

1B-212-C025

Monoclonal Antibody to CD14 Biotin conjugated (0.025 mg)

Clone:	MEM-18
Isotype:	Mouse IgG1
Specificity:	<p>The antibody MEM-18 reacts with CD14, a 53-55 kDa GPI (glycosylphosphatidylinositol)-linked membrane glycoprotein expressed on monocytes, macrophages and weakly on granulocytes; also expressed by most tissue macrophages. In human, the epitope recognized by MEM-18 is located between amino acids 57-64.</p> <p>HLDA III; WS Code M 253 HLDA IV; WS Code M 314 HLDA V; WS Code M MA087 HLDA VI; WS Code M MA95</p>
Immunogen:	A crude mixture of human urinary proteins precipitated by ammonium sulphate from the urine of a patient suffering from proteinuria.
Species Reactivity:	Human, Non-Human Primates
Preparation:	The purified antibody is conjugated with Biotin-LC-NHS under optimum conditions. The reagent is free of unconjugated biotin.
Concentration:	1 mg/ml
Storage Buffer:	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
Storage / Stability:	Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.
Usage:	<p>Biotinylated antibody is designed for indirect immunofluorescence analysis by Flow Cytometry.</p> <p>Suggested working dilution is 1:1000. Indicated dilution is recommended starting point for use of this product. Working concentrations should be determined by the investigator.</p>
Expiration:	See vial label
Lot Number:	See vial label
Background:	<p>CD14 is a 55 kDa GPI-anchored glycoprotein, constitutively expressed on the surface of mature monocytes, macrophages, and neutrophils, where serves as a multifunctional lipopolysaccharide receptor; it is also released to the serum both as a secreted and enzymatically cleaved GPI-anchored form. CD14 binds lipopolysaccharide molecule in a reaction catalyzed by lipopolysaccharide-binding protein (LBP), an acute phase serum protein. The soluble sCD14 is able to discriminate slight structural differences between lipopolysaccharides and is important for neutralization of serum allochthonous lipopolysaccharides by reconstituted lipoprotein particles. CD14 affects allergic, inflammatory and infectious processes.</p>

For laboratory research only, not for drug, diagnostic or other use.

**Antibodies****References:**

- *Juan TS, Hailman E, Kelley MJ, Wright SD, Lichenstein HS: Identification of a domain in soluble CD14 essential for lipopolysaccharide (LPS) signaling but not LPS binding. *J Biol Chem.* 1995 Jul 21;270(29):17237-42.
- *Lodrup Carlsen KC, Granum B: Soluble CD14: role in atopic disease and recurrent infections, including otitis media. *Curr Allergy Asthma Rep.* 2007 Nov;7(6):436-43.
- *Asai Y, Makimura Y, Kawabata A, Ogawa T: Soluble CD14 Discriminates Slight Structural Differences between Lipid As That Lead to Distinct Host Cell Activation. *J Immunol.* 2007 Dec 1;179(11):7674-83.
- *Fernández-Real JM, Broch M, Richart C, Vendrell J, López-Bermejo A, Ricart W: CD14 monocyte receptor, involved in the inflammatory cascade, and insulin sensitivity. *J Clin Endocrinol Metab.* 2003 Apr;88(4):1780-4.
- *Bazil V, Horejsi V, Baudys M, Kristofova H, Strominger JL, Kostka W, Hilgert I: Biochemical characterization of a soluble form of the 53-kDa monocyte surface antigen. *Eur J Immunol.* 1986 Dec;16(12):1583-9.
- *Leukocyte Typing III., McMichael A.J. et al. (Eds.), Oxford University Press (1987).
- *Bazil V, Baudys M, Hilgert I, Stefanova I, Low MG, Zbrozek J, Horejsi V: Structural relationship between the soluble and membrane-bound forms of human monocyte surface glycoprotein CD14. *Mol Immunol.* 1989 Jul;26(7):657-62.
- *Leukocyte Typing IV., Knapp W. et al. (Eds.), Oxford University Press (1989).
- *Leukocyte Typing V., Schlossman S. et al. (Eds.), Oxford University Press (1995).
- *Leukocyte Typing VI., Kishimoto T. et al. (Eds.), Garland Publishing Inc. (1997).
- *Iwaki D, Nishitani C, Mitsuzawa H, Hyakushima N, Sano H, Kuroki Y: The CD14 region spanning amino acids 57-64 is critical for interaction with the extracellular Toll-like receptor 2 domain. *Biochem Biophys Res Commun.* 2005 Mar 4;328(1):173-6.
- *Angel CE, Lala A, Chen CJ, Edgar SG, Ostrovsky LL, Dunbar PR: CD14+ antigen-presenting cells in human dermis are less mature than their CD1a+ counterparts. *Int Immunol.* 2007 Nov;19(11):1271-9.
- *Drbal K, Moertelmaier M, Holzhauser C, Muhammad A, Fuertbauer E, Howorka S, Hinterberger M, Stockinger H, Schütz GJ: Single-molecule microscopy reveals heterogeneous dynamics of lipid raft components upon TCR engagement. *Int Immunol.* 2007 May;19(5):675-84.
- *Weiss TS, Lichtenauer M, Kirchner S, Stock P, Aurich H, Christ B, Brockhoff G, Kunz-Schughart LA, Jauch KW, Schlitt HJ, Thasler WE. Hepatic progenitor cells from adult human livers for cell transplantation. *Gut.* 2008 Aug;57(8):1129-38.
- *Stöckl J, Majdic O, Fischer G, Maurer D, Knapp W: Monomorphic molecules function as additional recognition structures on haptenated target cells for HLA-A1-restricted, hapten-specific CTL. *J Immunol.* 2001 Sep 1;167(5):2724-33.
- *Funda DP, Tucková L, Farré MA, Iwase T, Moro I, Tlaskalová-Hogenová H: CD14 is expressed and released as soluble CD14 by human intestinal epithelial cells in vitro: lipopolysaccharide activation of epithelial cells revisited. *Infect Immun.* 2001 Jun;69(6):3772-81.
- *Sing A, Rost D, Tvardovskaia N, Roggenkamp A, Wiedemann A, Kirschning CJ, Aepfelbacher M, Heesemann J: Yersinia V-antigen exploits toll-like receptor 2 and CD14 for interleukin 10-mediated immunosuppression. *J Exp Med.* 2002 Oct 21;196(8):1017-24.
- *And other.

For laboratory research only, not for drug, diagnostic or other use.