

# Human CD14 antibody

Catalog Number: ATGA0339

## PRODUCT INFORMATION

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**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

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**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.

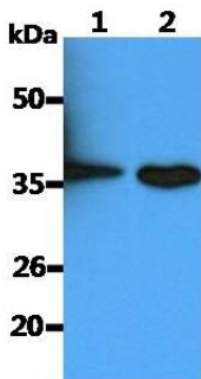
Kelley S.L., et al. (2013) *Journal of Immunology.* 190(3): 1304-1311.

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.

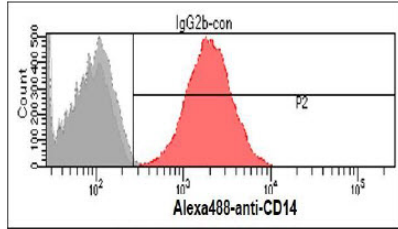
Lane 1.: HeLa cell lysate

Lane 2.: A549 cell lysate

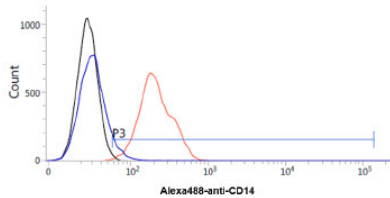
### Flow cytometry (FACS)

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Flow cytometry analysis of CD14 in THP-1 cells. The cell was stained with ATGA0339 at 2-5ug for  $1 \times 10^6$  cells (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  $1 \times 10^6$  cells (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).