CD105 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.
CD105-Biotin	for 30 tests	130-112-319
CD105-FITC	for 30 tests	130-112-327
CD105-FITC	for 100 tests	130-112-169
CD105-PE	for 30 tests	130-112-321
CD105-PE	for 100 tests	130-112-163
CD105-APC	for 30 tests	130-112-324
CD105-APC	for 100 tests	130-112-166
CD105-VioBlue	for 30 tests	130-112-320
CD105-VioBlue	for 100 tests	130-112-162
CD105-PE-Vio615	for 30 tests	130-112-322
CD105-PE-Vio615	for 100 tests	130-112-164
CD105-PE-Vio770	for 30 tests	130-112-325
CD105-PE-Vio770	for 100 tests	130-112-167
CD105-APC-Vio770	for 30 tests	130-112-326
CD105-APC-Vio770	for 100 tests	130-112-168
CD105-PerCP-Vio700	for 30 tests	130-112-328
CD105-PerCP-Vio700	for 100 tests	130-112-170
CD105-Biotin	for 100 tests	130-112-161

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	CD105
Clone	REA794
Isotype	recombinant human IgG1
Isotype control	REA Control (S) antibodies
Alternative names of antigen	ENG, END, HHT1, ORW1, Endoglin
Entrez Gene ID	2022
Molecular mass of antigen [kDa]	68

Distribution of antigen	bone marrow, endothelial cells, leukemia cells, mesenchymal stem cells, monocytes
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 REA794 recognizes the CD105 antigen, also known as endoglin, which serves as a receptor for the growth and differentiation factors TGF-β1 and TGF-β3. An epitope of CD105 is recognized by the SH-2 antibody, which was raised against human mesenchymal stromal cells (MSC) that show mesodermal differentiation capacity. Therefore, it can be used for studies on mesengenesis. CD105 is also expressed on mature endothelial cells and on some leukemic cells of B lymphoid and myeloid origin. Additional information: Clone REA794 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.

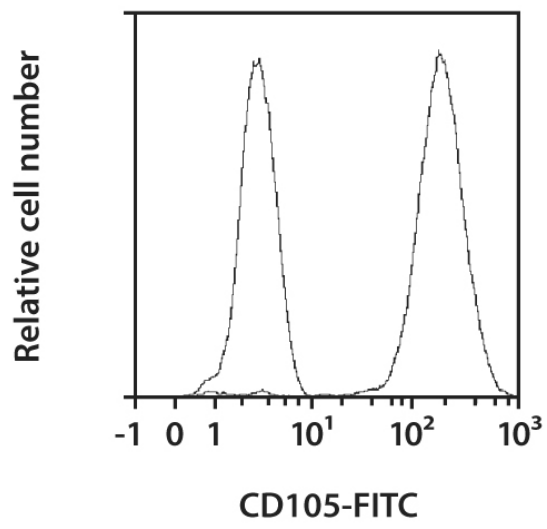
Protocol for cell surface staining

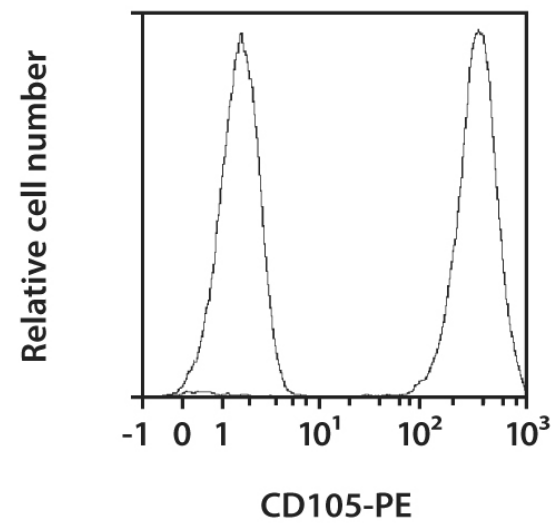
- The recommended antibody dilution for labeling of cells and subsequent analysis by flow cytometry is 1:50 for up to 10^6 cells/100 µL.
- Volumes given below are for up to 10^6 nucleated cells. When working with fewer than 10^6 cells, use the same volumes as indicated. When working with higher cell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

