CD19 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.
CD19-APC	for 100 tests	130-113-165
CD19-FITC	for 30 tests	130-113-730
CD19-FITC	for 100 tests	130-113-168
CD19-VioBright FITC	for 30 tests	130-113-735
CD19-VioBright FITC	for 100 tests	130-113-173
CD19-PE	for 30 tests	130-113-731
CD19-PE	for 100 tests	130-113-169
CD19-APC	for 30 tests	130-113-727
CD19-VioBlue	for 30 tests	130-113-734
CD19-VioBlue	for 100 tests	130-113-172
CD19-VioGreen	for 30 tests	130-113-736
CD19-VioGreen	for 100 tests	130-113-174
CD19-PE-Vio615	for 30 tests	130-114-712
CD19-PE-Vio615	for 100 tests	130-114-521
CD19-PE-Vio770	for 30 tests	130-113-732
CD19-PE-Vio770	for 100 tests	130-113-170
CD19-APC-Vio770	for 30 tests	130-113-728
CD19-APC-Vio770	for 100 tests	130-113-166
CD19-PerCP-Vio700	for 30 tests	130-113-733
CD19-PerCP-Vio700	for 100 tests	130-113-171
CD19-VioBright 515	for 30 tests	130-113-737
CD19-VioBright 515	for 100 tests	130-113-175
CD19-Biotin	for 30 tests	130-113-729
CD19-Biotin	for 100 tests	130-113-167

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 CD19

Clone	LT19
Isotype	mouse IgG1κ
Isotype control	Mouse IgG1 – isotype control antibodies
Alternative names of antigen	B4, CVID3
Entrez Gene ID	930
Molecular mass of antigen [kDa]	59
Distribution of antigen	B cells, dendritic 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.

The CD19 antibody recognizes the human CD19 antigen, a type I transmembrane glycoprotein of 95 kDa that belongs to the immunglobulin superfamily. CD19 is expressed on B cells throughout most stages of B cell differentiation, though its expression is down-regulated during their terminal differentiation to plasma cells. Expression of CD19 is also found in the majority of B cell–derived malignancies. CD19 is further present on follicular dendritic cells. On B cells, CD19 associates with CD21, CD81, and CD225 (Leu-13) forming a signal transduction complex.

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.

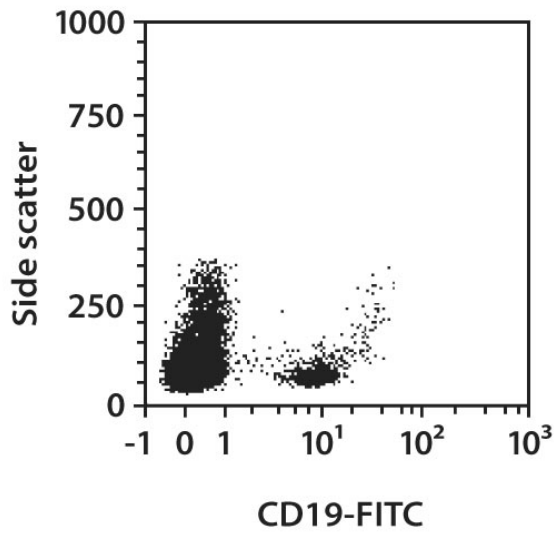
Protocol for cell surface staining

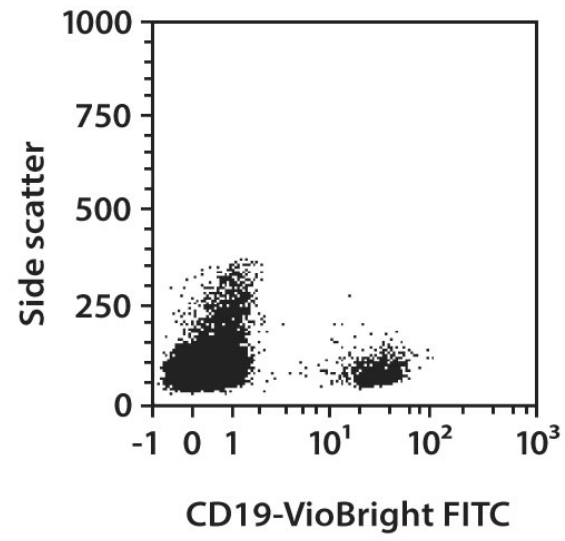
- The recommended antibody dilution for labeling of cells and subsequent analysis by flow cytometry is 1:50 for up to 10^6 cells/100 µL.
- Volumes given below are for up to 10^6 nucleated cells. When working with fewer than 10^6 cells, use the same volumes as indicated. When working with higher cell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

