

Brilliant Violet 650™ anti-human CD33 Antibody

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|--------------------------|---|
| Catalog# / Size | 303429 / 25 tests 303430 / 100 tests |
| Clone | WM53 |
| Regulatory Status | RUO |
| Workshop | IV M-505 |
| Other Names | Siglec-3, gp67, p67 |
| Isotype | Mouse IgG1, κ |
| Description | 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

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| Verified Reactivity | Human |
| Reported Reactivity | Chimpanzee |
| Antibody Type | Monoclonal |
| Host Species | Mouse |
| Immunogen | Human myeloid leukaemia cells. |
| Formulation | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA). |
| Preparation | The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 650™ under optimal conditions. |
| Concentration | Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.) |
| Storage & Handling | The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze. |
| Application | FC - Quality tested |
| Recommended Usage | <p>Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. 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 650™ excites at 405 nm and emits at 645 nm. The bandpass filter 660/20 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel. Refer to your instrument manual or manufacturer for support. Brilliant Violet 650™ is a trademark of Sirigen Group Ltd.</p> <p>Learn more about Brilliant Violet™.</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> |
| Excitation Laser | Violet Laser (405 nm) |
| Application Notes | Additional reported applications (for the relevant formats) include: immunoprecipitation, Western |

blotting³, induction of cytokine production³, and immunofluorescence⁴. 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. Fu J *et al.* 2019. *Cell stem cell.* 24(2):227-239. [PubMed](#)
2. Cirovic B, *et al.* 2020. *Cell Host & Microbe.* 28(2):322-334. [PubMed](#)
3. Wang Y, *et al.* 2021. *Sci Rep.* 1.429861111. [PubMed](#)
4. Leylek R, *et al.* 2020. *Cell Rep.* 32:108180. [PubMed](#)
5. Sugita M, *et al.* 2021. *NPJ Precis Oncol.* 5:44. [PubMed](#)

RRID

AB_2650933 (BioLegend Cat. No. 303429)
AB_2650934 (BioLegend Cat. No. 303430)

Antigen Details

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|---------------------------|---|
| Structure | Ig superfamily, sialoadhesins, type I glycoprotein, 67 kD |
| Distribution | Myeloid progenitor, monocytes, granulocytes, dendritic cells, mast cells |
| Function | Adhesion and lectin activity |
| Ligand/Receptor | Sugar chains containing sialic acid |
| Cross | Chimpanzee |
| Cell Type | B cells, Dendritic cells, Granulocytes, Hematopoietic stem and progenitors, Mast cells, Monocytes, Neutrophils |
| Biology Area | Cell Biology, Immunology, Neuroinflammation, Neuroscience |
| Molecular Family | CD Molecules, Siglec Molecules |
| Antigen References | 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. |
| Gene ID | 945 |

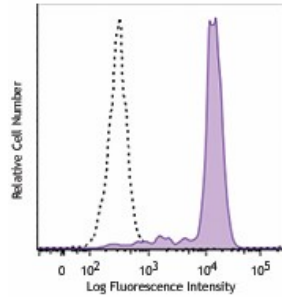
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

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



Human peripheral blood monocytes were stained with CD33 (clone WM53) Brilliant Violet 650™ (filled histogram) or mouse IgG1, κ Brilliant Violet 650™ (open histogram).

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