

Anti-Human CD14 Antibody, Clone M5E2



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TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

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Antibodies

Mouse monoclonal IgG2a antibody
against human, rhesus, cynomolgus
CD14, unconjugated

Catalog #60004

100 µg 0.5 mg/mL

Product Description

The M5E2 antibody reacts with CD14, an ~53 - 55 kDa GPI-anchored transmembrane glycoprotein expressed at high levels on the surface of peripheral blood monocytes and macrophages, and at lower levels on granulocytes. An ~10-fold difference in expression levels between monocytes/macrophages and granulocytes makes CD14 a useful marker for distinguishing these cell populations. CD14 is also found on tissue macrophages, Langerhans cells and dendritic cells. CD14 functions as a high-affinity receptor for complexes of lipopolysaccharide (LPS) and serum LPS-binding protein and modulates LPS-dependent signal transduction during the immune response to gram-negative pathogens by acting as a co-receptor for TLR 4 and MD-2. This triggers activation of NF-kappa-B, cytokine secretion, and induction of the inflammatory response. Two soluble forms of CD14 have also been described (~48 and ~55 kDa).

Target Antigen Name:	CD14
Alternative Names:	LPS receptor
Gene ID:	929
Species Reactivity:	Human, Rhesus, Cynomolgus, Chimpanzee, Capuchin Monkey, Common Marmoset, Cotton-topped Tamarin, Pigtailed Macaque, Squirrel Monkey, Cow, Dog, Pig, Sheep
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	M5E2
Isotype:	IgG2a, kappa
Immunogen:	Full-length human CD14 protein
Conjugate:	Unconjugated

Applications

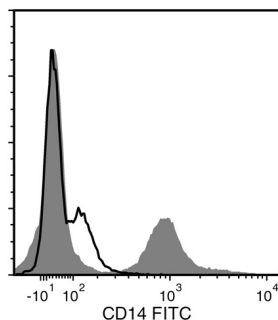
Verified:	FC
Reported:	Blocking, CyTOF®, FA, FC, ICC, IF, IHC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Human Myeloid Positive Selection Kit (Catalog #18653) and EasySep™ Human CD14 Positive Selection Kit (Catalog #18058); partial blocking may be observed, as well as EasySep™ HLA Whole Blood CD33 Positive Selection Kit (Catalog #18287HLA), EasySep™ HLA Whole Blood Myeloid Positive Selection Kit (Catalog #18683HLA) and EasySep™ Human Buffy Coat CD14 Positive Selection Kit (Catalog #18088).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody was purified by affinity chromatography.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. For product expiry date, please contact techsupport@stemcell.com .
Directions for Use:	For flow cytometry the suggested use of this antibody is ≤ 2 µg per 1 × 10 ⁶ cells in 100 µL volume. It is recommended that the antibody be titrated for optimal performance for each application. Clone M5E2 is not recommended for IHC with formalin-fixed, paraffin-embedded sections.

Data



Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs) labeled with Anti-Human CD14 Antibody, Clone M5E2, followed by Goat Anti-Mouse IgG (H+L) Antibody, Polyclonal, FITC (Catalog #60138FI) (filled histogram), or Mouse IgG2a, kappa Isotype Control Antibody, Clone MOPC-173 (Catalog #60071), followed by Goat Anti-Mouse IgG (H+L) Antibody, Polyclonal, FITC (solid line histogram).

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

1. Santer DM et al. (2010) C1q deficiency leads to the defective suppression of IFN- α in response to nucleoprotein containing immune complexes. *J Immunol* 185(8): 4738–49.
2. Iwamoto S et al. (2007) TNF- α drives human CD14+ monocytes to differentiate into CD70+ dendritic cells evoking Th1 and Th17 responses. *J Immunol* 179(3): 1449–57. (FC)
3. Power CP et al. (2004) Bacterial lipoprotein delays apoptosis in human neutrophils through inhibition of caspase-3 activity: regulatory roles for CD14 and TLR-2. *J Immunol* 173(8): 5229–37. (Blocking/FA)
4. Williams KC et al. (2001) Perivascular macrophages are the primary cell type productively infected by simian immunodeficiency virus in the brains of macaques: implications for the neuropathogenesis of AIDS. *J Exp Med* 193(8): 905–15. (IF)
5. Yoshino N et al. (2000) Upgrading of flow cytometric analysis for absolute counts, cytokines and other antigenic molecules of cynomolgus monkeys (*Macaca fascicularis*) by using anti-human cross-reactive antibodies. *Exp Anim* 49(2): 97–110. (FC)
6. Barclay AN et al. (Eds.). (1997) CD14. In: *The Leukocyte Antigens FactsBook*, Second Edition (pp. 169–70). New York: Academic Press.
7. Schlossman SF et al. (Eds.). (1995) Binding heterogeneity within the CD32 panel of mAb. In: *Leucocyte Typing V* (pp. 832–35). New York: Oxford University Press.
8. Knapp W et al. (Eds.). (1989) *Leucocyte Typing IV: White Cell Differentiation Antigens* (pp. 628–34). New York: Oxford University Press.

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