

CD14 (M-20): sc-6999

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. Simmons, D.L., et al. 1989. Monocyte antigen CD14 is a phospholipid anchored membrane protein. *Blood* 73: 284-289.
2. Schumann, R.R. 1992. Function of lipopolysaccharide (LPS)-binding protein (LBP) and CD14, the receptor for LPS/LBP complexes: a short review. *Res. Immunol.* 143: 11-15.
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4. Detmers, P.A., et al. 1995. Endotoxin receptors (CD14) are found with CD16 (Fc γ RIII) in an intracellular compartment of neutrophils that contains alkaline phosphatase. *J. Immunol.* 155: 2085-2095.
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6. Bufler, P., et al. 1995. Soluble lipopolysaccharide receptor (CD14) is released via two different mechanisms from human monocytes and CD14 transfectants. *Eur. J. Immunol.* 25: 604-610.

CHROMOSOMAL LOCATION

Genetic locus: Cd14 (mouse) mapping to 18 B2.

SOURCE

CD14 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD14 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6999 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CD14 (M-20) is recommended for detection of CD14 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD14 siRNA (m): sc-29962, CD14 shRNA Plasmid (m): sc-29962-SH and CD14 shRNA (m) Lentiviral Particles: sc-29962-V.

Molecular Weight of CD14: 53-55 kDa.

SELECT PRODUCT CITATIONS

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11. Le Poole, I.C., et al. 2008. Langerhans cells and dendritic cells are cytotoxic towards HPV16 E6 and E7 expressing target cells. *Cancer Immunol. Immunother.* 57: 789-797.

RESEARCH USE

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