CD38 antibodies, rat

For research use only

9 µg equal 60 tests, 30 µg equal 200 tests. One test corresponds to labeling of 10 cells.

Product	Content	Order no.
CD38-PE	9 µg in 300 µL	130-110-379
CD38-FITC	9 µg in 300 µL	130-110-378
CD38-FITC	30 µg in 1 mL	130-110-277
CD38-PE	30 µg in 1 mL	130-110-278
CD38-APC	9 µg in 300 µL	130-110-380
CD38-APC	30 µg in 1 mL	130-110-279
CD38-VioBlue	9 µg in 300 µL	130-110-384
CD38-VioBlue	30 µg in 1 mL	130-110-283
CD38-PE-Vio770	9 µg in 300 µL	130-110-381
CD38-PE-Vio770	30 µg in 1 mL	130-110-280
CD38-APC-Vio770	9 µg in 300 µL	130-110-382
CD38-APC-Vio770	30 µg in 1 mL	130-110-281
CD38-PerCP-Vio700	9 µg in 300 µL	130-110-383
CD38-PerCP-Vio700	30 µg in 1 mL	130-110-282
CD38-Biotin	9 µg in 300 µL	130-110-377
CD38-Biotin	30 µg in 1 mL	130-110-276

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	CD38
Clone	REA683
Isotype	recombinant human IgG1
Isotype control	REA Control antibodies
Alternative names of antigen	ADP-ribosyl cyclase 1, ADPRC 1, CD38H, cADPr hydrolase 1, T10
Entrez Gene ID	25668
Molecular mass of antigen [kDa]	34
Distribution of antigen	leukocytes, astrocytes, epithelial 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.

Clone REA683 recognizes the mouse CD38 antigen, a 42 kDa single-pass type II membrane protein, which is also known as ADP-ribosyl cyclase 1. CD38 is expressed on a variety of hematopoietic and non-hematopoietic cells such as early hematopoietic precursors as well as leukocytes, astrocytes, and epithelial cells. It is involved in spanerse processes such as generation of calcium-mobilizing metabolites, cell activation, and chemotaxis. Additional information: Clone REA683 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.

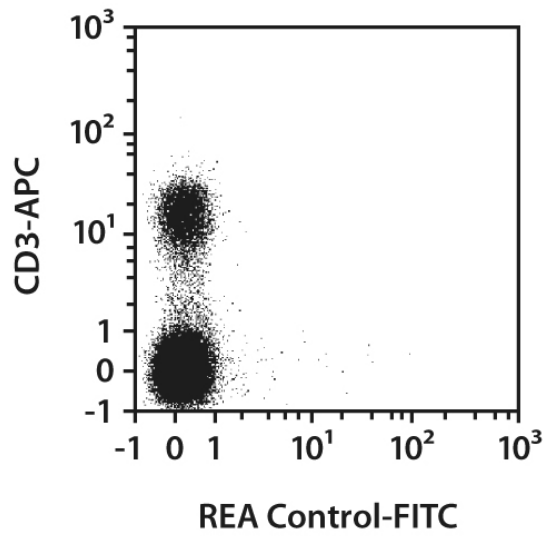
Protocol for cell surface staining

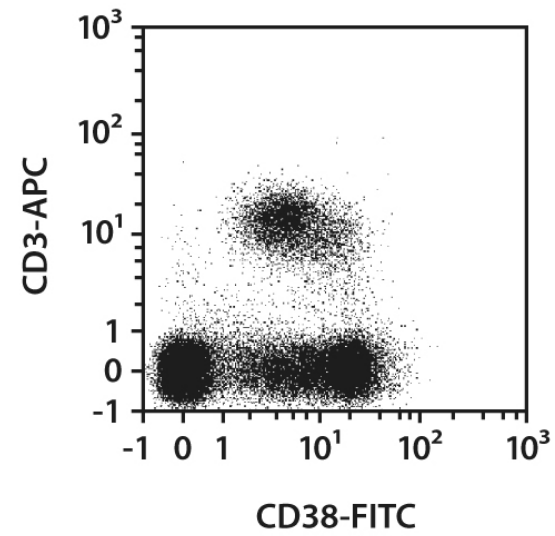
- The recommended antibody dilution for labeling of cells and subsequent analysis by flow cytometry is 1:10 for up to 10^6 cells/50 µL of buffer.
- Volumes given below are for up to 10^6 nucleated cells. When working with fewer than 10^6 cells, use the same volumes as indicated. When working with higher cell numbers, scale up all reagent volumes and total volumes accordingly (e.g. for 2×10^6 nucleated cells, use twice the volume of all indicated reagent volumes and total volumes).

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 45 µL of buffer.
4. Add 5 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 100 µL of buffer, add 10 µL of fluorochrome-conjugated anti-biotin antibody, and continue as described in steps 5 and 6.
8. Resuspend cell pellet in a suitable amount of buffer for analysis by flow cytometry or fluorescence microscopy.

Examples of immunofluorescent staining

Splenocytes from Wistar rats were stained with CD38 antibodies or with the corresponding REA Control antibodies (left image) as well as with CD3 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.


CD3-APC
REA Control-FITC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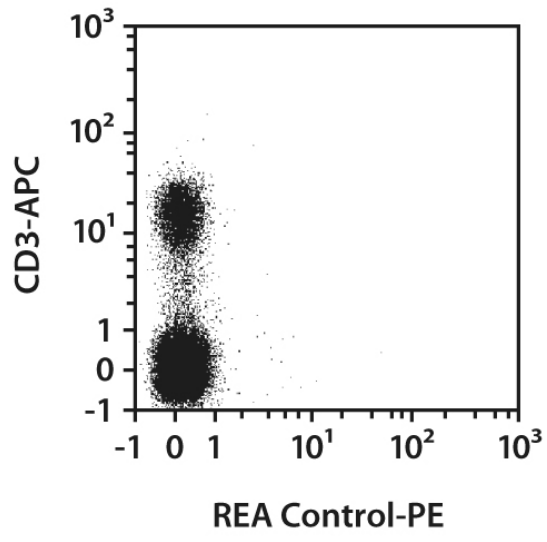
CD38-FITC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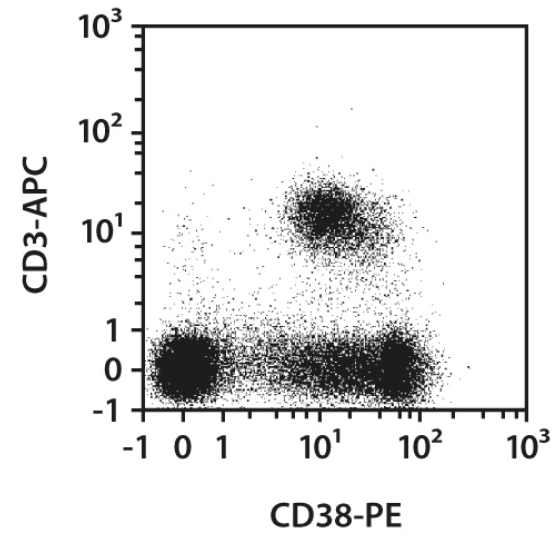
REA Control-PE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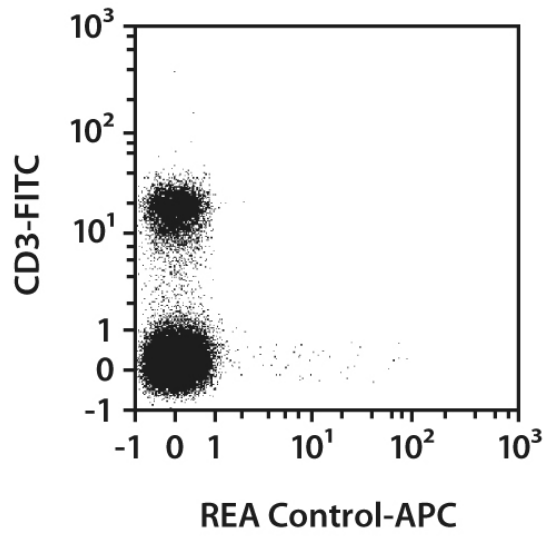
CD38-PE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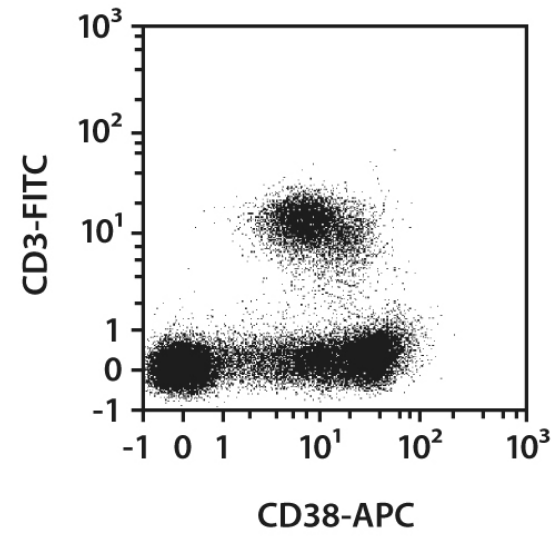
REA Control-APC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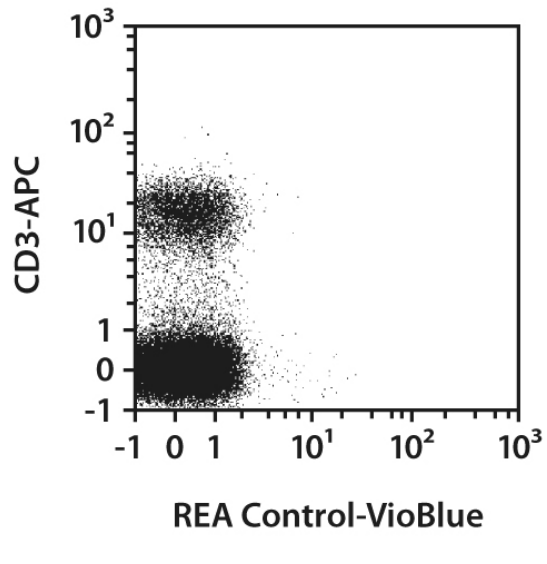
CD38-APC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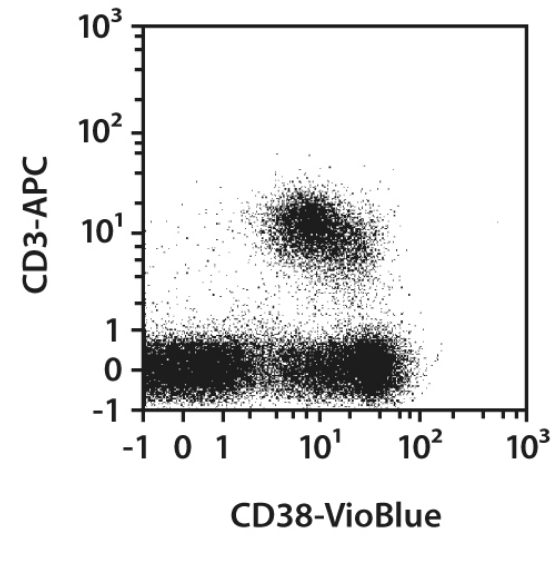
REA Control-VioBlue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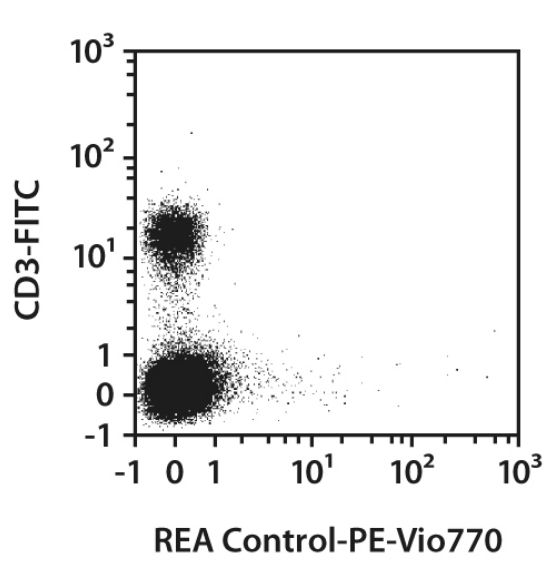
CD38-VioBlue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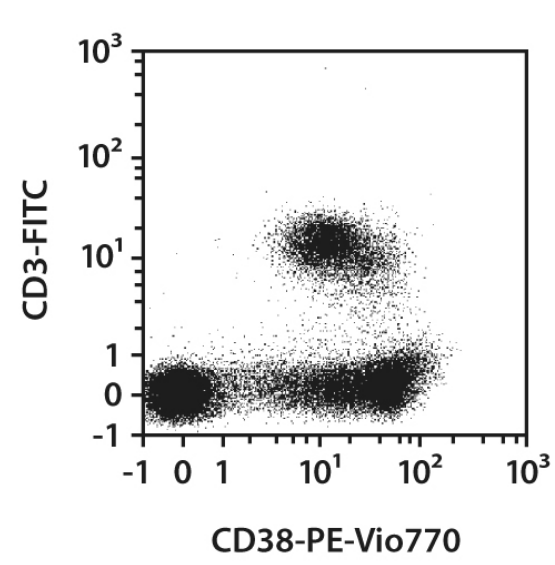
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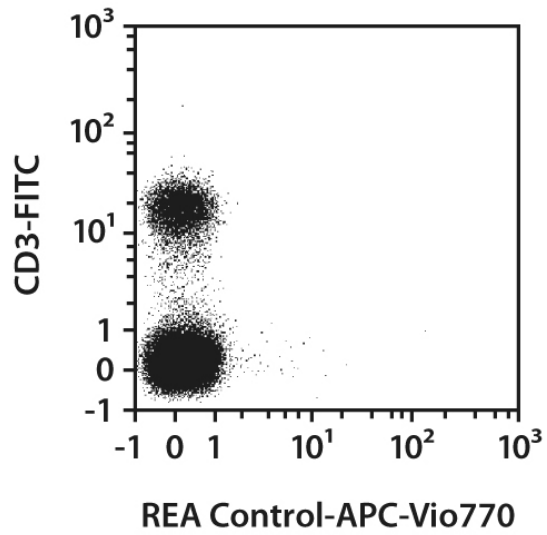
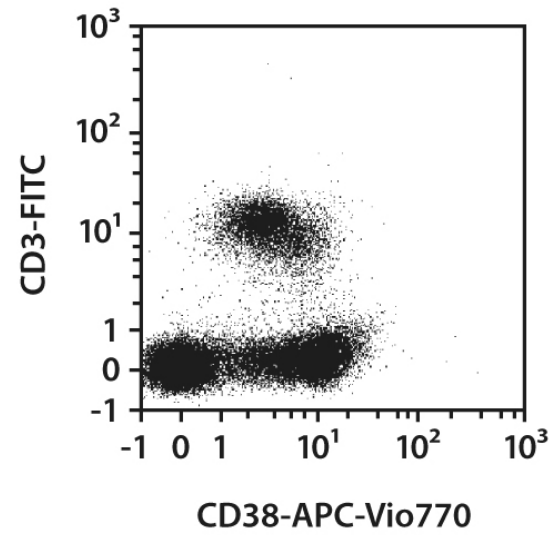
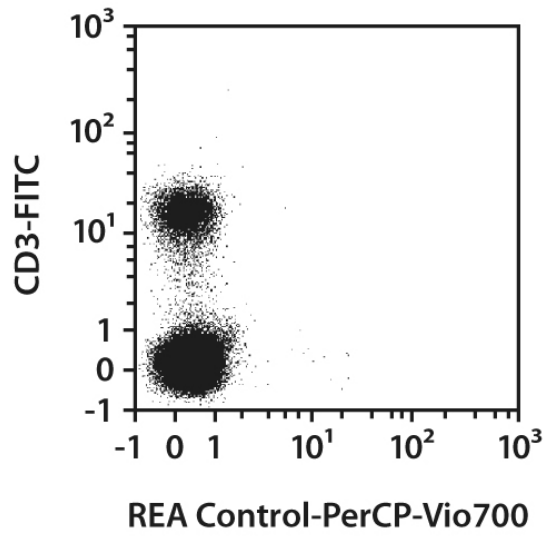
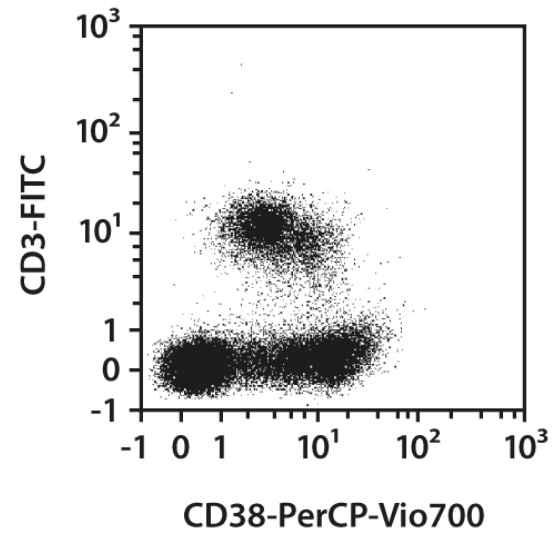
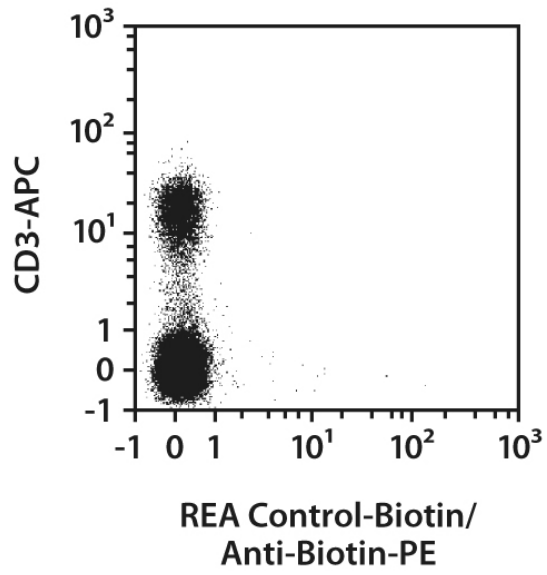
CD38-PE-Vio770

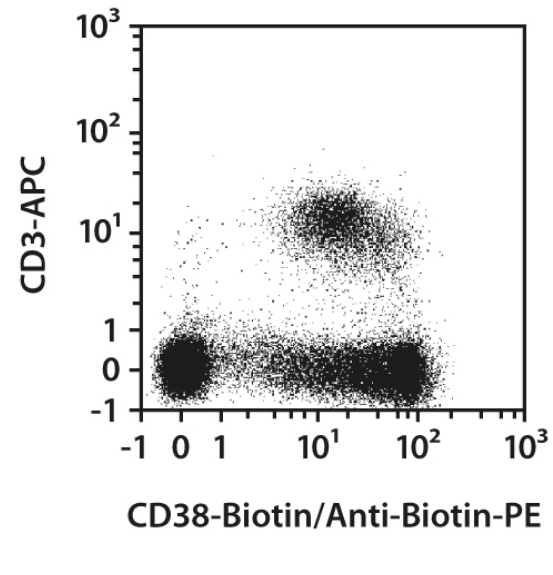












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