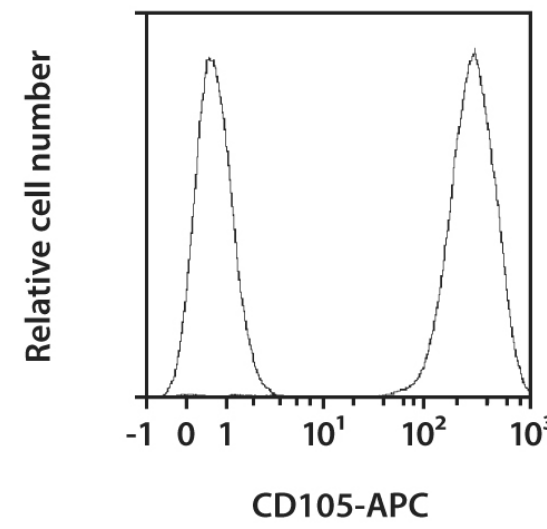
1. Determine cell number.
2. Centrifuge cell suspension at 300×g for 10 minutes. Aspirate supernatant completely.
3. Resuspend up to 10^6 nucleated cells per 98 µL of buffer.
4. Add 2 µL of the antibody.
5. Mix well and incubate for 10 minutes in the dark in the refrigerator (2−8 °C).
   Note: Higher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

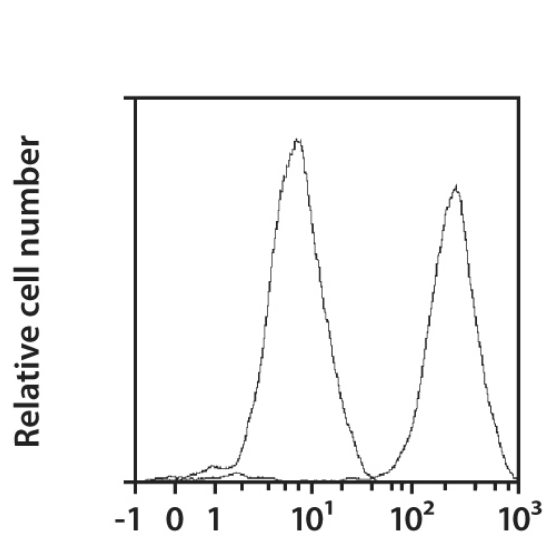
Examples of immunofluorescent staining

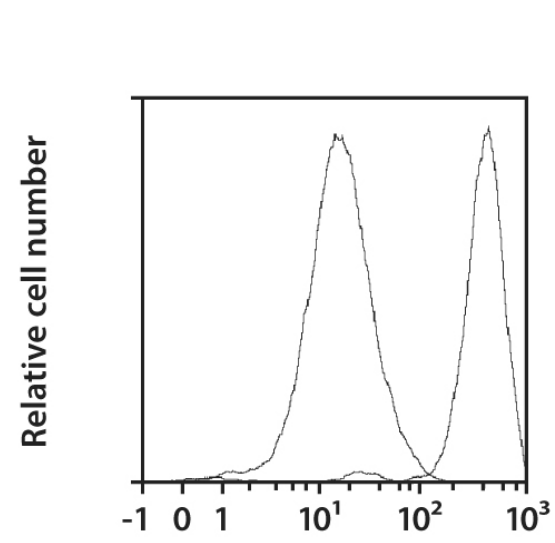
Human umbilical vein endothelial cells (HUVEC) were stained with CD105 antibodies or with the corresponding REA Control (S) antibodies (left peak). Flow cytometry was performed using the MACSQuant®Analyzer. The Tandem Signal Enhancer has been used to increase binding specificity of tandem-dye–conjugated 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.

