

## Brilliant Violet 421™ anti-human CD33 Antibody

<b>Catalog# / Size</b>	303415 / 25 tests 303416 / 100 tests
<b>Clone</b>	WM53
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	IV M-505
<b>Other Names</b>	Siglec-3, gp67, p67
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	CD33 is a 67 kD type I transmembrane glycoprotein also known as Siglec-3, gp67, and p67. It is a sialoadhesion immunoglobulin superfamily member expressed on myeloid progenitors, monocytes, granulocytes, dendritic cells and mast cells. CD33 is absent on normal platelets, lymphocytes, erythrocytes and hematopoietic stem cells. CD33 functions as a sialic acid-dependent cell adhesion molecule with carbohydrate/lectin binding activity.

### Product Details

<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	Chimpanzee
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Human myeloid leukaemia cells.
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 421™ under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	<p>Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a>. For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.</p> <p>Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd.</p> <p><a href="#">Learn more about Brilliant Violet™.</a></p> <p>This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.</p>
<b>Excitation Laser</b>	Violet Laser (405 nm)
<b>Application Notes</b>	Additional reported applications (for the relevant formats) include: immunoprecipitation, Western blotting <sup>3</sup> , induction of cytokine production <sup>3</sup> , and immunofluorescence <sup>4</sup> . The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. Nos. 303437 & 303438).

## Application References

(PubMed link indicates  
BioLegend citation)

1. Knapp W, *et al.* 1989. Leucocyte Typing IV. Oxford University Press. New York.
2. Favaloro E, *et al.* 1988. *Br. J. Haematol.* 69:163.
3. Garnache-Ottou F, *et al.* 2005. *Blood* 105:1256. (WB)
4. Pérez-Oliva AB, *et al.* 2011. *Glycobiology.* 21:757. (epitope, FC, IF)

## Product Citations

1. Hultmark S, *et al.* 2020. *Haematologica.* . [PubMed](#)
2. Hagan T, *et al.* 2020. *Cell.* 178(6):1313-1328.e13.. [PubMed](#)
3. Futrega K, Doran W 2016. *Sci Rep.* 6: 23886. [PubMed](#)
4. Agerstam H, *et al.* 2015. *Proc Natl Acad Sci U S A.* 112: 10786-10791. [PubMed](#)
5. Dannenmann B, *et al.* 2021. *Cell Stem Cell.* 28(5):906-922.e6. [PubMed](#)
6. Wang Z, *et al.* 2020. *J Cell Mol Med.* . [PubMed](#)
7. Nasri M, *et al.* 2019. *Haematologica.* 104:.. [PubMed](#)
8. Golan K *et al.* 2018. *Cell stem cell.* 23(4):572-585 . [PubMed](#)

## RRID

AB\_10900080 (BioLegend Cat. No. 303415)  
AB\_2561690 (BioLegend Cat. No. 303416)

## Antigen Details

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<b>Structure</b>	Ig superfamily, sialoadhesins, type I glycoprotein, 67 kD
<b>Distribution</b>	Myeloid progenitor, monocytes, granulocytes, dendritic cells, mast cells
<b>Function</b>	Adhesion and lectin activity
<b>Ligand/Receptor</b>	Sugar chains containing sialic acid
<b>Cell Type</b>	B cells, Dendritic cells, Granulocytes, Hematopoietic stem and progenitors, Mast cells, Monocytes, Neutrophils
<b>Biology Area</b>	Cell Biology, Immunology, Neuroinflammation, Neuroscience
<b>Molecular Family</b>	CD Molecules, Siglec Molecules
<b>Antigen References</b>	1. Favaloro E, <i>et al.</i> 1988. <i>Br. J. Haematol.</i> 69:163. 2. Freeman S, <i>et al.</i> 1995. <i>Blood</i> 85:2005.
<b>Gene ID</b>	<a href="#">945</a>

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

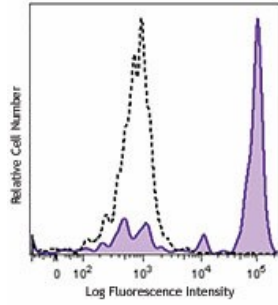
## Other Formats

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APC anti-human CD33, PE anti-human CD33, PE/Cyanine5 anti-human CD33, Purified anti-human CD33, PerCP/Cyanine5.5 anti-human CD33, Brilliant Violet 711™ anti-human CD33, Brilliant Violet 421™ anti-human CD33, Brilliant Violet 570™ anti-human CD33, Purified anti-human CD33 (Maxpar® Ready), Brilliant Violet 510™ anti-human CD33, Biotin anti-human CD33, Brilliant Violet 785™ anti-human CD33, Brilliant Violet 650™ anti-human CD33, PE/Cyanine7 anti-human CD33, PE/Dazzle™ 594 anti-human CD33, Alexa Fluor® 700 anti-human CD33, Ultra-LEAF™ Purified anti-human CD33, APC/Fire™ 750 anti-human CD33, APC/Cyanine7 anti-human CD33, GMP PerCP/Cyanine5.5 anti-human CD33, Alexa Fluor® 647 anti-human CD33, GMP APC anti-human CD33, GMP PE anti-human CD33, PE/Fire™ 810 anti-human CD33

## Product Data

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Human peripheral blood monocytes were stained with CD33 (clone WM53) Brilliant Violet 421™ (filled histogram) or mouse IgG1, κ Brilliant Violet 421™ isotype control (open histogram).

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