

Anti-Human CD14 Antibody, Clone M5E2

Antibodies

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

Catalog #60004

100 µg 0.5 mg/mL



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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

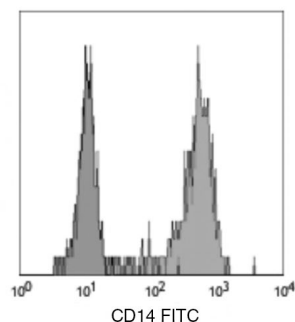
Verified:	FC
Reported:	Blocking, CyTOF®, FA, FC, ICC, IF, IHC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Human CD14 Positive Selection Kit (Catalog #18058; partial blocking may be observed), EasySep™ Human Monocyte Enrichment Kit without CD16 Depletion (Catalog #19058), and EasySep™ Human Monocyte Enrichment Kit (Catalog #19059).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; 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 request a lot-specific Certificate of Analysis from techsupport@stemcell.com.
Directions for Use:	For flow cytometry the suggested use of this antibody is ≤ 2.0 µg per 1 x 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 labeled with Anti-Human CD14 Antibody, Clone M5E2, followed by anti-mouse IgG, FITC (right histogram) or a mouse IgG2a, kappa isotype control antibody followed by anti-mouse IgG, FITC (left histogram).

Related Products

PRODUCT NAME	CATALOG #	SIZE
Anti-Human CD14 Antibody, Clone M5E2	60004	100 µg
Anti-Human CD14 Antibody, Clone M5E2, PE	60004PE	100 tests
Anti-Human CD14 Antibody, Clone M5E2, PE	60004PE.1	25 tests
Anti-Human CD14 Antibody, Clone M5E2, Alexa Fluor® 488	60004AD	100 tests
Anti-Human CD14 Antibody, Clone M5E2, Alexa Fluor® 488	60004AD.1	25 tests

References

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5. Williams KC, et al. 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, 2001 (IF)
6. Power CP, et al. 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, 2004 (Blocking/FA)
7. Iwamoto S, et al. TNF-alpha drives human CD14+ monocytes to differentiate into CD70+ dendritic cells evoking Th1 and Th17 responses. *J Immunol* 179(3): 1449-57, 2007 (FC)
8. Santer DM, et al. C1q deficiency leads to the defective suppression of IFN-alpha in response to nucleoprotein containing immune complexes. *J Immunol* 185(8): 4738-49, 2010

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