

CD33 (N-19): sc-7039

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

1. Griffin, J.D., et al. 1984. A monoclonal antibody reactive with normal and leukemic human myeloid progenitor cells. *Leuk. Res.* 8: 521-534.
2. Favaloro, E.J., et al. 1987. Characterization of monoclonal antibodies to the human myeloid-differentiation antigen, "gp67" (CD-33). *Dis. Markers* 5: 215-225.
3. 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.
4. 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.
5. 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. *British J. Haematol.* 84: 24-30.
6. 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.
7. 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.

SOURCE

CD33 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CD33 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.

Blocking peptide available for competition studies, sc-7039 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as fluorescein conjugate for immunofluorescence, sc-7039 FITC, 200 µg/1 ml.

APPLICATIONS

CD33 (N-19) is recommended for detection of CD33 of human 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); may cross-react with Siglec-L1.

Suitable for use as control antibody for CD33 siRNA (h): sc-42782, CD33 shRNA Plasmid (h): sc-42782-SH and CD33 shRNA (h) Lentiviral Particles: sc-42782-V.

Molecular Weight of CD33: 67 kDa.

Positive Controls: human PBL whole cell lysate or THP-1 cell lysate: sc-2238.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. La Rocca, G., et al. 2009. Isolation and characterization of Oct-4⁺/HLA-G⁺ mesenchymal stem cells from human umbilical cord matrix: differentiation potential and detection of new markers. *Histochem. Cell Biol.* 131: 267-282.

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.



Try **CD33 (6C5/2): sc-53199** or **CD33 (B-9): sc-374450**, our highly recommended monoclonal alternatives to CD33 (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **CD33 (6C5/2): sc-53199**.