

Alexa Fluor[®] 700 anti-human CD14 Antibody

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|--------------------------|---|
| Catalog# / Size | 301822 / 100 µg |
| Clone | M5E2 |
| Regulatory Status | RUO |
| 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

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|-------------------------------|--|
| Verified Reactivity | Human, Cynomolgus, Rhesus |
| Reported Reactivity | African Green, Capuchin Monkey, Cow, Chimpanzee, Common Marmoset, Cotton-topped Tamarin, Dog, Pigtailed Macaque, Squirrel Monkey |
| Antibody Type | Monoclonal |
| Host Species | Mouse |
| Immunogen | Full-length human CD14 protein |
| Formulation | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide. |
| Preparation | The antibody was purified by affinity chromatography and conjugated with Alexa Fluor [®] 700 under optimal conditions. |
| Concentration | 0.5 mg/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 | <p>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 ≤2.0 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>Alexa Fluor[®] and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p>View full statement regarding label licenses</p> |
| 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">1. McMichael A, <i>et al.</i> 1987. Leucocyte Typing III. Oxford University Press. New York.2. Knapp W, <i>et al.</i> Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York. (IHC-F) |
| (PubMed link indicates | |

- BioLegend citation)**
- Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
 - Power CP, *et al.* 2004. *J. Immunol.* 173:5229. (Block)
 - Williams KC, *et al.* 2001. *J. Exp. Med.* 193:905.
 - Iwamoto S, *et al.* 2007. *J. Immunol.* 179:1449. (FC) [PubMed](#)
 - Santer DM, *et al.* 2010. *J. Immunol.* 485:4739. [PubMed](#)
 - Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
 - Zizzo G, *et al.* 2012. *J. Immunol.* 189:3508. [PubMed](#)
 - Stoeckius M, *et al.* 2017. *Nat. Methods.* 14:865. (PG)
 - Peterson VM, *et al.* 2017. *Nat. Biotechnol.* 35:936. (PG)

Product Citations

- Dudley D, *et al.* 2016. *Nat Commun.* 7:12204. [PubMed](#)
- Li H, *et al.* 2015. *J Infect Dis.* 211:1717. [PubMed](#)
- Kim ST, *et al.* 2022. *Nat Commun.* 13:1970. [PubMed](#)
- Verma A, *et al.* 2021. *Cell Rep.* 37:109942. [PubMed](#)
- Judge CJ, *et al.* 2017. *J Leukoc Biol.* 102:171. [PubMed](#)
- Boyle M, *et al.* 2015. *J Infect Dis.* 212: 416-425. [PubMed](#)
- Pancieria T, *et al.* 2016. *Cell Stem Cell.* 19:725-737. [PubMed](#)
- Jagannathan P, *et al.* 2017. *Sci Rep.* 10.1038/s41598-017-10624-3. [PubMed](#)
- Lewis SA, *et al.* 2021. *Front Immunol.* 12:724015. [PubMed](#)
- Riquelme SA, *et al.* 2020. *Cell Metabolism.* 31(6):1091-1106.e6. [PubMed](#)
- Sureshchandra S, *et al.* 2021. *iScience.* 24:102690. [PubMed](#)
- Sabree SA, *et al.* 2021. *J Immunother Cancer.* 9: . [PubMed](#)
- Sureshchandra S, *et al.* 2022. *Cell Rep.* 39:110938. [PubMed](#)
- Krishnan S, *et al.* 2021. *Clin Exp Immunol.* 203:458. [PubMed](#)
- Pham TNQ, *et al.* 2020. *Cell Reports.* 29(9):2770-2782.e5.. [PubMed](#)
- Rhoades NS, *et al.* 2022. *Cell Rep.* 39:110725. [PubMed](#)
- Pi J, *et al.* 2022. *J Nanobiotechnology.* 20:36. [PubMed](#)
- Castellano E, *et al.* 2022. *Front Immunol.* 13:970931. [PubMed](#)
- O'Connor MH, *et al.* 2021. *Commun Biol.* 4:563. [PubMed](#)
- Clayton KL, *et al.* 2021. *Cell Host Microbe.* 29(3):435-447.e9. [PubMed](#)
- Connors J, *et al.* 2022. *Geroscience.* .: [PubMed](#)

RRID AB_493747 (BioLegend Cat. No. 301822)

Antigen Details

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|---------------------------|--|
| 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 | <ol style="list-style-type: none">Stocks S, <i>et al.</i> 1990. <i>Biochem. J.</i> 268:275.Wright S, <i>et al.</i> 1990. <i>Science</i> 249:1434. |
| Gene ID | 929 |

Related Protocols

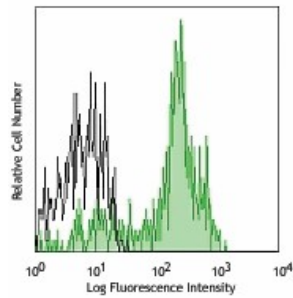
[Cell Surface Flow Cytometry Staining Protocol](#)

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



Human peripheral blood monocytes
stained with M5E2 Alexa Fluor® 700

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