

**CD33 Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1215a**

**Specification**

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**CD33 Antibody - Product Information**

Application	<b>WB, FC, ICC, IF</b>
Primary Accession	<a href="#">P20138</a>
Reactivity	<b>Human</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG1</b>

**Description**

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.

**Immunogen**

Purified recombinant fragment of CD33 (48-258) expressed in E. Coli.

**Formulation**

Ascitic fluid containing 0.03% sodium azide.

**CD33 Antibody - 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

**Dilution**

WB~~1/500 - 1/2000  
FC~~1:200~~400  
ICC~~1:200~~1000  
IF~~1:200~1000.

**Storage**

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.

**Precautions**

CD33 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**CD33 Antibody - 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:<a href="http://www.uniprot.org/citations/10611343" target="\_blank">10611343</a>, PubMed:<a href="http://www.uniprot.org/citations/11320212" target="\_blank">11320212</a>, PubMed:<a href="http://www.uniprot.org/citations/15597323" target="\_blank">15597323</a>). 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

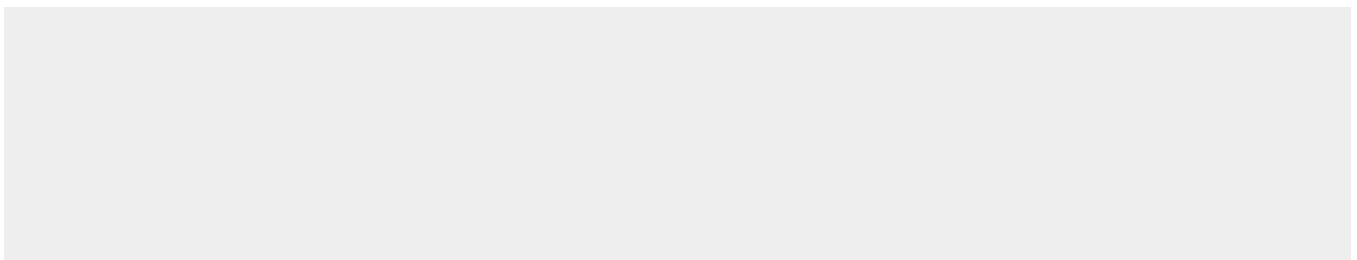
**Tissue Location**

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

**CD33 Antibody - 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 - Images**

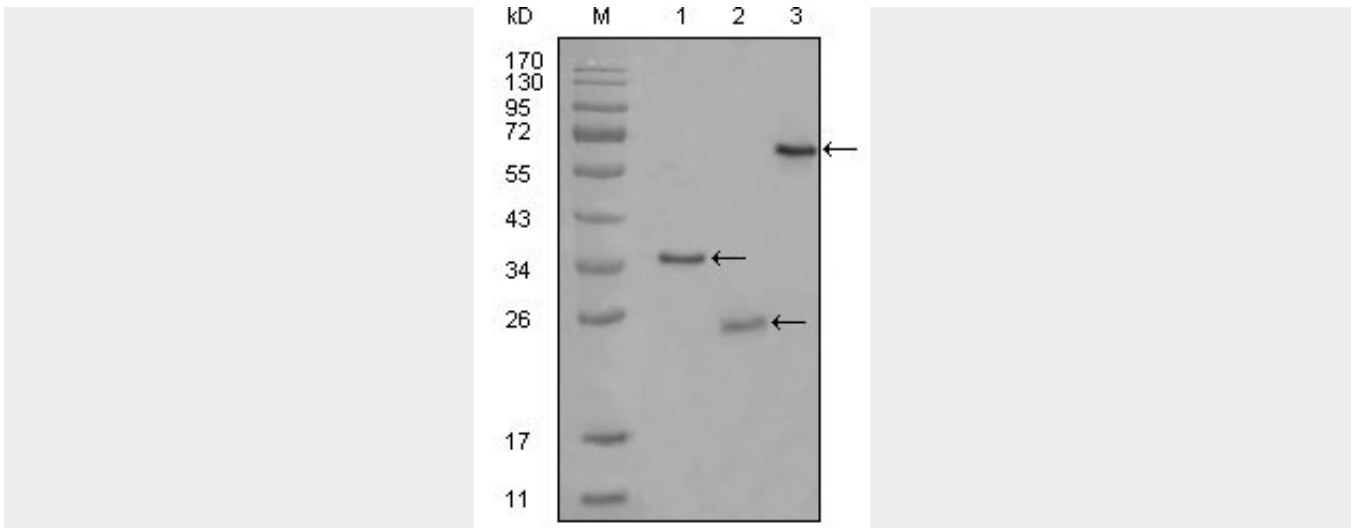


