

CD33 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1215a

Specification

CD33 Antibody - Product Information

Application	WB, FC, ICC, IF
Primary Accession	P20138
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1

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: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

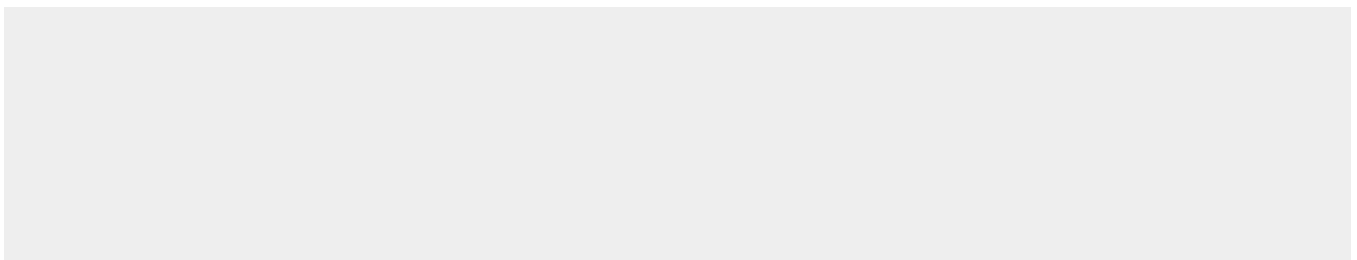
Monocytic/myeloid lineage cells. In the brain, CD33 is mainly expressed on microglial cells

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



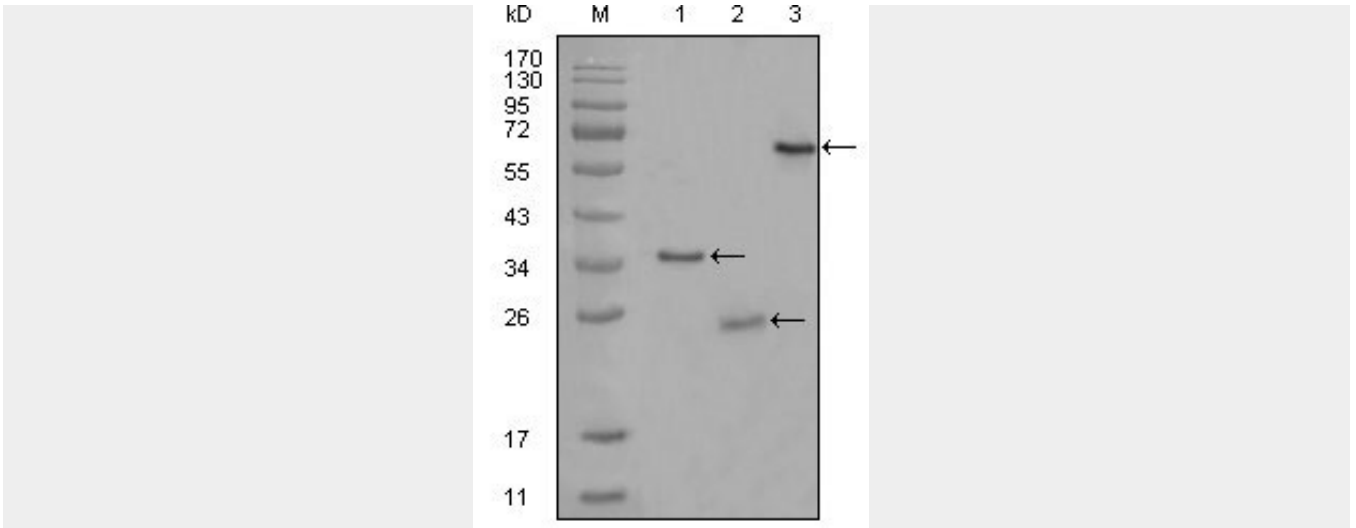


Figure 1: Western blot analysis using CD33 mouse mAb against truncated Trx-CD33 recombinant protein (1), truncated CD33 (aa48-258)-His recombinant protein (2) and truncated CD33 (aa18-259)-hlgGfc transfected CHO-K1 cell lysate (3).

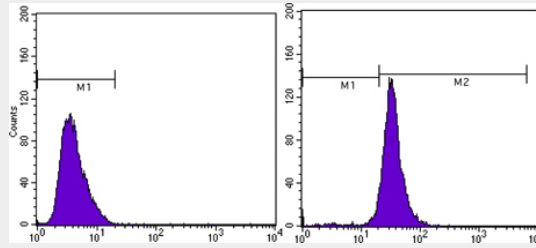


Figure 3: Flow cytometric analysis of MCF-7 cells using beta Actin mouse mAb (right) and negative control (left).

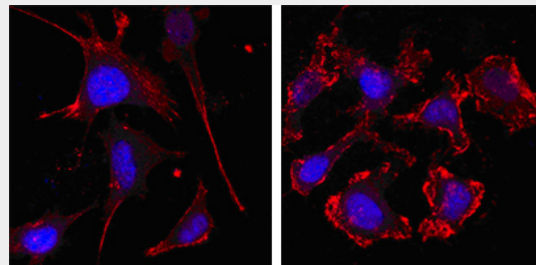


Figure 2: Confocal immunofluorescence analysis of SKBR-3 (left) and A549 (right) cells using beta Actin mouse mAb (red, the secondary Ab is Cy3-Goat anti mouse IgG). Blue: DRAQ5 fluorescent DNA dye.

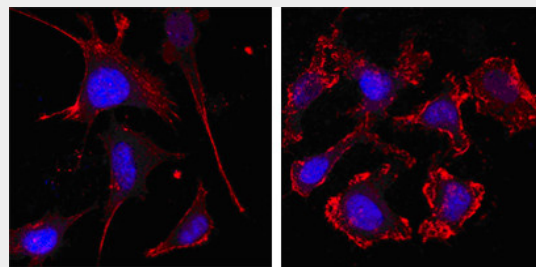


Figure 3: Confocal immunofluorescence analysis of SKBR-3 (left) and A549 (right) cells using anti-beta Actin mAb (red, the secondary Ab is Cy3-Goat anti mouse IgG). Blue: DRAQ5 fluorescent DNA dye.

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.](#)