

TotalSeq™-A0114 anti-mouse F4/80 Antibody

Catalog# / Size	123153 / 10 µg
Clone	BM8
Regulatory Status	RUO
Other Names	EMR1, Ly71
Isotype	Rat IgG2a, κ
Barcode Sequence	TTAACTTCAGCCCGT
Description	F4/80 is a 160 kD glycoprotein. It is characterized as a member of the epidermal growth factor (EGF)-transmembrane 7 (TM7) family. F4/80, also known as EMR1 or Ly71, has been widely used as a murine macrophage marker, which is expressed on the majority of tissue macrophages including peritoneal macrophages, macrophages in lung, gut, thymus and red pulp of spleen (but not on the macrophages located in T cell areas of the spleen, lymph node and Peyer's patch), Kuffer cells, Langerhans cells, and bone marrow stromal cells. F4/80 has also been shown on a subset of dendritic cells. The biological ligand of F4/80 has not been identified, but it has been reported that F4/80 is required for induction of CD8 ⁺ T cells-mediated peripheral tolerance.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Murine macrophages
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™-A 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™-A 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	Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen sections ^{1,2} and formalin-fixed paraffin-embedded sections ^{6,7} , Western blotting, and spatial biology (IBEX) ^{12,13} .
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 CCTTGGCACCCGAGAATTCCA (PCR handle), and BAAA*A*A (capture sequence). B represents either 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. Schaller E, *et al.* 2002. *Mol. Cell. Biol.* 22:8035. (IHC)
2. Stevceva L, *et al.* 2001. *BMC Clin Pathol.* 1:3. (IHC)
3. Kobayashi M, *et al.* 2008. *J. Leukoc. Biol.* 83:1354. [PubMed](#)
4. Poekkel D, *et al.* 2009. *J. Biol Chem.* 284:21077. [PubMed](#)
5. Glass AM, *et al.* 2013. *J. Immunol.* 190:4830. [PubMed](#)
6. