FITC anti-mouse CD64 (FcγRI) Antibody

Catalog# / Size	139315 / 25 µg 139316 / 100 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.
Preparation	The antibody was purified by affinity chromatography and conjugated with FITC under optimal conditions.
Concentration	0.5 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.
Excitation Laser	Blue Laser (488 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: immunoprecipitation[1], and spatial biology (IBEX)[5,6]. Clone X54-5/7.1 is not found to be useful for Western blots[1].

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)
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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

Product Citations

1. Mathur R, *et al.* 2019. Mucosal Immunol. 12:612. PubMed
2. Zhang R, *et al.* 2021. Cell Mol Immunol. 18:1222. PubMed
3. Khamissi FZ, *et al.* 2022. Sci Adv. 8:eabm5900. PubMed
4. Tordesillas L, *et al.* 2018. Nat Commun. 9:5238. PubMed
5. Nguyen SL, *et al.* 2021. Sci Rep. 11:4217. PubMed
6. She L, *et al.* 2021. JCI Insight. 6:e143509. PubMed

7. An J,*et al.* 2017. Sci Rep.. 10.1038/s41598-017-13629-0. PubMed
8. Grigoryan L, *et al.* 2022. NPJ Vaccines. 7:55. PubMed
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11. Liu J, *et al.* 2018. Am J Pathol. 188:2786. PubMed
12. Liu SS, *et al.* 2021. Immunity. :. PubMed
13. Kitamoto S, *et al.* 2020. Cell. 182(2):447-462.e14. PubMed
14. Kubli SP, *et al.* 2019. Nat Commun. 10:2678. PubMed
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RRID

AB_2566555 (BioLegend Cat. No. 139315)
AB_2566556 (BioLegend Cat. No. 139316)

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

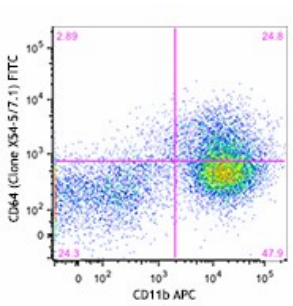
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

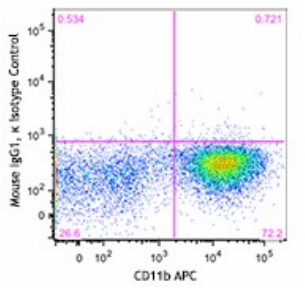
Other Formats

Purified anti-mouse CD64 (FcγRI), PE anti-mouse CD64 (FcγRI), APC anti-mouse CD64 (FcγRI), PerCP/Cyanine5.5 anti-mouse CD64 (FcγRI), Brilliant Violet 421™ anti-mouse CD64 (FcγRI), Brilliant Violet 711™ anti-mouse CD64 (FcγRI), PE/Cyanine7 anti-mouse CD64 (FcγRI), FITC anti-mouse CD64 (FcγRI), Biotin anti-mouse CD64 (FcγRI), PE/Dazzle™ 594 anti-mouse CD64 (FcγRI), Alexa Fluor® 647 anti-mouse CD64 (FcγRI), Brilliant Violet 605™ anti-mouse CD64 (FcγRI), TotalSeq™-A0202 anti-mouse CD64 (FcγRI), TotalSeq™-C0202 anti-mouse CD64 (FcγRI), TotalSeq™-B0202 anti-mouse CD64 (FcγRI), PE/Cyanine5 anti-mouse CD64 (FcγRI), APC/Fire™ 750 anti-mouse CD64 (FcγRI)

Product Data



C57BL/6 mouse bone marrow cells were stained with CD11b (clone M1/70) APC and CD64 (clone X54-5/7.1) FITC (top) or mouse IgG1, κ FITC isotype control (bottom).



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