

CD14 (M-305): sc-9150

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.

CHROMOSOMAL LOCATION

Genetic locus: CD14 (human) mapping to 5q31.3; Cd14 (mouse) mapping to 18 B2.

SOURCE

CD14 (M-305) is a rabbit polyclonal antibody raised against amino acids 17-321 of CD14 of human origin.

PRODUCT

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

APPLICATIONS

CD14 (M-305) is recommended for detection of CD14 of mouse, rat and 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)], 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 (h): sc-29248, CD14 siRNA (m): sc-29962, CD14 shRNA Plasmid (h): sc-29248-SH, CD14 shRNA Plasmid (m): sc-29962-SH, CD14 shRNA (h) Lentiviral Particles: sc-29248-V and CD14 shRNA (m) Lentiviral Particles: sc-29962-V.

Molecular Weight of CD14: 53-55 kDa.

Positive Controls: CD14 (m): 293T Lysate: sc-119093, THP-1 cell lysate: sc-2238 or BJAB whole cell lysate: sc-2207.

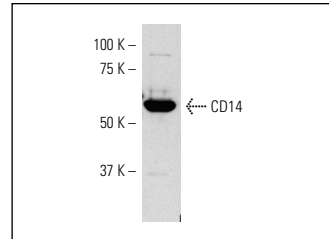
RESEARCH USE

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

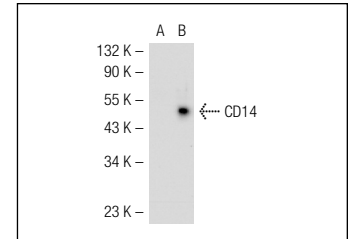
STORAGE

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

DATA



CD14 (M-305): sc-9150. Western blot analysis of CD14 expression in BJAB whole cell lysate.



CD14 (M-305): sc-9150. Western blot analysis of CD14 expression in non-transfected: sc-117752 (A) and mouse CD14 transfected: sc-119093 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Shibata, Y., et al. 2001. GM-CSF regulates alveolar macrophage differentiation and innate immunity in the lung through PU.1. *Immunity* 15: 557-567.
2. Seksik, P., et al. 2010. Sera from patients with Crohn's disease break bacterial lipopolysaccharide tolerance of human intestinal epithelial cells via MD-2 activity. *Innate Immun.* 16: 381-390.
3. Chui, J.J., et al. 2010. Iris pigment epithelial cells express a functional lipopolysaccharide receptor complex. *Invest. Ophthalmol. Vis. Sci.* 51: 2558-2567.
4. Ma, L., et al. 2010. Propofol has anti-inflammatory effects on alveolar type II epithelial cells. *Acta Anaesthesiol. Scand.* 54: 362-369.
5. Hoarau, J.J., et al. 2010. Persistent chronic inflammation and infection by Chikungunya arthritogenic alphavirus in spite of a robust host immune response. *J. Immunol.* 184: 5914-5927.
6. Krejbich-Trotot, P., et al. 2011. Chikungunya virus mobilizes the apoptotic machinery to invade host cell defenses. *FASEB J.* 25: 314-325.
7. Floden, A.M., et al. 2011. Microglia demonstrate age-dependent interaction with amyloid-β fibrils. *J. Alzheimers Dis.* 25: 279-293.
8. Tsai, T.H., et al. 2011. Impaired Cd14 and Cd36 expression, bacterial clearance, and Toll-like receptor 4-Myd88 signaling in caveolin-1-deleted macrophages and mice. *Shock* 35: 92-99.



Try **CD14 (5A3B11B5): sc-58951** or **CD14 (UCH-M1): sc-1182**, our highly recommended monoclonal alternatives to CD14 (M-305). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **CD14 (5A3B11B5): sc-58951**.