CD206 antibodies, human

For research use only

One test corresponds to labeling of up to 10^7 cells in a total volume of 100 µL.

Product	Content	Order no.
CD206-FITC	for 30 tests	130-100-085
CD206-FITC	for 100 tests	130-095-131
CD206-PE	for 30 tests	130-099-732
CD206-PE	for 100 tests	130-095-220
CD206-APC	for 30 tests	130-099-731
CD206-APC	for 100 tests	130-095-217
CD206-VioBlue	for 30 tests	130-100-033
CD206-VioBlue	for 100 tests	130-100-034
CD206-PE-Vio770	for 30 tests	130-100-233
CD206-PE-Vio770	for 100 tests	130-100-152
CD206-APC-Vio770	for 30 tests	130-100-230
CD206-APC-Vio770	for 100 tests	130-100-226
CD206-PerCP-Vio700	for 30 tests	130-104-167
CD206-PerCP-Vio700	for 100 tests	130-104-129
CD206-Biotin	for 100 tests	130-095-214

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	CD206
Clone	DCN228
Isotype	mouse IgG1κ
Isotype control	Mouse IgG1 – isotype control antibodies
Alternative names of antigen	MRC1, CLEC13D, CLEC13DL, MMR, MRC1L1
Molecular mass of antigen [kDa]	164
Distribution of antigen	dendritic cells, endothelial cells, macrophages, placenta, plasma cells
Product format	Antibodies 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 mannose receptor (MR), also known as macrophage MR or CD206, is a 162–175 kDa type I membrane protein. It contains an N-terminal cystein-rich domain and eight C-type lectin-like domains (CTLDs), beside a transmembrane and a cytoplasmic domain. CD206 is expressed by macrophages, dendritic cells, and subsets of endothelial cells, but not on monocytes. The MR recognizes multiple mainly microbial carbohydrates with mannose, fucose, or N-acetyl glucosamine residues. The MR mediates endocytosis and phagocytosis, linked to antigen presentation. It plays an important role in host defense and provides a link between innate and adaptive immunity.

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

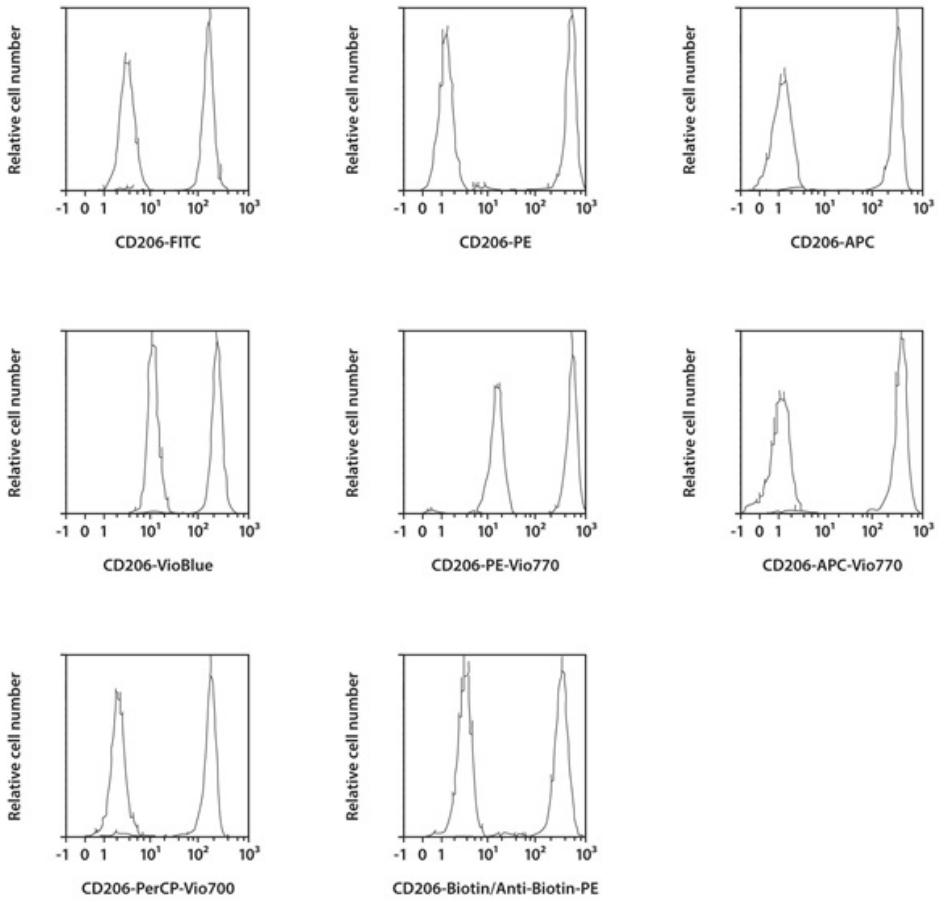
- The recommended antibody dilution for labeling of cells and subsequent analysis by flow cytometry is 1:11 for up to 10^7 cells/100 µL of buffer.
- Volumes given below are for up to 10^7 nucleated cells. When working with fewer than 10^7 cells, use the same volumes as indicated. When working with higher cell numbers, scale up all reagent volumes and total volumes accordingly (e.g. for 2×10^7 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 10^7 nucleated cells per 100 µL of buffer.
4. Add 10 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.

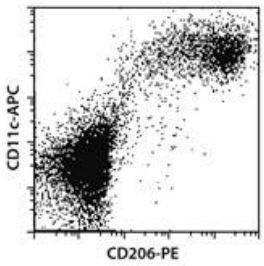
Examples of immunofluorescent staining

CD14+ monocytes were isolated with CD14 MicroBeads, human, from peripheral blood mononuclear cells (PBMCs) and cultured in the presence of GM-CSF and IL-4 for 6 days. Cells were stained with CD206 antibodies or with the corresopnding isotype control antibodies (left peak) as well as with CD11c 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. CD11c+ cells were pregated for the analysis. 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.



Human peripheral blood mononuclear cells (PBMCs) were cultured in the presence of GM-CSF for 6 days. Cells were stained with CD206 antibodies conjugated to PE, as well as with CD11c-APC (# 130-092-412) and analyzed by flow cytometry using the MACSQuant® Analyzer. Cell debris and dead cells were excluded from the analysis based on scatter signals and propidium iodide fluorescence.



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