

**CD33 Antibody [Clone WM53]**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AH10363**

**Specification**

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**CD33 Antibody [Clone WM53] - Product Information**

Application	FC
Primary Accession	<a href="#">P20138</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1, kappa
Calculated MW	67kDa KDa

**CD33 Antibody [Clone WM53] - Additional Information**

**Gene ID** 945

**Other Names**

Myeloid cell surface antigen CD33, Sialic acid-binding Ig-like lectin 3, Siglec-3, gp67, CD33, CD33, SIGLEC3

**Target/Specificity**

Human AML cells

**Format**

0.5 ml at 100ug/ml; Conjugated to AF488

**Storage**

Store at 2 to 8°C. Antibody is stable for 24 months.

**Precautions**

CD33 Antibody [Clone WM53] is for research use only and not for use in diagnostic or therapeutic procedures.

**CD33 Antibody [Clone WM53] - Protein Information**

**Name** CD33

**Synonyms** SIGLEC3

**Function**

Sialic-acid-binding immunoglobulin-like lectin (Siglec) that plays a role in mediating cell-cell interactions and in maintaining immune cells in a resting state (PubMed: [10611343](http://www.uniprot.org/citations/10611343), PubMed: [11320212](http://www.uniprot.org/citations/11320212), PubMed: [15597323](http://www.uniprot.org/citations/15597323)). Preferentially recognizes and binds alpha-2,3- and more avidly alpha-2,6-linked sialic acid-bearing glycans

(PubMed:<a href="http://www.uniprot.org/citations/7718872" target="\_blank">7718872</a>). Upon engagement of ligands such as C1q or sialylated glycoproteins, two immunoreceptor tyrosine-based inhibitory motifs (ITIMs) located in CD33 cytoplasmic tail are phosphorylated by Src-like kinases such as LCK (PubMed:<a href="http://www.uniprot.org/citations/10887109" target="\_blank">10887109</a>, PubMed:<a href="http://www.uniprot.org/citations/28325905" target="\_blank">28325905</a>). These phosphorylations provide docking sites for the recruitment and activation of protein-tyrosine phosphatases PTPN6/SHP-1 and PTPN11/SHP- 2 (PubMed:<a href="http://www.uniprot.org/citations/10206955" target="\_blank">10206955</a>, PubMed:<a href="http://www.uniprot.org/citations/10556798" target="\_blank">10556798</a>, PubMed:<a href="http://www.uniprot.org/citations/10887109" target="\_blank">10887109</a>). In turn, these phosphatases regulate downstream pathways through dephosphorylation of signaling molecules (PubMed:<a href="http://www.uniprot.org/citations/10206955" target="\_blank">10206955</a>, PubMed:<a href="http://www.uniprot.org/citations/10887109" target="\_blank">10887109</a>). One of the repressive effect of CD33 on monocyte activation requires phosphoinositide 3-kinase/PI3K (PubMed:<a href="http://www.uniprot.org/citations/15597323" target="\_blank">15597323</a>).

### Cellular Location

[Isoform CD33M]: Cell membrane; Single-pass type I membrane protein

### Tissue Location

Monocytic/myeloid lineage cells. In the brain, CD33 is mainly expressed on microglial cells

## CD33 Antibody [Clone WM53] - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## CD33 Antibody [Clone WM53] - Images

### CD33 Antibody [Clone WM53] - Background

Recognizes a 67kDa glycoprotein, which is identified as CD33 (HLDA IV; WS Code M-505). CD33 is a transmembrane protein of the sialic acid-binding immunoglobulin-like lectin (Siglec) family. It belongs to the immunoreceptor tyrosine-based inhibitory motif (ITIM)-containing molecules able of recruiting protein tyrosine phosphatases SHP-1 and SHP-2 to signal assemblies; these ITIMs are also used for ubiquitin-mediated removal of the receptor from the cell surface. CD33 is expressed on cells of myelomonocytic lineage, binds sialic acid residues in N- and O-glycans on cell surfaces, and is a therapeutic target for acute myeloid leukemia. CD33 is expressed on myeloid progenitors, monocytes, granulocytes, dendritic cells and mast cells. It is absent on platelets, lymphocytes, erythrocytes and hematopoietic stem cells.

### CD33 Antibody [Clone WM53] - References

1. Favaloro EJ, Bradstock KF, Kabral A, Grimsley P, Berndt MC: Characterization of monoclonal antibodies to the human myeloid-differentiation antigen, 'gp67' (CD-33). *Dis Markers*. 1987;5(4):215-25.
2. Favaloro EJ, Bradstock KF, Kabral A, Grimsley P, Zowtyj H, Zola H: 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 CD-11b, CD-13 and CD-33. Br J Haematol. 1988;69(2):163-71.