Miltenyi Biotec

CD192 (CCR2) antibodies
human

Contents

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.

1. Description

This product is for research use only.

Components Monoclonal CD192 (CCR2) antibodies, human conjugated to:

Conjugate	Order no. 1 mL (100 tests)	Order no. 300 µL (30 tests)
PE	130-103-829	130-103-899
APC	130-103-830	130-103-900
PE-Vio770™	130-103-831	130-103-901
APC-Vio770™	130-103-832	130-103-902

Capacity 1 mL: 100 tests or up to 10^9 total cells

300 µL: 30 tests or up to 3×10^8 total cells.

Product format Antibodies are supplied in buffer containing stabilizer and 0.05% sodium azide.

Storage Store protected from light at 2–8 °C. Do not freeze. The expiration date is indicated on the vial label.

1.1 Background information

- Antigen: CD192 (CCR2)
- Synonym: C-C chemokine receptor type 2; C-C CKR-2; CC-CKR-2; CCR-2; Monocyte chemoattractant protein 1 receptor; MCP-1-R; MCP-1R
- Expression patterns: Clone REA264 recognizes the CD192 antigen, a G protein linked seven transmembrane receptor which is also known as C-C chemokine receptor type 2 (CCR2) or monocyte chemoattractant protein 1 receptor (MCP-1-R). Two spliced variants of CD192 (CD192A and CD192B) are expressed on peripheral monocytes and basophils as a result of alternate splicing of a single gene and differ at the C-terminal end. CD192 and its main ligand CCL2 have been implicated in a wide range of immunobiological processes and neuropathologies, including recruitment of monocytes and regulation of bone marrow homeostasis, as well as multiple sclerosis, HIV-associated dementia, Alzheimer's disease, and neuropathic pain. Additional information: Clone REA264 displays negligible binding to Fc receptors.

1.2 Applications

- Identification and enumeration of CD192 $(CCR2)^+$ cells by flow cytometry.

1.3 Recommended antibody dilution

The recommended antibody dilution for all CD192 (CCR2) conjugates is **1:11 for up to 10^7 cells/100 µL** of buffer for labeling of cells and subsequent analysis by flow cytometry.

The antibody is suited for staining of formaldehyde-fixed cells.

1.4 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) Tandem Signal Enhancer, human (# 130-099-888) to reduce non-specific binding of tandem dye–conjugated antibodies to human cells, especially to monocytes.
- (Optional) For antibodies for additional staining or for isotype control, refer to www.miltenyibiotec.com/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.

2. General protocol for immunofluorescent staining

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).

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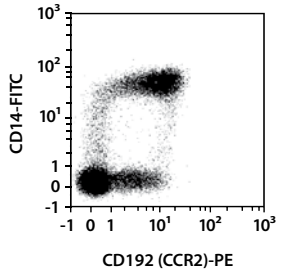
1. Determine cell number.
2. Centrifuge cell suspension at 300×g for 10 minutes. Aspirate supernatant completely.
3. Resuspend up to 10^7 nucleated cells per 100 µL of buffer.
4. Add 10 µL of the CD192 (CCR2) antibody.
5. Mix well and incubate for 10 minutes in the dark in the refrigerator (2–8 °C).

   ▲ **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. Resuspend cell pellet in a suitable amount of buffer for analysis by flow cytometry or fluorescence microscopy.

3. Example of immunofluorescent staining with CD192 (CCR2) antibodies

Human peripheral blood mononuclear cells (PBMCs) were stained with CD192 (CCR2) antibodies conjugated to PE as well as with CD14-FITC 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 iodiode fluorescence.



For more examples please refer to the respective product page at www.miltenyibiotec.com/antibodies.

4. References

1. Charo, I. F. *et al.* (1994) Molecular cloning and functional expression of two monocyte chemoattractant protein 1 receptors reveals alternative splicing of the carboxyl-terminal tails. Proc Natl Acad Sci U S A 91 (7): 2752–2756.
2. Henrich T. J. *et al.* (2013) HIV-1 entry inhibitors: recent development and clinical use. Curr. Opin. Virol. 3 (1): 51–57.

Refer to www.miltenyibiotec.com for all data sheets and protocols.

Warranty

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