

# CD14 (MEM-18): sc-58953

## BACKGROUND

Lipopolysaccharide (LPS) elicits the secretion of mediators and cytokines produced by activated macrophages and monocytes. CD14 is a glycosylphosphatidylinositol (GPI)-anchored protein found on the surfaces of monocytes and polymorphonuclear leukocytes. CD14 functions as a receptor for LPS, resulting in the secretion of various proteins. An important component in the LPS activation of monocytes through the CD14 receptor is the "adapter molecule," lipopolysaccharide binding protein (LBP). There are two forms of CD14, a membrane-associated form (mCD14) and a soluble form (sCD14). mCD14 responds to LPS alone and facilitates the secretion of proteins, while cells not expressing mCD14 fail to respond to LPS. The cells that lack mCD14 respond to LPS/LBP in the presence of sCD14.

## REFERENCES

1. Bazil, V., et al. 1986. Biochemical characterization of a soluble form of the 53 kDa monocyte surface antigen. *Eur. J. Immunol.* 16: 1583-1589.
2. McMichael, A.J., et al., eds. 1987. *Leucocyte Typing III.*, Oxford, England: Oxford University Press
3. Knapp, W., et al., eds. 1989. *Leucocyte Typing IV.*, Oxford, England: Oxford University Press.
4. Simmons, D.L., et al. 1989. Monocyte antigen CD14 is a phospholipid anchored membrane protein. *Blood* 73: 284-289.
5. Sundan, A., et al. 1994. Soluble CD14 from urine copurifies with a potent inducer of cytokines. *Eur. J. Immunol.* 24: 1779-1784.

## CHROMOSOMAL LOCATION

Genetic locus: CD14 (human) mapping to 5q31.3.

## SOURCE

CD14 (MEM-18) is a mouse monoclonal antibody raised against a crude mixture of urinary proteins of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CD14 (MEM-18) is recommended for detection of CD14 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for CD14 siRNA (h): sc-29248, CD14 shRNA Plasmid (h): sc-29248-SH and CD14 shRNA (h) Lentiviral Particles: sc-29248-V.

Molecular Weight of CD14: 53-55 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, BJAB whole cell lysate: sc-2207 or THP-1 cell lysate: sc-2238.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## SELECT PRODUCT CITATIONS

1. Furugen, R., et al. 2012. *Porphyromonas gingivalis* and *Escherichia coli* lipopolysaccharide causes resistin release from neutrophils. *Oral Dis.* E-published.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.