

## Technical Data Sheet

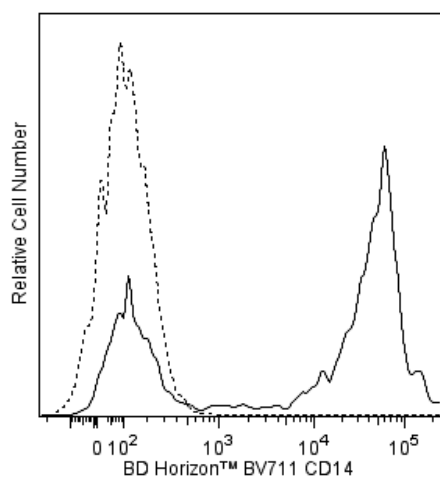
**BV711 Mouse Anti-Human CD14****Product Information**

|                         |                                                                      |
|-------------------------|----------------------------------------------------------------------|
| <b>Material Number:</b> | <b>563373</b>                                                        |
| <b>Alternate Name:</b>  | LPS receptor; LPS-R; Myeloid cell-specific leucine-rich glycoprotein |
| <b>Size:</b>            | 25 tests                                                             |
| <b>Vol. per Test:</b>   | 5 µl                                                                 |
| <b>Clone:</b>           | MφP9 (also known as MφP-9)                                           |
| <b>Immunogen:</b>       | Human Monocytes                                                      |
| <b>Isotype:</b>         | Mouse (BALB/c) IgG2b, κ                                              |
| <b>Reactivity:</b>      | QC Testing: Human                                                    |
| <b>Workshop:</b>        | I M35                                                                |
| <b>Storage Buffer:</b>  | Aqueous buffered solution containing BSA and ≤0.09% sodium azide.    |

**Description**

The MφP9 monoclonal antibody specifically binds to human CD14, a 53-55 kDa glycosylphosphatidylinositol (GPI)-anchored and single chain glycoprotein expressed at high levels on monocytes. Additionally, this CD14-specific 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.

The antibody was conjugated to BD Horizon™ BV711 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. This dye is a tandem fluorochrome of BD Horizon™ BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 711-nm. BD Horizon™ BV711 can be excited by the violet laser and detected in a filter used to detect Cy™5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-Cy™5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.



**Flow cytometric analysis of CD14 expression on human peripheral blood monocytes.** Human whole blood was stained with either BD Horizon™ BV711 Mouse Anti-Human CD14 antibody (Cat. No. 563372/563373; solid line histogram) or BD Horizon™ BV711 Mouse IgG2b, κ Isotype Control (Cat. No. 563125; 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 monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon™ BV711 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV711 were removed.

**Application Notes****Application**

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

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## Suggested Companion Products

| Catalog Number | Name                                        | Size       | Clone       |
|----------------|---------------------------------------------|------------|-------------|
| 554656         | Stain Buffer (FBS)                          | 500 ml     | (none)      |
| 563125         | BV711 Mouse IgG2b, $\kappa$ Isotype Control | 50 $\mu$ g | 27-35       |
| 563372         | BV711 Mouse Anti-Human CD14                 | 100 tests  | M $\phi$ P9 |
| 555899         | Lysing Buffer                               | 100 ml     | (none)      |
| 349202         | FACS Lysing Solution                        |            | (none)      |

## Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  cells in a 100- $\mu$ l experimental sample (a test).
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.
5. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
8. Cy is a trademark of Amersham Biosciences Limited.
9. Brilliant Violet™ 711 is a trademark of Sirigen.

## References

Dimitriu-Bona A, Burmester GR, Kelley K, Winchester RJ. Human mononuclear phagocyte differentiation antigens: Definition by monoclonal antibodies, cell distribution, and in vitro modulation. In: Bernard A, Boumsell L, Dausset J, Milstein C, Schlossman SF, ed. *Leukocyte Typing*. New York: Springer-Verlag; 1984:434-437. (Immunogen: Flow cytometry, Immunofluorescence)

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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