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


CHROMOSOMAL LOCATION

Genetic locus: CD14 (human) mapping to 5q31.1; Cd14 (mouse) mapping to 18 B2.

SOURCE

CD14 (Sa14-2) is a rat monoclonal antibody raised against monocyte marker CD14 of mouse origin.

PRODUCT

Each vial contains 100 µg IgG2a in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as fluorescein conjugate for flow cytometry, sc-52640 FITC, 100 tests.

APPLICATIONS

CD14 (Sa14-2) is recommended for detection of CD14 of mouse 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 10^6 cells).

Molecular Weight of CD14: 53-55 kDa.

Positive Controls: mouse PBL.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rat IgG-HRP: sc-2006 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-rat IgG-HRP: sc-2032 (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).

DATA

CD14 (Sa14-2), sc-52640. Indirect FCM analysis of mouse peripheral blood leukocytes stained with CD14 (Sa14-2), followed by PE-conjugated goat anti-rat IgG: sc-3740. Black line histogram represents the isotype control, normal rat IgG2a: sc-3883.

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 or our catalog for detailed protocols and support products.