EXBIO Antibodies

PRODUCT DATA SHEET

A7-293-T025

Monoclonal Antibody to CD14 Alexa Fluor® 700 conjugated (25 tests)

Clone: MEM-15

Isotype: Mouse IgG1

Specificity: The antibody MEM-15 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.
The antibody MEM-15 also reacts with soluble forms of CD14 found in serum and in the urine of some nephrotic patients.
HLDA III; WS Code M 252
HLDA IV; WS Code M 113
HLDA IV; WS Code NL 90
HLDA IV; WS Code T 53
HLDA V; WS Code M MA086
HLDA VI; WS Code M MA94

Regulatory Status: RUO

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 Alexa Fluor® 700 under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.

Storage Buffer: The reagent is provided in stabilizing phosphate buffered saline (PBS) solution containing 15mM sodium azide.

Storage / Stability: Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.

Usage: The reagent is designed for Flow Cytometry analysis of human blood cells using 4 µl reagent / 100 µl of whole blood or 10^6 cells in a suspension.
The content of a vial (0.1 ml) is sufficient for 25 tests.

Expiration: See vial label

Lot Number: See vial label

Background: 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.

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

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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.
*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.
*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.
*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).
*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).
*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.
*Schiff DE, Rae J, Martin TR, Davis BH, Curnutte JT: Increased phagocyte Fc gammaRI expression and improved Fc gamma-receptor-mediated phagocytosis after in vivo recombinant human interferon-gamma treatment of normal human subjects. Blood. 1997 Oct 15;90(8):3187-94.
*Cejkova P, Nemeckova I, Broz J, Cerna M: TLR2 and TLR4 expression on CD14++ and CD14+ monocyte subtypes in adult-onset autoimmune diabetes. Biomed Pap Med Fac Univ Palacky Olomouc Czech Repub. 2015 May 4. doi: 10.5507/bp.2015.016.
*Majer F, Vlaskova H, Krol L, Kalina T, Kubanek M, Stolnaya L, Dvorakova L, Elleder M, Sikora J: Danon disease: a focus on processing of the novel LAMP2 mutation and comments on the beneficial use of peripheral white blood cells in the diagnosis of LAMP2 deficiency. Gene. 2012 May 1;498(2):183-95.
*Kanderova V, Kuzilkova D, Stuchly J, Vaskova M, Brdicka T, Fiser K, Hrusak O, Lund-Johansen F, Kalina T: High-resolution Antibody Array Analysis of Childhood Acute Leukemia Cells. Mol Cell Proteomics. 2016 Apr;15(4):1246-61.
*Jeraiby M, Sidi Yahya K, Depince-Berger AE, Lambert C: Microbicidal activity measured by flow cytometry: Optimization and standardization for detection of primary and functional deficiencies. J Immunol Methods. 2016 Sep 29. pii: S0022-1759(16)30220-4.