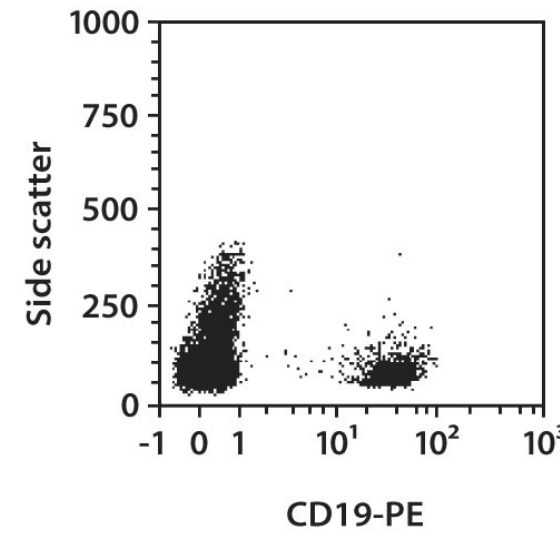
1. Determine cell number.
2. Centrifuge cell suspension at 300×g for 10 minutes. Aspirate supernatant completely.
3. Resuspend up to 10^6 nucleated cells per 98 µL of buffer.
4. Add 2 µL of the antibody.
5. Mix well and incubate for 10 minutes in the dark in the refrigerator (2−8 °C).
   Note: Higher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

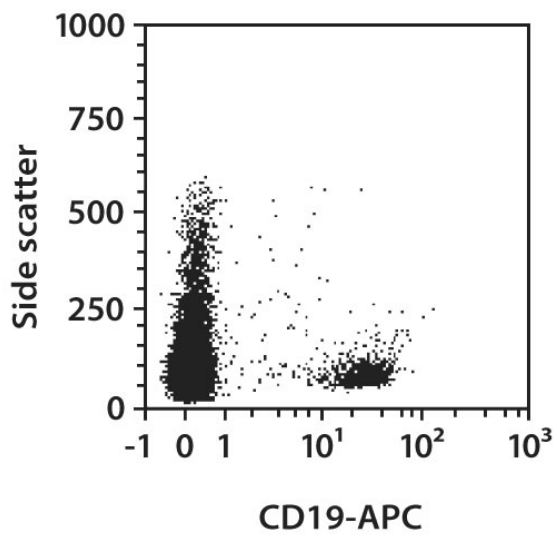
Examples of immunofluorescent staining

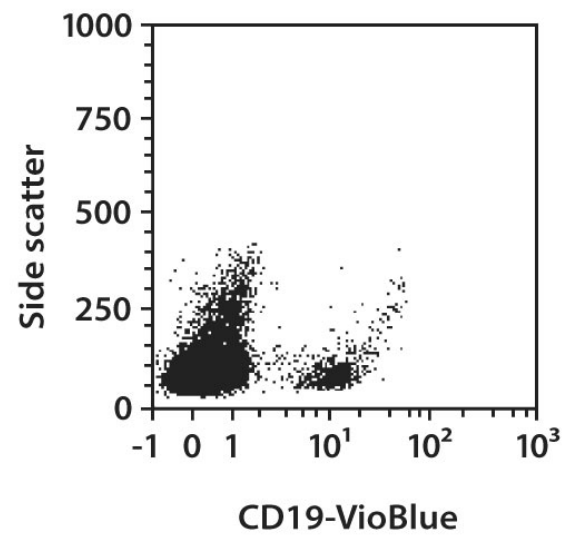
Human peripheral blood mononuclear cells (PBMCs) were stained with CD19 antibodies and analyzed by flow cytometry using the MACSQuant®Analyzer. The Tandem Signal Enhancer has been used to increase binding specificity of tandem-dye–conjugated antibodies. Cell debris and dead cells were excluded from the analysis based on scatter signals and propidium iodide fluorescence or 4',6-diamidino-2-phenylindole (DAPI) fluorescence, as in the case of tandem conjugates.