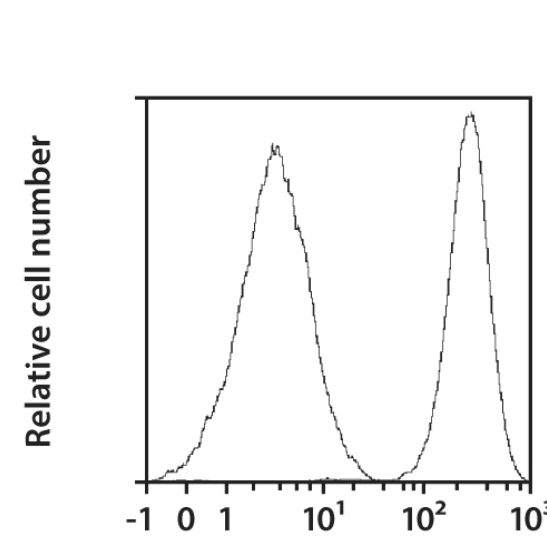


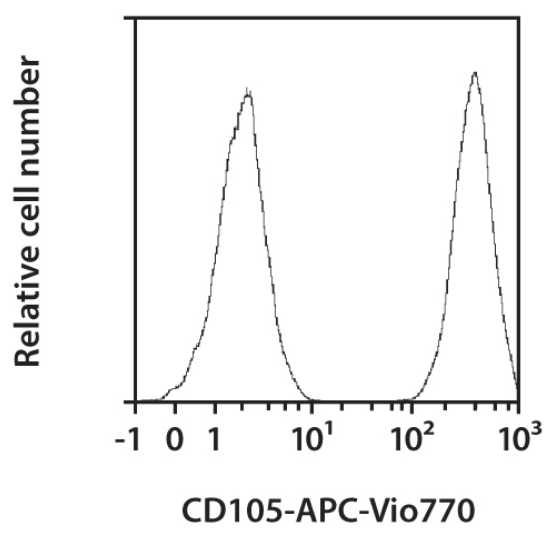


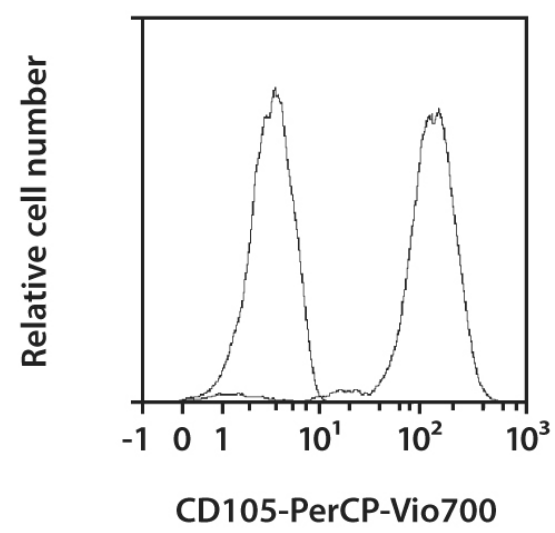


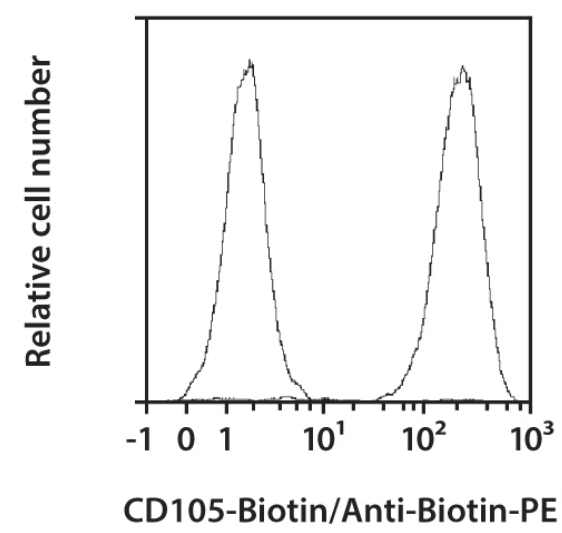












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