

Brilliant Violet 785™ anti-mouse CD64 (FcγRI) Antibody

Catalog# / Size	139340 / 50 µg
Clone	X54-5/7.1
Regulatory Status	RUO
Other Names	FcRI
Isotype	Mouse IgG1, κ
Description	CD64 is a 72 kD single chain type I glycoprotein also known as FcγRI and FcRI. CD64 is a member of the immunoglobulin superfamily and is expressed on monocytes/macrophages, dendritic cells, and mast cells. The expression can be upregulated by IFN-γ stimulation. CD64 binds IgG immune complex. It plays a role in antigen capture, phagocytosis of IgG/antigen complexes, and antibody-dependent cellular cytotoxicity (ADCC).

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	BALB/c mouse FcγRI-human IgG Fc fusion protein.
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 785™ 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 ≤ 1.0 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application. Brilliant Violet 785™ excites at 405 nm and emits at 785 nm. The bandpass filter 780/60 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 785™ 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	The X54-5/7.1 antibody reacts with mouse strains carrying CD64a and b alleles but not CD64d. X54-5/7.1 recognizes a conformational determinant formed between domains 2 and 3. Additional

reported application (for relevant formats) include: immunoprecipitation¹, and spatial biology (IBEX)^{5,6}. Clone X54-5/7.1 is not found to be useful for Western blots¹.

Application References

(PubMed link indicates
BioLegend citation)

1. Tan PS, *et al.* 2003. *J. Immunol.* 170:2549. (IP)
2. Ingersoll MA, *et al.* 2010. *Blood* 115:e10. (FC)
3. Ozeri E, *et al.* 2012. *J. Immunol.* 189:146. [PubMed](#)
4. Richardson ML, *et al.* 2014. *PLoS Negl Trop Dis.* 8:2825. [PubMed](#)
5. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci U S A.* 117:33455-65. (SB) [PubMed](#)
6. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

RRID

AB_3720535 (BioLegend Cat. No. 139340)

Antigen Details

Structure	Ig superfamily, type I glycoprotein, 72 kD
Distribution	Monocytes, macrophages, mast cells, dendritic cells
Function	Phagocytosis, ADCC
Ligand/Receptor	IgG
Cell Type	Dendritic cells, Macrophages, Mast cells, Monocytes
Biology Area	Immunology, Innate Immunity
Molecular Family	CD Molecules, Fc Receptors
Gene ID	14129

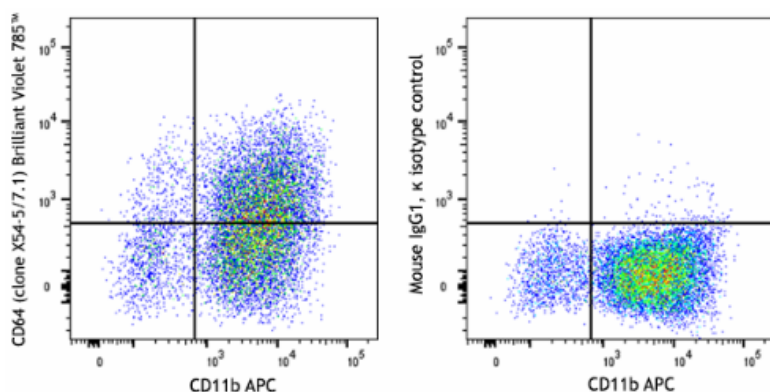
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

PE/Cyanine5 anti-mouse CD64 (FcγRI), APC/Fire™ 750 anti-mouse CD64 (FcγRI), PE/Cyanine7 anti-mouse CD64 (FcγRI), FITC anti-mouse CD64 (FcγRI), PE/Dazzle™ 594 anti-mouse CD64 (FcγRI), Alexa Fluor® 647 anti-mouse CD64 (FcγRI), Biotin anti-mouse CD64 (FcγRI), Purified anti-mouse CD64 (FcγRI), PE anti-mouse CD64 (FcγRI), Brilliant Violet 510™ anti-mouse CD64 (FcγRI), Brilliant Violet 711™ anti-mouse CD64 (FcγRI), Brilliant Violet 650™ anti-mouse CD64 (FcγRI), Spark YG™ 581 anti-mouse CD64 (FcγRI) (Flexi-Fluor™), Spark YG™ 593 anti-mouse CD64 (FcγRI) (Flexi-Fluor™) Antibody, Brilliant Violet 605™ anti-mouse CD64 (FcγRI), APC anti-mouse CD64 (FcγRI), TotalSeq™-B0202 anti-mouse CD64 (FcγRI), PerCP/Cyanine5.5 anti-mouse CD64 (FcγRI), Spark NIR™ 685 anti-mouse CD64 (FcγRI) (Flexi-Fluor™) Antibody, Brilliant Violet 785™ anti-mouse CD64 (FcγRI), TotalSeq™-A0202 anti-mouse CD64 (FcγRI), Brilliant Violet 421™ anti-mouse CD64 (FcγRI), TotalSeq™-C0202 anti-mouse CD64 (FcγRI)

Product Data



C57BL/6 mouse bone marrow cells were stained with anti-mouse/human CD11b APC (clone M1/70) and anti-mouse CD64 (FcγRI) (clone X54-5/7.1) Brilliant Violet 785™ (left) or mouse IgG1, κ Brilliant Violet 785™ isotype control (right). Data shown was gated on the myeloid population.

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