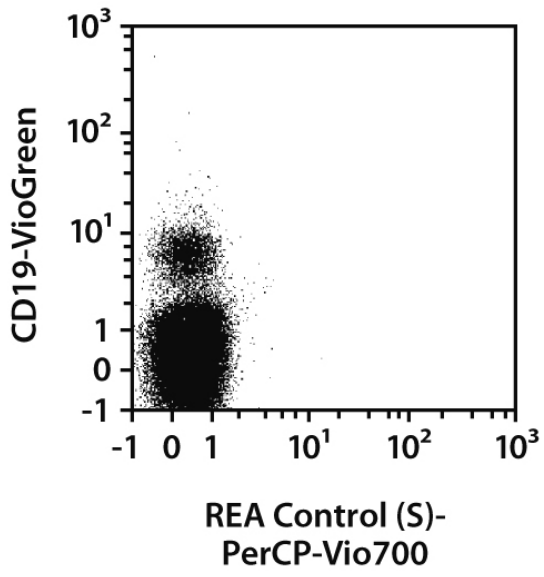

CD19-VioGreen
CD5-PE-Vio615

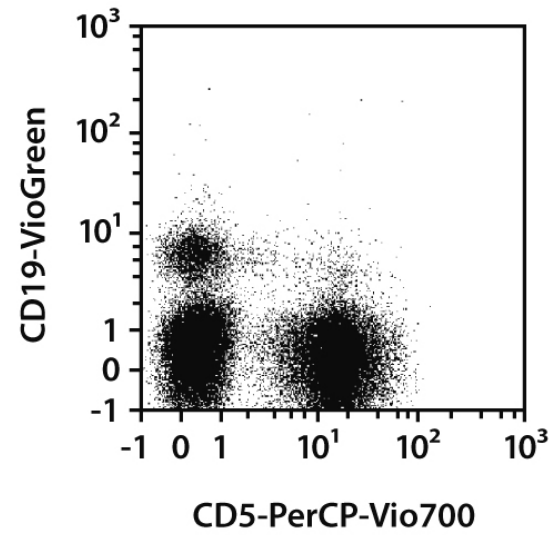


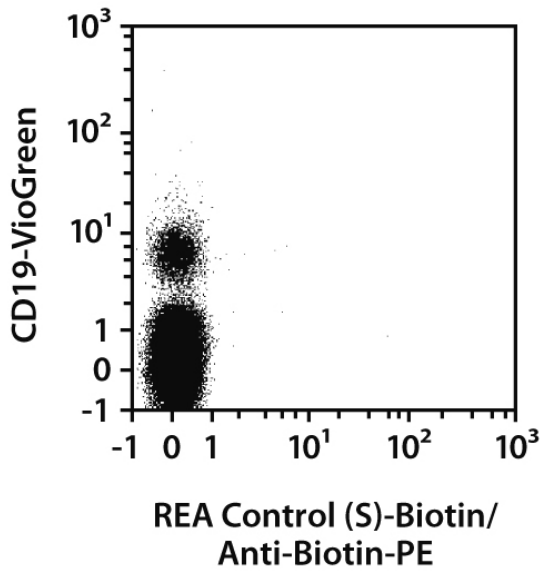


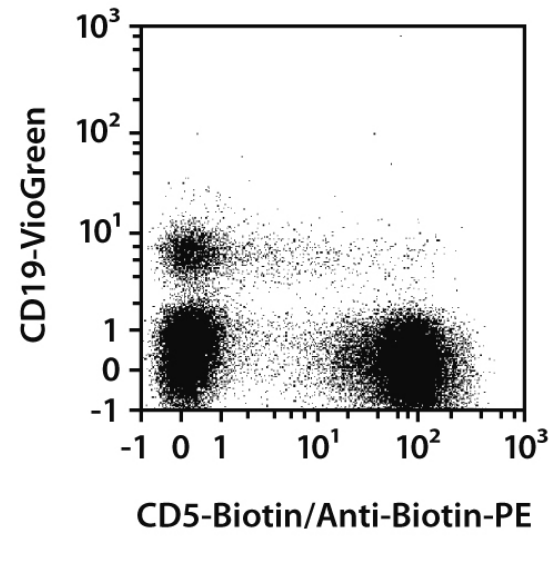












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Miltenyi Biotec GmbH | Friedrich-Ebert-Straße 68 | 51429 Bergisch Gladbach | Germany | Phone +49 2204 8306-0 | Fax +49 2204 85197 |

macs@miltenyibiotec.de | www.miltenyibiotec.com Miltenyi Biotec provides products and services worldwide. Visit **www.miltenyibiotec.com/local** to find your nearest Miltenyi Biotec contact.