

Purified anti-mouse CD64 (FcγRI) Antibody

Catalog# / Size	139301 / 50 µg 139302 / 500 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.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - Quality tested IP - Reported in the literature, not verified in house
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 ≤0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
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	<ol style="list-style-type: none"> 1. Tan PS, <i>et al.</i> 2003. <i>J. Immunol.</i> 170:2549. (IP) 2. Ingersoll MA, <i>et al.</i> 2010. <i>Blood</i> 115:e10. (FC) 3. Ozeri E, <i>et al.</i> 2012. <i>J. Immunol.</i> 189:146. PubMed 4. Richardson ML, <i>et al.</i> 2014. <i>PLoS Negl Trop Dis.</i> 8:2825. PubMed 5. Radtke AJ, <i>et al.</i> 2020. <i>Proc Natl Acad Sci U S A.</i> 117:33455-65. (SB) PubMed 6. Radtke AJ, <i>et al.</i> 2022. <i>Nat Protoc.</i> 17:378-401. (SB) PubMed
(PubMed link indicates BioLegend citation)	
Product Citations	<ol style="list-style-type: none"> 1. Melo GD, <i>et al.</i> 2017. <i>Sci Rep.</i> 6:1625. PubMed 2. Orecchioni M, <i>et al.</i> 2022. <i>Methods Mol Biol.</i> 2419:779. PubMed 3. Swidergall M, <i>et al.</i> 2019. <i>Cell Rep.</i> 28:423. PubMed 4. Arimura K, <i>et al.</i> 2017. <i>Mucosal Immunol.</i> 1:08125. PubMed 5. Rissiek B, <i>et al.</i> 2017. <i>Sci Rep.</i> . 10.1038/s41598-017-16613-w. PubMed 6. Hilligan KL, <i>et al.</i> 2020. <i>Nat Commun.</i> 11:5637. PubMed 7. Salei N, <i>et al.</i> 2020. <i>J Am Soc Nephrol.</i> 31:257. PubMed 8. Yan J, <i>et al.</i> 2020. <i>Cancer Immunol Res.</i> 8:356. PubMed 9. Barvalia M, <i>et al.</i> 2022. <i>Methods Mol Biol.</i> 2508:147. PubMed

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RRID AB_10612757 (BioLegend Cat. No. 139301)
 AB_10613107 (BioLegend Cat. No. 139302)

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

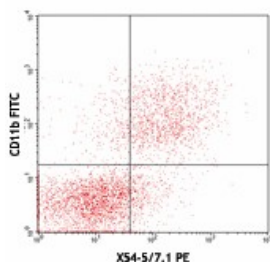
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

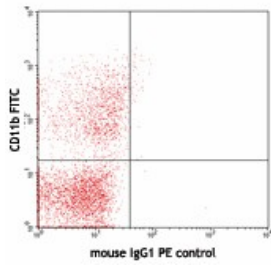
Other Formats

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 bone marrow cells stained with CD11b FITC and purified X54-5/7.1 conjugated with PE



C57BL/6 bone marrow cells stained with
CD11b FITC and mouse IgG1 PE
isotype control

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