

**Brilliant Violet 421™ anti-human CD14**

**Catalog # / Size:** 2109145 / 25 tests  
2109150 / 100 tests

**Clone:** M5E2

**Isotype:** Mouse IgG2a, κ

**Immunogen:** Full-length human CD14 protein

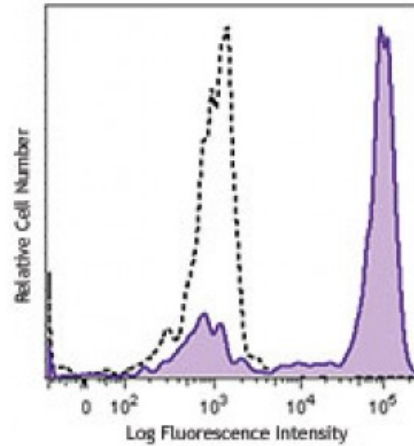
**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 421™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 421™ and unconjugated antibody.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).

**Workshop Number:** III 329

**Concentration:** Lot-specific



Human peripheral blood monocytes were stained with CD14 (clone M5E2) Brilliant Violet 421™ (filled histogram) or mouse IgG2a, κ Brilliant Violet 421™ isotype control (open histogram).

**Applications:**

**Applications:** Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd.

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**Application Notes:** The M5E2 antibody inhibits monocyte activation and cytokine production induced by LPS. Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen sections, blocking of LPS stimulation<sup>4</sup>, and immunofluorescence microscopy<sup>5</sup>. Clone M5E2 is not recommended for immunohistochemical staining of formalin-fixed paraffin-embedded sections. The LEAF™ purified antibody (Endotoxin <0.1 EU/μg, Azide-Free, 0.2 μm filtered) is recommended for functional assays (Cat. No. 301810).

**Application References:**

1. McMichael A, *et al.* 1987. Leucocyte Typing III. Oxford University Press. New York.
2. Knapp W, *et al.* Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York.

3. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
  4. Power CP, *et al.* 2004. *J. Immunol.* 173:5229. (Block)
  5. Williams KC, *et al.* 2001. *J. Exp. Med.* 193:905. (IF)
  6. Iwamoto S, *et al.* 2007. *J. Immunol.* 179:1449. (FC) [PubMed](#)
  7. Santer DM, *et al.* 2010. *J. Immunol.* 485:4739. [PubMed](#)
  8. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
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**Description:** CD14 is a 53-55 kD glycosylphosphatidylinositol (GPI)-linked membrane glycoprotein also known as LPS receptor. CD14 is expressed at high levels on monocytes and macrophages, and at lower levels on granulocytes. Some dendritic cell populations such as interfollicular dendritic cells, reticular dendritic cells, and Langerhans cells have also been reported to express CD14. As a high-affinity receptor for LPS, CD14 is involved in the clearance of gram-negative pathogens, and in the upregulation of adhesion molecules and expression of cytokines in monocytes and neutrophils.

**Antigen** 1. Stocks S, *et al.* 1990. *Biochem. J.* 268:275.  
**References:** 2. Wright S, *et al.* 1990. *Science* 249:1434.