

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

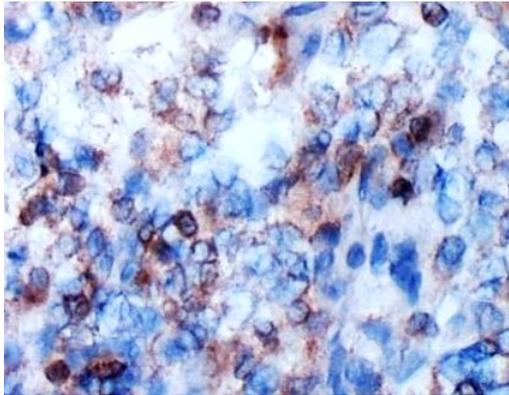
Application table	Application	Dilution
	CyTOF®-candidate	Assay-dependent
	FACS	1 - 4 µg/ml
	FuncSt	Assay-dependent
	ICC/IF	Assay-dependent
	IHC-Fr	2 µg/ml
	IP	Assay-dependent
	WB	Assay-dependent
Application Note	IHC-Fr: Acetone fixation. Functional application: Induction of cytokine production. * The 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.

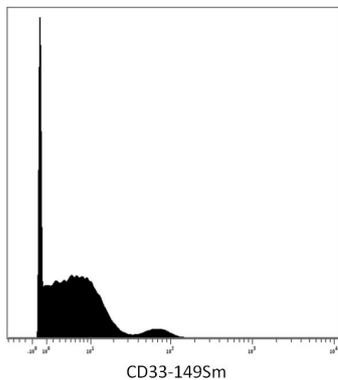
Bioinformation

Database links	GeneID: 945 Human Swiss-port # P20138 Human
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: ARG30336 Human MDSC Marker Antibody Duo</p> <p>Related products: CD33 antibodies; CD33 ELISA Kits; CD33 Duos / Panels; Anti-Mouse IgG secondary antibodies;</p> <p>Related news: CyTOF-candidate Antibodies New antibody panels and duos for Tumor immune microenvironment Anti-SerpinB9 therapy, a new strategy for cancer therapy</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.



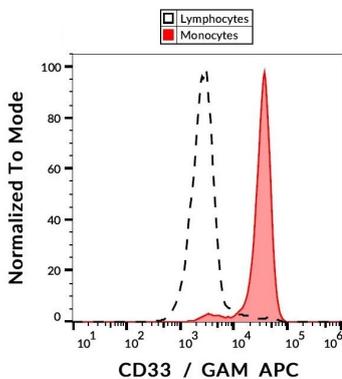
ARG65560 anti-CD33 antibody [WM53] IHC-Fr image

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



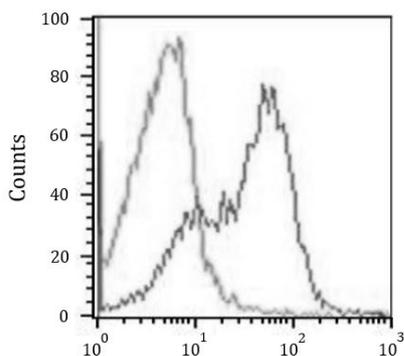
ARG65560 anti-CD33 antibody [WM53] CyTOF image

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 µg/10⁶ cells (right histogram) or isotype control (left histogram), followed by incubation with PE labelled secondary antibody.