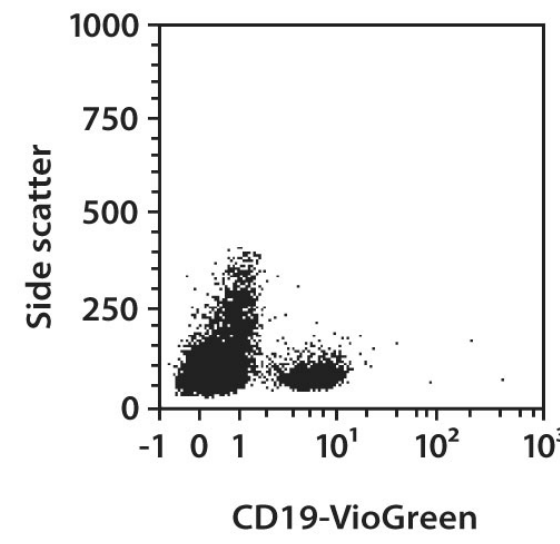


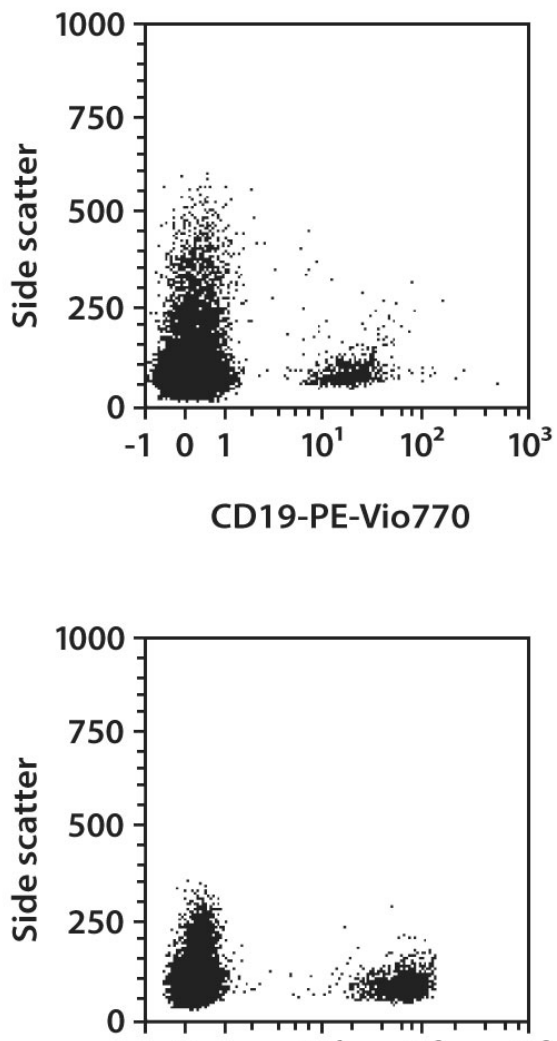


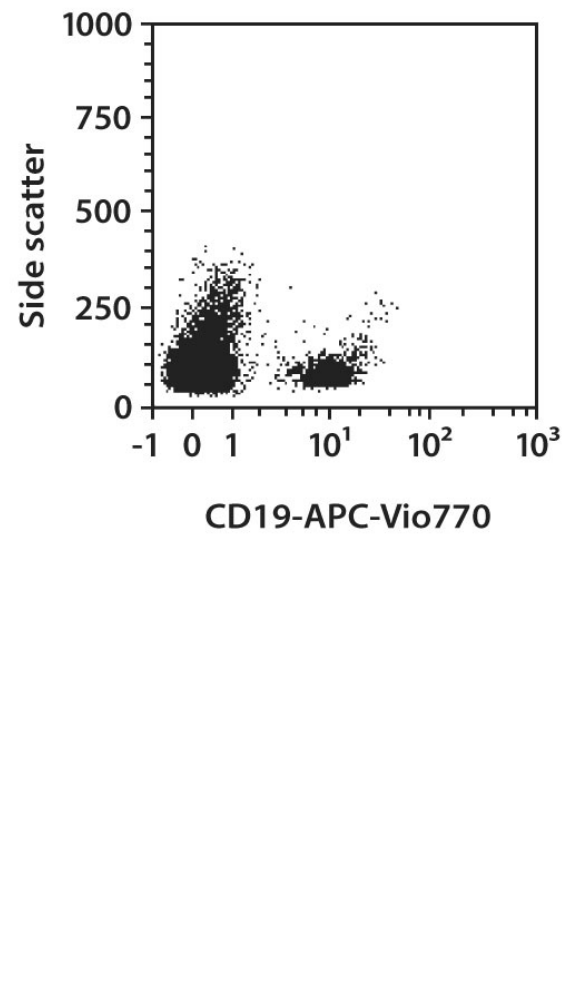


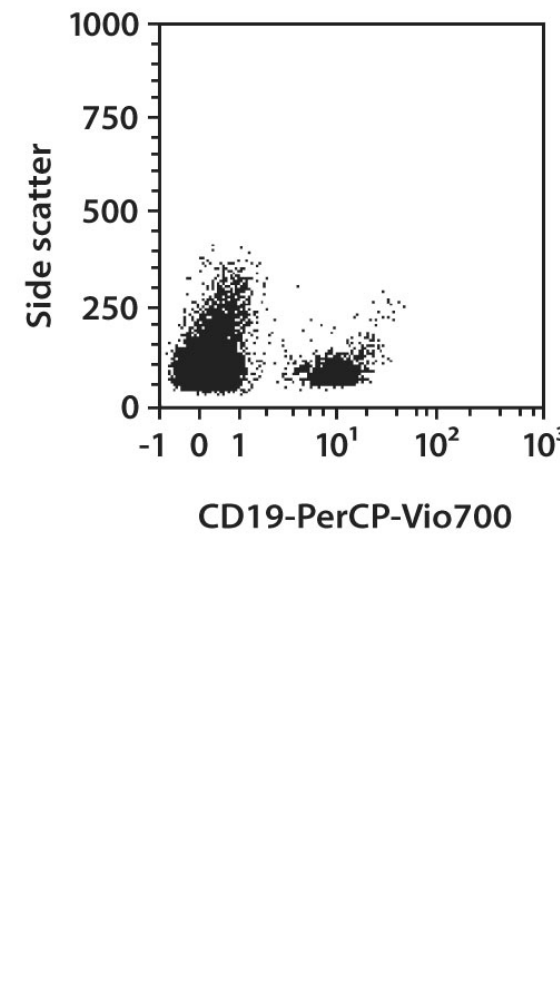












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