

## ARG65560 anti-CD33 antibody [WM53]

Package: 100 µg  
Store at: -20°C

### Summary

Product Description	Mouse Monoclonal antibody [WM53] recognizes CD33
Tested Reactivity	Hu, NHuPrm
Tested Application	CyTOF®-candidate, FACS, FuncSt, ICC/IF, IHC-Fr, IP, WB
Specificity	The clone WM53 reacts with CD33, a 67 kDa type I transmembrane glycoprotein (immunoglobulin superfamily) expressed on myeloid progenitors, monocytes, granulocytes, dendritic cells and mast cells; it is absent on platelets, lymphocytes, erythrocytes and hematopoietic stem cells. HLDA IV; WS Code M-505
Host	Mouse
Clonality	Monoclonal
Clone	WM53
Isotype	IgG1
Target Name	CD33
Species	Human
Immunogen	Human AML cells
Conjugation	Un-conjugated
Alternate Names	p67; Sialic acid-binding Ig-like lectin 3; SIGLEC-3; CD antigen CD33; gp67; Siglec-3; Myeloid cell surface antigen CD33; SIGLEC3

### Application Instructions

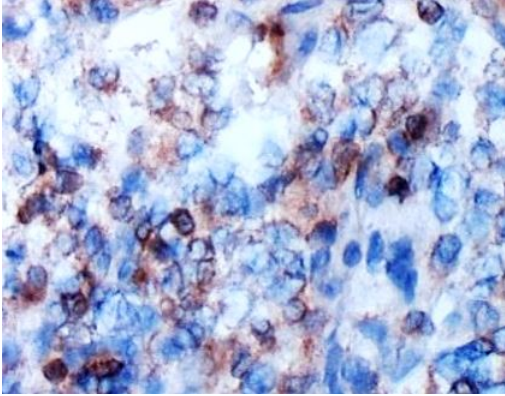
Application table	Application	Dilution
	CyTOF®-candidate	Assay-dependent
	FACS	1 - 4 µg/ml
	FuncSt	Assay-dependent
	ICC/IF	Assay-dependent
	IHC-Fr	2 µg/ml
	IP	Assay-dependent
	WB	Assay-dependent
Application Note	IHC-Fr: Acetone fixation. Functional application: Induction of cytokine production. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

### Properties

Form	Liquid
Purification	Purified from cell culture supernatant by protein-A affinity chromatography.
Purity	> 95% (by SDS-PAGE)
Buffer	PBS (pH 7.4) and 15 mM Sodium azide
Preservative	15 mM Sodium azide
Concentration	0.1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

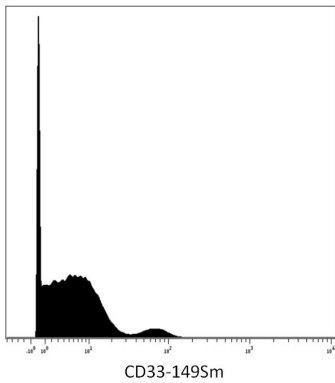
## Bioinformation

Database links	<a href="#">GeneID: 945 Human</a>  <a href="#">Swiss-port # P20138 Human</a>
Gene Symbol	CD33
Gene Full Name	CD33 molecule
Background	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.
Function	CD33: 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:15597323, PubMed:11320212). 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:28325905, PubMed:10887109). These phosphorylations provide docking sites for the recruitment and activation of protein-tyrosine phosphatases PTPN6/SHP-1 and PTPN11/SHP-2 (PubMed:10556798, PubMed:10206955, 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). [UniProt]
Highlight	<p>Related Antibody Duos and Panels:  <a href="#">ARG30336 Human MDSC Marker Antibody Duo</a></p> <p>Related products:  <a href="#">CD33 antibodies</a>; <a href="#">CD33 ELISA Kits</a>; <a href="#">CD33 Duos / Panels</a>; <a href="#">Anti-Mouse IgG secondary antibodies</a>;</p> <p>Related news:  <a href="#">CyTOF-candidate Antibodies</a>  <a href="#">New antibody panels and duos for Tumor immune microenvironment</a>  <a href="#">Anti-SerpinB9 therapy, a new strategy for cancer therapy</a></p>
Research Area	Developmental Biology antibody; Immune System antibody; Human MDSC Marker antibody; Myeloid-derived suppressor cell antibody
Calculated Mw	40 kDa
PTM	Phosphorylation of Tyr-340 is involved in binding to PTPN6 and PTPN11. Phosphorylation of Tyr-358 is involved in binding to PTPN6.



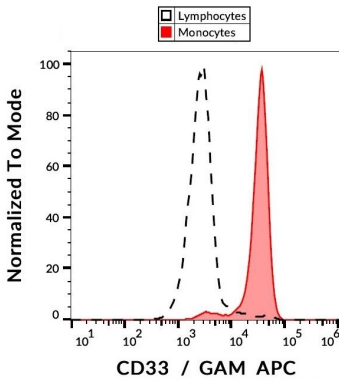
ARG65560 anti-CD33 antibody [WM53] IHC-Fr image

Immunohistochemistry: Frozen section of Human colon tissue stained with ARG65560 anti-CD33 antibody [WM53].



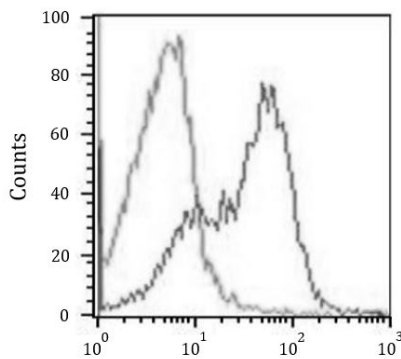
ARG65560 anti-CD33 antibody [WM53] CyTOF image

CyTOF: Human peripheral blood stained with ARG65560 anti-CD33 antibody [WM53] (149Sm). Singlet cells were gated for data analysis.



ARG65560 anti-CD33 antibody [WM53] FACS image

Flow Cytometry: Separation of Human CD33 positive Monocytes (red) from Human CD33 negative Lymphocytes (black-dashed). Human peripheral blood stained with ARG65560 anti-CD33 antibody [WM53], followed by incubation with APC labelled Goat anti-Mouse secondary antibody.



ARG65560 anti-CD33 antibody [WM53] FACS image

Flow Cytometry: PBMC stained with ARG65560 anti-CD33 antibody [WM53] at 0.5  $\mu\text{g}/10^6$  cells (right histogram) or isotype control (left histogram), followed by incubation with PE labelled secondary antibody.