Human CD14 antibody

Catalog Number: ATGA0339

PRODUCT INFORMATION

Catalog number
ATGA0339

Clone No.
AT87H7

Product type
Monoclonal Antibody

UnitProt No.
P08571

NCBI Accession No.
NP_001167576

Alternative Names
Monocyte differentiation antigen CD14, Myeloid cell-specific leucine-rich glycoprotein, CD14 molecule

PRODUCT SPECIFICATION

Antibody Host
Mouse

Reacts With
Human

Concentration
1mg/ml (determined by BCA assay)

Formulation
Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

Immunogen
Recombinant human CD14 (20-349aa) purified from E.coli

Isotype
IgG2b kappa

Purification Note
By protein-A affinity chromatography

Application
ELISA, WB, FACS

Usage
The antibody has been tested by ELISA, Western blot and FACS analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

Storage

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Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

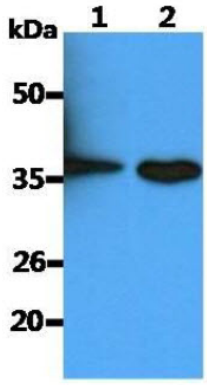
The protein encoded by this gene is a component of the innate immune system. CD14 exists in two forms, one anchored to the membrane by a glycosylphosphatidylinositol tail (mCD14), the other a soluble form (sCD14). Soluble CD14 either appears after shedding of mCD14 (48kDa) or is directly secreted from intracellular vesicles (56kDa). The x-ray crystal structure of human CD14 reveals a monomeric, bent solenoid structure containing a hydrophobic amino-terminal pocket. CD14 was the first described pattern recognition receptor. CD14 acts as a co-receptor (along with the Toll-like receptor TLR4 and MD-2) for the detection of bacterial lipopolysaccharide (LPS). CD14 can bind LPS only in the presence of lipopolysaccharide-binding protein (LBP). Although LPS is considered its main ligand, CD14 also recognizes other pathogen-associated molecular patterns such as lipoteichoic acid.

General References

Kirkland T.N., et al. (1998) Prog Clin Biol Res. 397: 79-87.
Kelley S.L., et al. (2013) Journal of Immunology. 190(3): 1304-1311.
Kitchens R.L., et al. (2000) Chem Immunol Chemical Immunology and Allergy. 74: 61-82.
Tapping R.I., et al. (2000) Chem Immunol Chemical Immunology and Allergy. 74: 108-121.

DATA

Western blot analysis (WB)



The cell lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human CD14 antibody (1:500). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.
Lane 1.: HeLa cell lysate
Lane 2.: A549 cell lysate

Flow cytometry (FACS)

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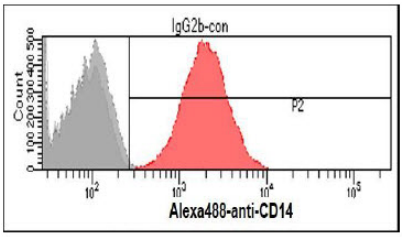
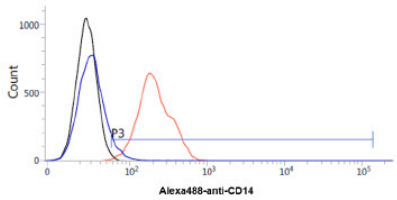


Flow cytometry analysis of CD14 in THP-1 cells. The cell was stained with ATGA0339 at 2-5ug for 1x10^6cells (red). A Goat anti mouse IgG (Alexa fluor 488) was used as the secondary antibody. Mouse monoclonal IgG was used as the isotype control (dark gray), cells without incubation with primary and secondary antibody was used as the negative control (light gray).



Flow cytometry analysis of CD14 in PBMC cells. The cell was stained with ATGA0339 at 2-5ug for 1x10^6cells (red). A Goat anti mouse IgG (Alexa fluor 488) was used as the secondary antibody. Mouse monoclonal IgG was used as the isotype control (blue), cells without incubation with primary and secondary antibody was used as the negative control (black).