Purified anti-mouse CD115 (CSF-1R) Antibody

Catalog# / Size	135501 / 50 µg 135502 / 500 µg
Clone	AFS98
Other Names	CSF-1R, M-CSFR, c-fms
Isotype	Rat IgG2a, κ
Description	CSF-1R, also known as CD115 and M-CSFR, is a single-pass type I membrane protein and member of the platelet-derived growth factor receptor family. This c-fms (Fms proto-oncogene) gene product's natural ligands include M-CSF and IL-34. Structural studies of CD115 have described an Ig-like extracellular domain, a transmembrane domain, an intracellular juxtamembrane domain, a split tyrosine kinase domain, and a C-terminal tail receptor. Receptor activation induces homodimerization in addition to phosphorylation and ubiquitination of intracellular residues. CD115 directly influences tissue macrophage and osteoclast differentiation and proliferation. It is expressed on monocytes/macrophages, peritoneal exudate cells, plasmacytoid and conventional dendritic cells, and osteoclasts.

Product Details

Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
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* Block - *Reported in literature*
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 10^6 cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Additional reported applications (for the relevant formats) include: blocking of ligand binding[1]. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays. It has been reported that CD115 can be rapidly internalized, especially when samples are exposed to room temperature. Approximate 33% decrease in CD115 expression has been observed between 0 and 4 hours after sample collection, while overnight incubation of the cells results in complete CD115 downregulation. Pre-treatment with EDTA and low temperatures (2 to 8°C) helps in maintaining surface expression of CD115[4].

Application References

(PubMed link indicates BioLegend citation)

1. Sudo T, et al. 1995. Oncogene 11:2469.
2. Murayama T, et al. 1999. Circulation 99:1740.
3. Jaeger BN, et al. 2012. J. Exp. Med. 209:565. PubMed
4. Breslin WL, et al. 2013. J Immunol Methods. 390(1-2):1 PubMed

Product Citations

1. Jaeger B, et al. 2012. J Exp Med. 209:565. PubMed
2. Rogers P, Driessnack M, and Schwartz E. 2017. PLoS One. 10.1371/journal.pone.0181985. PubMed
3. Seehus C, et al. 2017. Nat Commun.. 10.1038/s41467-017-02023-z. PubMed
4. Zhu YP et al. 2018. Cell reports. 24(9):2329-2341 . PubMed
5. Winter C, et al. 2018. Cell Metab. 28:175. PubMed
6. Regan–Komito D, et al. 2017. Front Immunol. 1.459027778. PubMed
7. Kikuchi K, et al. 2018. J Immunol. 201:635. PubMed
8. Leist SR, et al. 2019. PLoS One. 14:e0220126. PubMed

RRID	AB_1937292 (BioLegend Cat. No. 135501)

Antigen Details

Structure	Ig superfamily, 145 kD
Distribution	Monocytes/macrophages, peritoneal exudate cells, plasmacytoid and conventional dendritic cells, osteoclasts
Function	Growth factor receptor, tyrosine kinase
Ligand/Receptor	Macrophage colony stimulating factor (M-CSF), IL-34
Cell Type	Dendritic cells, Macrophages, Monocytes, Osteoclasts
Biology Area	Immunology
Molecular Family	CD Molecules, Cytokine/Chemokine Receptors
Antigen References	1. Sudo T, et al. 1995 Oncogene 11:2469. 2. Murayama T, et al. 1999 Circulation 99:1740. 3. Goswami S, et al. 2005 Cancer Res. 65:5278. 4. Yu W, et al. 2008 J. Leuko. Biol. 84:852.
Gene ID	12978

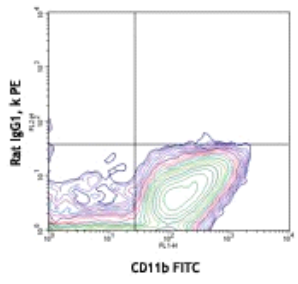
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

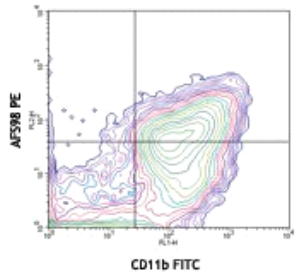
Other Formats

PE anti-mouse CD115 (CSF-1R), Biotin anti-mouse CD115 (CSF-1R), APC anti-mouse CD115 (CSF-1R), Alexa Fluor® 488 anti-mouse CD115 (CSF-1R), Brilliant Violet 421™ anti-mouse CD115 (CSF-1R), Brilliant Violet 605™ anti-mouse CD115 (CSF-1R), Brilliant Violet 711™ anti-mouse CD115 (CSF-1R), Alexa Fluor® 594 anti-mouse CD115 (CSF-1R), Purified anti-mouse CD115 (CSF-1R) (Maxpar® Ready), PE/Cyanine7 anti-mouse CD115 (CSF-1R), PerCP/Cyanine5.5 anti-mouse CD115 (CSF-1R), PE/Dazzle™ 594 anti-mouse CD115 (CSF-1R), Alexa Fluor® 647 anti-mouse CD115 (CSF-1R), APC/Cyanine7 anti-mouse CD115 (CSF-1R), TotalSeq™-A0105 anti-mouse CD115 (CSF-1R), APC/Fire™ 750 anti-mouse CD115 (CSF-1R), Ultra-LEAF™ Purified anti-mouse CD115 (CSF-1R), TotalSeq™-B0105 anti-mouse CD115 (CSF-1R), TotalSeq™-C0105 anti-mouse CD115 (CSF-1R)

Product Data



Thioglycolate-elicited BALB/c mouse peritoneal macrophages stained with rat IgG1, k PE and CD11b FITC.



Thioglycolate-elicited BALB/c mouse peritoneal macrophages stained with AFS98 PE and CD11b FITC.

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