

# CD33 (M-20): sc-7040

## BACKGROUND

CD33 is a 67 kDa 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

- Griffin, J.D., et al. 1984. A monoclonal antibody reactive with normal and leukemic human myeloid progenitor cells. *Leuk. Res.* 8: 521-534.
- Favaloro, E.J., et al. 1987. Characterization of monoclonal antibodies to the human myeloid-differentiation antigen, "gp67" (CD-33). *Dis. Markers* 5: 215-225.
- Favaloro, E.J., et al. 1988. Further characterization of human myeloid antigens (gp160,95; gp150; gp67): investigation of epitopic heterogeneity and non-haemopoietic distribution using panels of monoclonal antibodies belonging to CD11b, CD13 and CD33. *Br. J. Haematol.* 69: 163-171.
- Knapp, W., et al., eds. 1989. *Leucocyte Typing IV*. New York: Oxford University Press.
- Bradstock, K.F., et al. 1989. Unusual immunophenotypes in acute leukaemias: incidence and clinical correlations. *Br. J. Haematol.* 72: 512-518.
- Robertson, M.J., et al. 1992. Effects of peptidase inhibition on angiotensin receptor agonist and antagonist potency in rabbit isolated thoracic aorta. *Br. J. Pharmacol.* 106: 166-172.
- Schlossman, S.F., et al., eds. 1995. *Leucocyte Typing V*. New York: Oxford University Press.
- 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 immuno-globulin superfamily. *Glycoconj. J.* 13: 913-926.

## CHROMOSOMAL LOCATION

Genetic locus: Cd33 (mouse) mapping to 7 B4.

## SOURCE

CD33 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD33 precursor of mouse 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-7040 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CD33 (M-20) is recommended for detection of CD33 of mouse and rat 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).

Suitable for use as control antibody for CD33 siRNA (m): sc-42783, CD33 shRNA Plasmid (m): sc-42783-SH and CD33 shRNA (m) Lentiviral Particles: sc-42783-V.

Molecular Weight of CD33: 67 kDa.

## 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

- Elhage, R., et al. 2004. Deleting TCR  $\alpha/\beta^+$  or CD4<sup>+</sup> T lymphocytes leads to opposite effects on site-specific atherosclerosis in female apolipoprotein E-deficient mice. *Am. J. Pathol.* 165: 2013-2018.
- Wright, C.J., et al. 2009. Hyperoxia-induced NF $\kappa$ B activation occurs via a maturationally sensitive atypical pathway. *Am. J. Physiol. Lung Cell Mol. Physiol.* 296: L296-L306.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **CD33 (6C5/2): sc-53199** or **CD33 (B-3): sc-514119**, our highly recommended monoclonal alternatives to CD33 (M-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **CD33 (6C5/2): sc-53199**.