SONY

Product Data Sheet

Brilliant Violet 650™ anti-human CD14

Catalog # / Size: 2109180 / 100 tests
2109175 / 25 tests

Clone: M5E2

Isotype: Mouse IgG2a, κ

Immunogen: Full-length human CD14 protein

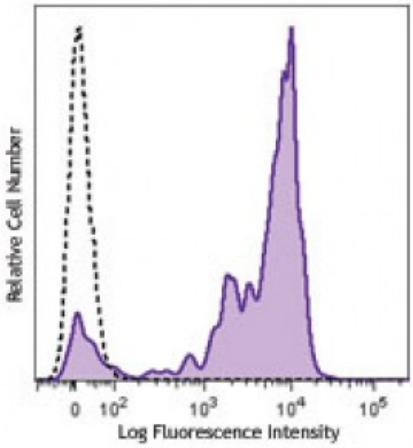
Reactivity: Human

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 650™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 650™ 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 650™.

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 650™ excites at 405 nm and emits at 645 nm. The bandpass filter 660/20 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel. Refer to your instrument manual or manufacturer for support. Brilliant Violet 650™ 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 stimulation4, and immunofluorescence microscopy5. 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

1. McMichael A, *et al.* 1987. Leucocyte Typing III. Oxford University Press. New

References: 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)
9. Milne P, *et al.* 2015. *Blood.* 125:470. PubMed
10. Ortiz AM, *et al.* 2015. *J Virol.* 89:5883. PubMed

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