Brilliant Violet 510™ anti-mouse CD16/32 Antibody

Catalog# / Size	101333 / 50 µg
Clone	93
Regulatory Status	RUO
Other Names	Fcγ R III/II, Ly-17
Isotype	Rat IgG2a, λ
Description	CD16 is low affinity IgG Fc receptor III (FcR III) and CD32 is FcR II. CD16/CD32 are expressed on B cells, monocytes/macrophages, NK cells, granulocytes, mast cells, and dendritic cells. The Fc receptors bind antibody-antigen immune complexes and mediate adaptive immune responses.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Sorted pre-B 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 510™ under optimal conditions.
Concentration	0.2 mg/ml
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	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 ≤0.5 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application. Brilliant Violet 510™ excites at 405 nm and emits at 510 nm. The bandpass filter 510/50 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 510™ is a trademark of Sirigen Group Ltd. Learn more about Brilliant Violet™. 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.
Excitation Laser	Violet Laser (405 nm)
Application Notes	Clone 93 can be used for blocking of CD16/CD32 interactions with the Fc domain of immunoglobulins, but is not the same clone as 2.4G2. The 93 mAb is specific to the common epitope of CD16/CD32. Additional reported applications (for the relevant formats) include: immunoprecipitation[1] and blocking of Fc-mediated reactions in functional studies[2,4,23]. It is useful for blocking non-specific binding of immunoglobulin to Fc receptors. For blocking of Fc receptors in flow cytometric analysis, pre-incubate the cells with

purified anti-CD16/CD32 antibody (=1.0 µg per 10^6 cells in 100 µL volume) for 5-10 minutes on ice prior to immunostaining. For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 101330) (Endotoxin <0.01 EU/µg, Azide-Free, 0.2 µm filtered).

Application References

(PubMed link indicates BioLegend citation)

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Product Citations

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4. Comazzetto S *et al.* 2018. Cell stem cell. 24(3):477-486 . PubMed
5. Matsumura T, *et al.* 2022. Nat Commun. 13:7064. PubMed
6. Tang W, *et al.* 2021. Front Cell Dev Biol. 9:728057. PubMed
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RRID AB_2563692 (BioLegend Cat. No. 101333)

Antigen Details

Structure	Ig superfamily, 40-60 kD
Distribution	B cells, monocyte/macrophages, NK cells, neutrophils, mast cells, dendritic cells
Function	Low affinity receptors for IgG
Ligand/Receptor	IgG
Cell Type	B cells, Dendritic cells, Macrophages, Mast cells, Monocytes, Neutrophils, NK cells
Biology Area	Immunology, Innate Immunity
Molecular Family	CD Molecules, Fc Receptors
Antigen References	1. Barclay AN, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press. 2. Unkeless JC. 1989. *J. Clin. Invest.* 83:355. 3. Qiu WQ, *et al.* 1990. *Science* 248:732.
Gene ID	14130 14131

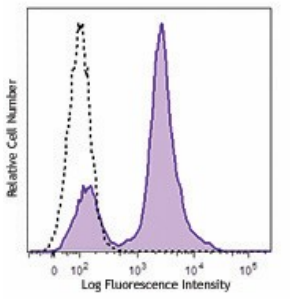
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

Biotin anti-mouse CD16/32, FITC anti-mouse CD16/32, PE anti-mouse CD16/32, Purified anti-mouse CD16/32, Ultra-LEAF™ Purified anti-mouse CD16/32, Alexa Fluor® 647 anti-mouse CD16/32, PE/Cyanine7 anti-mouse CD16/32, TruStain FcX™ (anti-mouse CD16/32), PerCP/Cyanine5.5 anti-mouse CD16/32, APC anti-mouse CD16/32, APC/Cyanine7 anti-mouse CD16/32, Brilliant Violet 421™ anti-mouse CD16/32, Brilliant Violet 510™ anti-mouse CD16/32, Purified anti-mouse CD16/32 (Maxpar® Ready), Brilliant Violet 711™ anti-mouse CD16/32, TotalSeq™-A0109 anti-mouse CD16/32, TotalSeq™-B0109 anti-mouse CD16/32, TotalSeq™-C0109 anti-mouse CD16/32

Product Data



C57BL/6 mouse splenocytes were stained with CD16/32 (clone 93) Brilliant Violet 510™ (filled histogram) or rat IgG2a Brilliant Violet 510™ isotype control (open histogram).

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