

# CD33 Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO1215a

## Product Information

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<b>Application</b>	WB, E
<b>Primary Accession</b>	<a href="#">P20138</a>
<b>Reactivity</b>	Human
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clone Names</b>	2B7C12
<b>Isotype</b>	IgG1
<b>Calculated MW</b>	39825
<b>Description</b>	CD33 is found on granulocyte and macrophage precursors in the bone marrow, but is not on pluripotent stem cells. The protein is also expressed on, and is a useful marker for, peripheral monocytes. It is also useful for distinguishing myelogenous leukaemia cells from lymphoid or erythroid leukaemias.
<b>Immunogen</b>	Purified recombinant fragment of CD33 (48-258) expressed in E. Coli.
<b>Formulation</b>	Ascitic fluid containing 0.03% sodium azide.

## Additional Information

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<b>Gene ID</b>	945
<b>Other Names</b>	Myeloid cell surface antigen CD33, Sialic acid-binding Ig-like lectin 3, Siglec-3, gp67, CD33, CD33, SIGLEC3
<b>Dilution</b>	WB~~1/500 - 1/2000 E~~N/A
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	CD33 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	CD33
<b>Synonyms</b>	SIGLEC3
<b>Function</b>	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:[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 sialylated 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

## References

1. Exp Hematol. 2005 Feb;33(2):199-211. 2. Cancer. 2008 Feb 1;112(3):572-80.

## Images

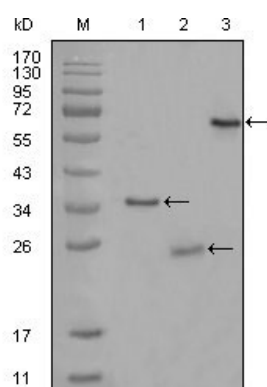


Figure 1: Western blot analysis using CD33 mouse mAb against truncated Trx-CD33 recombinant protein (1), truncated CD33 (aa48-258)-His recombinant protein (2) and truncated CD33 (aa18-259)-hIgGfc transfected CHO-K1 cell lysate (3).

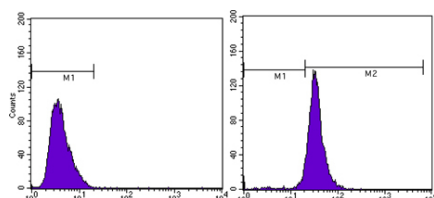


Figure 3: Flow cytometric analysis of MCF-7 cells using beta Actin mouse mAb (right) and negative control (left).

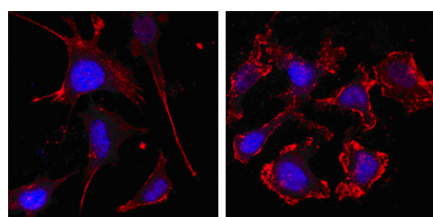
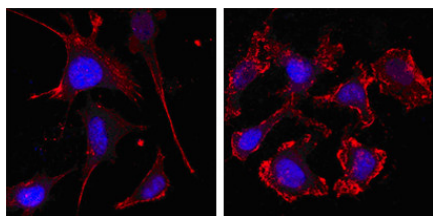


Figure 2: Confocal immunofluorescence analysis of SKBR-3 (left) and A549 (right) cells using beta Actin mouse mAb (red, the secondary Ab is Cy3-Goat anti mouse IgG). Blue: DRAQ5 fluorescent DNA dye.

Figure 3: Confocal immunofluorescence analysis of SKBR-3 (left) and A549 (right) cells using anti-beta Actin



mAb (red, the secondary Ab is Cy3-Goat anti mouse IgG).  
Blue: DRAQ5 fluorescent DNA dye.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.