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CD33 Antibody [Clone WM53]
Purified Mouse Monoclonal Antibody
Catalog # AH10364

Specification

CD33 Antibody [Clone WM53] - Product Information

Application	**FC**
Primary Accession	P20138
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

Application Note
FC~~1:10~50

Format
0.5 ml at 100ug/ml; Conjugated to PE

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, PubMed:<a

href="http://www.uniprot.org/citations/11320212" target="_blank">11320212, PubMed:15597323). Preferentially recognizes and binds alpha-2,3- and more avidly alpha-2,6-linked sialic acid-bearing glycans (PubMed:7718872). Upon engagement of ligands such as C1q or syalylated glycoproteins, two immunoreceptor tyrosine-based inhibitory motifs (ITIMs) located in CD33 cytoplasmic tail are phosphorylated by Src-like kinases such as LCK (PubMed:10887109, PubMed:28325905). These phosphorylations provide docking sites for the recruitment and activation of protein-tyrosine phosphatases PTPN6/SHP-1 and PTPN11/SHP- 2 (PubMed:10206955, PubMed:10556798, PubMed:10887109). In turn, these phosphatases regulate downstream pathways through dephosphorylation of signaling molecules (PubMed:10206955, PubMed:10887109). One of the repressive effect of CD33 on monocyte activation requires phosphoinositide 3-kinase/PI3K (PubMed:15597323).

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 Cytomety
- 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.