Figure 1: Western blot analysis using CD33 mouse mAb against truncated Trx-CD33 recombinant protein (1), truncated CD33 (aa48-258)-His recombinant protein (2) and truncated CD33 (aa18-259)-hlgGfc transfected CHO-K1 cell lysate (3).

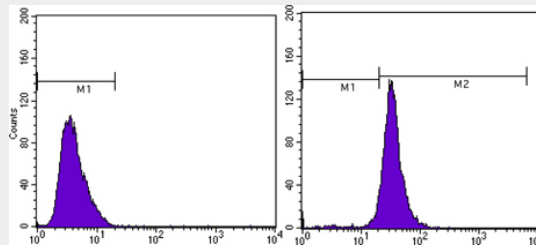


Figure 3: Flow cytometric analysis of MCF-7 cells using beta Actin mouse mAb (right) and negative control (left).

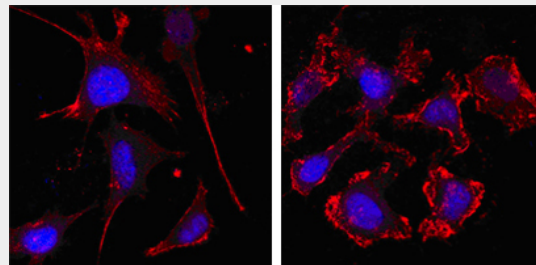


Figure 2: Confocal immunofluorescence analysis of SKBR-3 (left) and A549 (right) cells using beta Actin mouse mAb (red, the secondary Ab is Cy3-Goat anti mouse IgG). Blue: DRAQ5 fluorescent DNA dye.

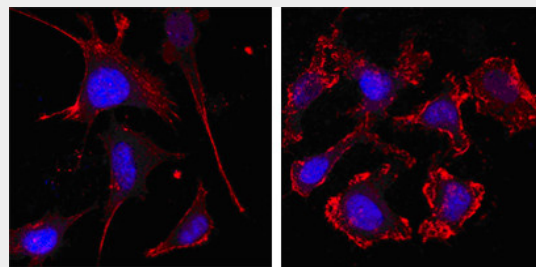


Figure 3: Confocal immunofluorescence analysis of SKBR-3 (left) and A549 (right) cells using anti-beta Actin mAb (red, the secondary Ab is Cy3-Goat anti mouse IgG). Blue: DRAQ5 fluorescent DNA dye.

**CD33 Antibody - References**

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

**CD33 Antibody - Citations**

- [The nuclear transcription factor RelB functions as an oncogene in human lung adenocarcinoma SPC-A1 cells.](#)
- [CHIP functions as an oncogene by promoting colorectal cancer metastasis via activation of MAPK and AKT signaling and suppression of E-cadherin.](#)
- [Ubiquitin ligase CHIP functions as an oncogene and activates the AKT signaling pathway in prostate cancer.](#)
- [miR-17-92 plays an oncogenic role and conveys chemo-resistance to cisplatin in human prostate cancer cells.](#)
- [Cigarette smoking exposure alters pebp1 DNA methylation and protein profile involved in MAPK signaling pathway in mice testis.](#)