

TotalSeq™-B0105 anti-mouse CD115 (CSF-1R) Antibody

Catalog# / Size	135543 / 10 µg
Clone	AFS98
Regulatory Status	RUO
Other Names	CSF-1R, M-CSFR, c-fms
Isotype	Rat IgG2a, κ
Barcode Sequence	TTCCGTTGTTGTGAG
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

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 1 mM EDTA
Preparation	The antibody was purified by chromatography and conjugated with TotalSeq™-B oligomer under optimal conditions.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	PG - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis and the oligomer sequence is confirmed by sequencing. TotalSeq™-B antibodies are compatible with 10x Genomics Single Cell Gene Expression Solutions.</p> <p>To maximize performance, it is strongly recommended that the reagent be titrated for each application, and that you centrifuge the antibody dilution before adding to the cells at 14,000xg at 2 - 8°C for 10 minutes. Carefully pipette out the liquid avoiding the bottom of the tube and add to the cell suspension. For Proteogenomics analysis, the suggested starting amount of this reagent for titration is ≤ 1.0 µg per million cells in 100 µL volume. Refer to the corresponding TotalSeq™ protocol for specific staining instructions.</p> <p>Buyer is solely responsible for determining whether Buyer has all intellectual property rights that are necessary for Buyer's intended uses of the BioLegend TotalSeq™ products. For example, for any technology platform Buyer uses with TotalSeq™, it is Buyer's sole responsibility to determine whether it has all necessary third party intellectual property rights to use that platform and TotalSeq™ with that platform.</p>
Application Notes	<p>Additional reported applications (for the relevant formats) include: blocking of ligand binding¹. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays.</p> <p>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</p>

in maintaining surface expression of CD115⁴.

Additional Product Notes

TotalSeq™ reagents are designed to profile protein levels at a single cell level following an optimized protocol similar to the CITE-seq workflow. A compatible single cell device (e.g. [10x Genomics Chromium System and Reagents](#)) and sequencer (e.g. Illumina analyzers) are required. Please contact [technical support](#) for more information, or visit biolegend.com/totalseq.

The barcode flanking sequences are GTGACTGGAGTTTCAGACGTGTGCTCTTCCGATCTNNNNNNNNNN (PCR handle), and NNNNNNNNGCTTTAAGGCCGGTCCTAGC*A*A (capture sequence). N represents either randomly selected A, C, G, or T, and * indicates a phosphorothioated bond, to prevent nuclease degradation.

View more applications data for this product in our [Scientific Poster Library](#).

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](#)
5. Dong L, *et al.* 2016. *Nature.* 539:304–308. [PubMed](#)

RRID

AB_2832487 (BioLegend Cat. No. 135543)

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	<ol style="list-style-type: none">1. Sudo T, <i>et al.</i> 1995 <i>Oncogene</i> 11:2469.2. Murayama T, <i>et al.</i> 1999 <i>Circulation</i> 99:1740.3. Goswami S, <i>et al.</i> 2005 <i>Cancer Res.</i> 65:5278.4. Yu W, <i>et al.</i> 2008 <i>J. Leuko. Biol.</i> 84:852.
Gene ID	12978

Related Protocols

[TotalSeq™-B or -C with 10x Feature Barcoding Technology](#)

Other Formats

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

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BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587