

Purified anti-human CD14 (Maxpar[®] Ready) Antibody

Catalog# / Size	301843 / 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

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 and EDTA.
Preparation	The antibody was purified by affinity chromatography.
Concentration	1.0 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - Quality tested CyTOF[®] - Verified
Recommended Usage	This product is suitable for use with the Maxpar[®] Metal Labeling Kits . For metal labeling using Maxpar [®] Ready antibodies, proceed directly to the step to Partially Reduce the Antibody by adding 100 µl of Maxpar [®] Ready antibody to 100 µl of 4 mM TCEP-R in a 50 kDa filter and continue with the protocol. Always refer to the latest version of Maxpar [®] User Guide when conjugating Maxpar [®] Ready antibodies.
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).
Additional Product Notes	Maxpar [®] is a registered trademark of Standard BioTools Inc.
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
(PubMed link indicates BioLegend citation)	

7. Santer DM, *et al.* 2010. *J. Immunol.* 485:4739. [PubMed](#)
8. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
9. Zizzo G, *et al.* 2012. *J. Immunol.* 189:3508. [PubMed](#)
10. Stoeckius M, *et al.* 2017. *Nat. Methods.* 14:865. (PG)
11. Peterson VM, *et al.* 2017. *Nat. Biotechnol.* 35:936. (PG)

Product Citations

1. Stras SF, *et al.* 2020. *Developmental Cell.* 51(3):357-373.e5.. [PubMed](#)
2. Neidleman J, *et al.* 2020. *Elife.* 9:00. [PubMed](#)
3. Neidleman J, *et al.* 2020. *Cell Rep Med.* 100081:1. [PubMed](#)
4. de Jong SE, *et al.* 2021. *Nature Immunology.* 22(5):654-665. [PubMed](#)
5. Gide TN, *et al.* 2019. *Cancer Cell.* 35:238. [PubMed](#)
6. de Andrade LF, *et al.* 2019. *JCI Insight.* 4:e133103. [PubMed](#)
7. Cheung P, *et al.* 2018. *Cell.* 173:1385. [PubMed](#)
8. Neidleman J, *et al.* 2021. *Elife.* 10:. [PubMed](#)
9. Neidleman J, *et al.* 2021. *Cell Rep.* 36:109414. [PubMed](#)
10. Jordan S, *et al.* 2020. *Cell.* 178(5):1102-1114.e17.. [PubMed](#)
11. NULL, *et al.* 2022. *Cell.* 185:916. [PubMed](#)
12. Wimmers F, *et al.* 2021. *Cell.* 184:3915. [PubMed](#)
13. Stensland ZC, *et al.* 2022. *iScience.* 25:103626. [PubMed](#)

RRID

AB_2562813 (BioLegend Cat. No. 301843)

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	<ol style="list-style-type: none"> 1. Stocks S, <i>et al.</i> 1990. <i>Biochem. J.</i> 268:275. 2. Wright S, <i>et al.</i> 1990. <i>Science</i> 249:1434.
Gene ID	929

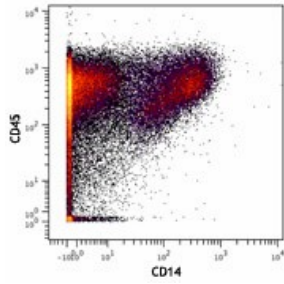
Related Protocols

[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 PBMCs stained with ¹⁵⁴Sm-anti-CD45 (HI30) and ¹⁶⁰Gd-anti-CD14 (M5E2). Data provided by DVS Sciences.

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BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587