Technical Data Sheet

# PE-CF594 Mouse Anti-Human CD14

## Product Information

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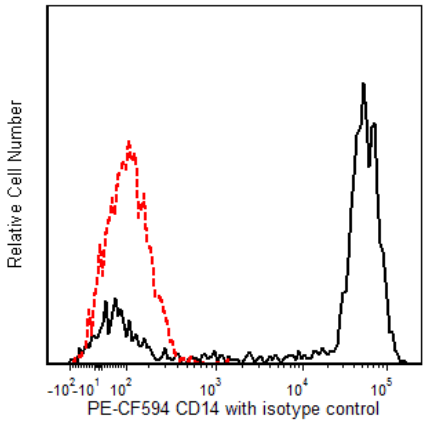
| **Material Number:** | **562335** |
| **Alternate Name:** | LPS receptor; LPS-R; Myeloid cell-specific leucine-rich glycoprotein |
| **Size:** | 100 tests |
| **Vol. per Test:** | 5 µl |
| **Clone:** | MΦP9 |
| **Immunogen:** | Human Monocytes |
| **Isotype:** | Mouse (BALB/c) IgG2b, κ |
| **Reactivity:** | QC Testing: Human |
| **Storage Buffer:** | Aqueous buffered solution containing BSA and ≤0.09% sodium azide. |

## Description

The MφP9 monoclonal antibody specifically binds to CD14 which is also known as the LPS receptor (LPS-R). CD14 is a 53-55 kDa glycosylphosphatidylinositol (GPI)-anchored, single chain glycoprotein expressed at high levels on monocytes and macrophages. Additionally, this anti-CD14 monoclonal antibody reacts with interfollicular macrophages, reticular dendritic cells and some Langerhans cells. CD14 has been identified as a high affinity cell-surface receptor for complexes of lipopolysaccharide (LPS) and serum LPS-binding protein, LPB. The purified antibody is suitable for staining acetone-fixed, frozen tissue sections.

This antibody is conjugated to BD Horizon™ PE-CF594, which has been developed exclusively by BD Biosciences as a better alternative to PE-Texas Red®. PE-CF594 excites and emits at similar wavelengths to PE-Texas Red® yet exhibits improved brightness and spectral characteristics. Due to PE having maximal absorption peaks at 496 nm and 564 nm, PE-CF594 can be excited by the blue (488-nm), green (532-nm) and yellow-green (561-nm) lasers and can be detected with the same filter set as PE-Texas Red® (eg 610/20-nm filter).




***Flow cytometric analysis of CD14 expression on human peripheral blood monocytes.*** *Human whole blood was stained with the BD Horizon™ PE-CF594 Mouse Anti-Human CD14 antibody (Cat. No. 562334/562335; solid line histogram) or with a BD Horizon™ PE-CF594 Mouse IgG2b, κ Isotype Control (Cat. No. 562305; dashed line histogram). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable monocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.*

## Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The antibody was conjugated with BD Horizon™ PE-CF594 under optimum conditions, and unconjugated antibody and free PE-CF594 were removed.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

## Application Notes

**Application**

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|---|---|
| Flow cytometry | Routinely Tested |

## Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|---|---|---|---|
| 562305 | PE-CF594 Mouse IgG2b, κ Isotype Control | 0.1 mg | 27-35 |
| 554656 | Stain Buffer (FBS) | 500 ml | (none) |
| 555899 | Lysing Buffer | 100 ml | (none) |

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| 877.232.8995 | 800.979.9408 | 32.53.720.550 | 0120.8555.90 | 65.6861.0633 | 55.11.5185.9995 |

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## Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. When excited by the yellow-green (561-nm) laser, the fluorescence may be brighter than when excited by the blue (488-nm) laser.
3. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using multi-laser cytometers, which may directly excite both PE and CF™594.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. CF™ is a trademark of Biotium, Inc.
8. This product is provided under an Agreement between BIOTIUM and BD Biosciences. The manufacture, use, sale, offer for sale, or import of this product is subject to one or more patents or pending applications owned or licensed by Biotium, Inc. This product, and only in the amount purchased by buyer, may be used solely for buyer's own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. This product is for research use only. Diagnostic uses require a separate license from Biotium, Inc. For information on purchasing a license to this product including for purposes other than research, contact Biotium, Inc., 3159 Corporate Place, Hayward, CA 94545, Tel: (510) 265-1027. Fax: (510) 265-1352. Email: btinfo@biotium.com.
9. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
10. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
11. Texas Red is a registered trademark of Molecular Probes, Inc., Eugene, OR.
12. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

## References


Dimitriu-Bona A, Burmester GR, Waters SJ, Winchester RJ. Human mononuclear phagocyte differentiation antigens. I. Patterns of antigenic expression on the surface of human monocytes and macrophages defined by monoclonal antibodies. *J Immunol.* 1983; 130(1):145-152. (Immunogen: Flow cytometry, Immunofluorescence)

Goyert SM, Ferrero E. Biochemical analysis of myeloid antigens and cDNA expression of gp55 (CD14). In: McMichael AJ, ed. *Leucocyte Typing III: White Cell Differentiation Antigens.* New York, NY: Oxford University Press;; 1987:613-619. (Biology)

Wright SD, Ramos RA, Tobias PS, Ulevitch RJ, Mathison JC. CD14, a receptor for complexes of lipopolysaccharide (LPS) and LPS binding protein. *Science.* 1990; 249(4975):1431-1433. (Biology)



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