

CD33 (E-6): sc-376184

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" (CD33). *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.
- 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.
- Sgroi, D., et al. 1996. A single N-linked glycosylation site is implicated in the regulation of ligand recognition by the I-type lectins CD22 and CD33. *J. Biol. Chem.* 271: 18803-18809.
- Vitale, C., et al. 2001. Surface expression and function of p75/AIRM-1 or CD33 in acute myeloid leukemias: engagement of CD33 induces apoptosis of leukemic cells. *Proc. Natl. Acad. Sci. USA* 98: 5764-5769.

CHROMOSOMAL LOCATION

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

SOURCE

CD33 (E-6) is a mouse monoclonal antibody raised against amino acids 231-340 mapping near the C-terminus of CD33 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.

APPLICATIONS

CD33 (E-6) is recommended for detection of precursor and mature forms of CD33 of 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); may cross-react with Siglec-5.

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.

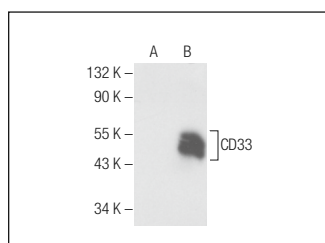
Molecular Weight of CD33: 67 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182 or CD33 (h): 293T Lysate: sc-114798.

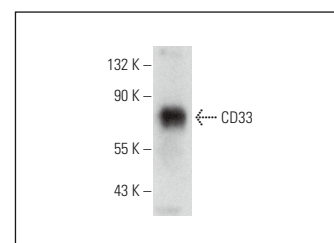
RECOMMENDED SUPPORT REAGENTS

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 (E-6): sc-376184. Western blot analysis of CD33 expression in non-transfected: sc-117752 (A) and human CD33 transfected: sc-114798 (B) 293T whole cell lysates.



CD33 (E-6): sc-376184. Western blot analysis of CD33 expression in AML-193 whole cell lysate.

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.



See **CD33 (6C5/2): sc-53199** for CD33 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.