SANTA CRUZ BIOTECHNOLOGY, INC.

CD14 (5A3B11B5): sc-58951

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

CD14 (5A3B11B5) is a mouse monoclonal antibody raised against recombinant CD14 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD14 (5A3B11B5) is available conjugated to agarose (sc-58951 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-58951 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-58951 PE), fluorescein (sc-58951 FITC), Alexa Fluor® 488 (sc-58951 AF488), Alexa Fluor® 546 (sc-58951 AF546), Alexa Fluor® 594 (sc-58951 AF594) or Alexa Fluor® 647 (sc-58951 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-58951 AF680) or Alexa Fluor® 790 (sc-58951 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD14 (5A3B11B5) 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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, THP-1 cell lysate: sc-2238 or BJAB whole cell lysate: sc-2207.

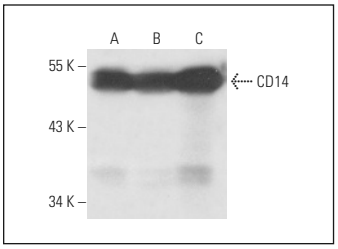
RESEARCH USE

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

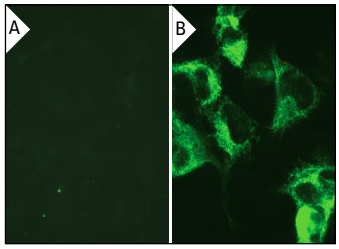
STORAGE

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

DATA



CD14 (5A3B11B5): sc-58951. Western blot analysis of CD14 expression in BJAB (**A**), THP-1 (**B**) and CCRF-CEM (**C**) whole cell lysates.



CD14 (5A3B11B5): sc-58951. Immunofluorescence staining of methanol-fixed untransfected (**A**) and human CD14 transfected HEK293 cells (**B**).

SELECT PRODUCT CITATIONS

1. Kanczkowski, W., et al. 2010. Abrogation of TLR4 and CD14 expression and signaling in human adrenocortical tumors. J. Clin. Endocrinol. Metab. 95: E421-E429.
2. McNally, A.K. and Anderson, J.M. 2011. Foreign body-type multinucleated giant cells induced by interleukin-4 express select lymphocyte co-stimulatory molecules and are phenotypically distinct from osteoclasts and dendritic cells. Exp. Mol. Pathol. 91: 673-681.
3. Romero, V., et al. 2013. Immune-mediated pore-forming pathways induce cellular hypercitrullination and generate citrullinated autoantigens in rheumatoid arthritis. Sci. Transl. Med. 5: 209ra150.
4. Bailon, E., et al. 2014. Overexpression of progelatinase B/proMMP-9 affects migration regulatory pathways and impairs chronic lymphocytic leukemia cell homing to bone marrow and spleen. J. Leukoc. Biol. 96: 185-199.
5. McNally, A.K. and Anderson, J.M. 2015. Phenotypic expression in human monocyte-derived interleukin-4-induced foreign body giant cells and macrophages *in vitro:* dependence on material surface properties. J. Biomed. Mater. Res. A 103: 1380-1390.
6. Henrick, B.M., et al. 2015. HIV-1 structural proteins serve as PAMPs for TLR2 heterodimers significantly increasing infection and innate immune activation. Front. Immunol. 6: 426.
7. Schlegel, M., et al. 2018. Inhibition of neogenin fosters resolution of inflammation and tissue regeneration. J. Clin. Invest. 128: 4711-4726.
8. Vats, R., et al. 2020. Platelet extracellular vesicles drive inflammasome-IL1β-dependent lung injury in sickle cell disease. Am. J. Respir. Crit. Care Med. 201: 33-46.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.