

GMP APC/Fire™ 750 anti-human CD14 Antibody

Catalog# / Size	260274 / 100 tests
Clone	M5E2
Workshop	III 329
Other Names	LPS receptor
Isotype	Mouse IgG2a, κ
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.

Product Details

Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Full-length human CD14 protein
Formulation	Phosphate-buffered solution, pH 7.2, containing True-Stain Monocyte Blocker™, 0.09% sodium azide and 0.2% (w/v) BSA (origin USA) and a stabilizer.
Preparation	The antibody was purified by affinity chromatography and conjugated with APC/Fire™ 750 under optimal conditions.
Concentration	400 µg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
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 µL per million cells in 100 µL staining volume or 5 µL per 100 µL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. * APC/Fire™ 750 has a maximum excitation of 650 nm and a maximum emission of 787 nm.
Excitation Laser	Red Laser (633 nm)
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 ⁴ , and immunofluorescence microscopy ⁵ . Clone M5E2 is not recommended for immunohistochemical staining of formalin-fixed paraffin-embedded sections. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 301861 and 301862).
Application References	<ol style="list-style-type: none"> McMichael A, <i>et al.</i> 1987. Leucocyte Typing III. Oxford University Press. New York. Knapp W, <i>et al.</i> Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York. (IHC-F) Schlossman S, <i>et al.</i> Eds. 1995. Leucocyte Typing V. Oxford University Press. New York. Power CP, <i>et al.</i> 2004. <i>J. Immunol.</i> 173:5229. (Block) Williams KC, <i>et al.</i> 2001. <i>J. Exp. Med.</i> 193:905. Iwamoto S, <i>et al.</i> 2007. <i>J. Immunol.</i> 179:1449. (FC) PubMed Santer DM, <i>et al.</i> 2010. <i>J. Immunol.</i> 485:4739. PubMed Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC) Zizzo G, <i>et al.</i> 2012. <i>J. Immunol.</i> 189:3508. PubMed
(PubMed link indicates BioLegend citation)	

10. Stoeckius M, et al. 2017. *Nat. Methods*. 14:865. (PG)
11. Peterson VM, et al. 2017. *Nat. Biotechnol.* 35:936. (PG)

Disclaimer

GMP RUO Flow Cytometry Antibodies. BioLegend GMP RUO fluorophore conjugated antibodies are manufactured in a dedicated GMP facility and compliant with ISO 13485:2016. For research use only. Not for use in diagnostic or therapeutic procedures. Our processes include:

- Batch-to-batch consistency
- Material traceability
- Documented procedures
- Documented employee training
- Equipment maintenance and monitoring records
- Lot-specific certificates of analysis
- Quality audits per ISO 13485:2016
- QA review of released products

Antigen Details

Structure	GPI-linked membrane glycoprotein, 53-55 kD
Distribution	Monocytes, macrophages, granulocytes (low)
Function	LPS receptor, clearance of Gram-negative pathogens
Ligand/Receptor	LPS
Cell Type	Granulocytes, Macrophages, Monocytes, Neutrophils
Biology Area	Cell Biology, Immunology, Innate Immunity, Neuroinflammation, Neuroscience
Molecular Family	CD Molecules
Antigen References	1. Stocks S, et al. 1990. <i>Biochem. J.</i> 268:275. 2. Wright S, et al. 1990. <i>Science</i> 249:1434.
Gene ID	929

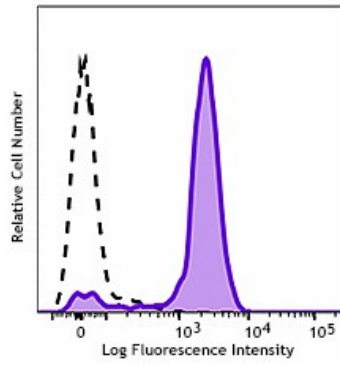
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-human CD14, FITC anti-human CD14, PE anti-human CD14, Purified anti-human CD14, PE/Cyanine7 anti-human CD14, Alexa Fluor® 488 anti-human CD14, Alexa Fluor® 647 anti-human CD14, Ultra-LEAF™ Purified anti-human CD14, Pacific Blue™ anti-human CD14, APC/Cyanine7 anti-human CD14, Alexa Fluor® 700 anti-human CD14, PerCP/Cyanine5.5 anti-human CD14, Biotin anti-human CD14, Brilliant Violet 421™ anti-human CD14, Brilliant Violet 570™ anti-human CD14, Brilliant Violet 605™ anti-human CD14, Brilliant Violet 650™ anti-human CD14, Brilliant Violet 711™ anti-human CD14, Brilliant Violet 785™ anti-human CD14, Brilliant Violet 510™ anti-human CD14, Purified anti-human CD14 (Maxpar® Ready), PerCP anti-human CD14, PE/Dazzle™ 594 anti-human CD14, APC/Fire™ 750 anti-human CD14, TotalSeq™-A0081 anti-human CD14, TotalSeq™-B0081 anti-human CD14, TotalSeq™-C0081 anti-human CD14, PE/Cyanine5 anti-human CD14, TotalSeq™-D0081 anti-human CD14, GMP FITC anti-human CD14, GMP APC anti-human CD14, GMP PE anti-human CD14, GMP Pacific Blue™ anti-human CD14

Product Data



Typical results from human peripheral blood monocytes stained either with M5E2 APC/Fire™ 750 used at 5 μ L/test (solid line) or with an isotype control (dotted line).

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