

CD33 (B-3): sc-514119

BACKGROUND

CD33 is a type I transmembrane glycoprotein that is found on granulocyte and macrophage precursors in the bone marrow, but is absent from pluripotent stem cells. CD33 is also expressed on monocytes in peripheral blood. It is used as a marker to distinguish myelogenous leukemia cells from lymphoid or erythroid leukemias. CD33 may function as a sialic acid-dependent cell adhesion molecule.

REFERENCES

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- Andrews, R.G., et al. 1989. Precursors of colony-forming cells in humans can be distinguished from colony-forming cells by expression of the CD33 and CD34 antigens and light scatter properties. *J. Exp. Med.* 169: 1721-1731.
- Handgretinger, R., et al. 1993. Expression of an early myelopoietic antigen (CD33) of a subset of human umbilical cord blood-derived natural killer cells. *Immunol. Lett.* 37: 223-228.
- Pierelli, L., et al. 1993. Further investigations on the expression of HLA-DR, CD33 and CD13 surface antigens in purified bone marrow and peripheral blood CD34⁺ haematopoietic progenitor cells. *Br. J. Haematol.* 84: 24-30.
- Freeman, S.D., et al. 1995. Characterization of CD33 as a new member of the sialoadhesin family of cellular interaction molecules. *Blood* 85: 2005-2012.
- Kelm, S., et al. 1996. The Sialoadhesins—a family of sialic-acid-dependent cellular recognition molecules within the immunoglobulin superfamily. *Glycoconj. J.* 13: 913-926.

CHROMOSOMAL LOCATION

Genetic locus: CD33 (human) mapping to 19q13.41; Cd33 (mouse) mapping to 7 B4.

SOURCE

CD33 (B-3) is a mouse monoclonal antibody raised against amino acids 18-107 mapping within an extracellular domain of CD33 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD33 (B-3) is available conjugated to agarose (sc-514119 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514119 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514119 PE), fluorescein (sc-514119 FITC), Alexa Fluor® 488 (sc-514119 AF488), Alexa Fluor® 546 (sc-514119 AF546), Alexa Fluor® 594 (sc-514119 AF594) or Alexa Fluor® 647 (sc-514119 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514119 AF680) or Alexa Fluor® 790 (sc-514119 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD33 (B-3) is recommended for detection of precursor and mature forms of CD33 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 CD33 siRNA (h): sc-42782, CD33 siRNA (m): sc-42783, CD33 shRNA Plasmid (h): sc-42782-SH, CD33 shRNA Plasmid (m): sc-42783-SH, CD33 shRNA (h) Lentiviral Particles: sc-42782-V and CD33 shRNA (m) Lentiviral Particles: sc-42783-V.

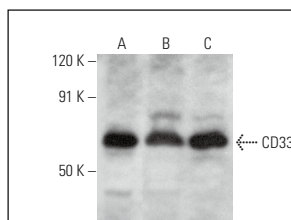
Molecular Weight of CD33: 67 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, AML-193 whole cell lysate: sc-364182 or M1 whole cell lysate: sc-364782.

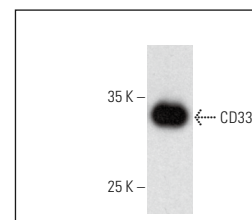
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CD33 (B-3): sc-514119. Western blot analysis of CD33 expression in AML-193 (A), RAW 264.7 (B) and M1 (C) whole cell lysates.



CD33 (B-3): sc-514119. Western blot analysis of mouse recombinant CD33.

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 for detailed protocols and support products.

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