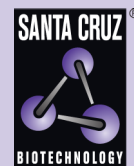


CD33 (P67.6): sc-19660



The Power to Question

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

- 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.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: CD33 (human) mapping to 19q13.41.

SOURCE

CD33 (P67.6) is a mouse monoclonal antibody raised against CD33-transfected FMY9S5 cells of human 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 (P67.6) is available conjugated to agarose (sc-19660 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-19660 PE), fluorescein (sc-19660 FITC), Alexa Fluor® 488 (sc-19660 AF488), Alexa Fluor® 546 (sc-19660 AF546), Alexa Fluor® 594 (sc-19660 AF594) or Alexa Fluor® 647 (sc-19660 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-19660 AF680) or Alexa Fluor® 790 (sc-19660 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

RESEARCH USE

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

APPLICATIONS

CD33 (P67.6) is recommended for detection of CD33 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

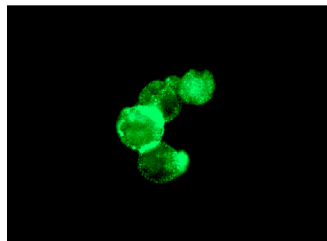
Suitable for use as control antibody for CD33 siRNA (h): sc-42782, CD33 shRNA Plasmid (h): sc-42782-SH and CD33 shRNA (h) Lentiviral Particles: sc-42782-V.

Molecular Weight of CD33: 67 kDa.

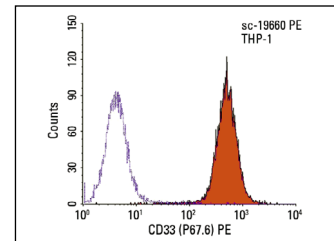
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 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 (P67.6): sc-19660. Immunofluorescence staining of methanol-fixed THP-1 cells showing membrane staining.



CD33 (P67.6) PE: sc-19660 PE. FCM analysis of THP-1 cells. Black line histogram represents the isotype control, normal mouse IgG₁-PE: sc-2886.

SELECT PRODUCT CITATIONS

- Stebulis, J.A., et al. 2005. Fibroblast-like synovial cells derived from synovial fluid. *J. Rheumatol.* 32: 301-307.
- Mina-Osorio, P. and Ortega, E. 2005. Aminopeptidase N (CD13) functionally interacts with FcγRs in human monocytes. *J. Leukoc. Biol.* 77: 1008-1017.
- Kuriyama, T., et al. 2012. Engulfment of hematopoietic stem cells caused by down-regulation of CD47 is critical in the pathogenesis of hemophagocytic lymphohistiocytosis. *Blood* 120: 4058-4067.
- Laszlo, G.S., et al. 2014. Cellular determinants for preclinical activity of a novel CD33/CD3 bispecific T-cell engager (BiTE) antibody, AMG 330, against human AML. *Blood* 123: 554-561.
- Karnell, F.G., et al. 2017. Reconstitution of immune cell populations in multiple sclerosis patients after autologous stem cell transplantation. *Clin. Exp. Immunol.* 189: 268-278.
- Wibfeld, J., et al. 2021. Reporter cell assay for human CD33 validated by specific antibodies and human iPSC-derived microglia. *Sci. Rep.* 11: 13462.

STORAGE

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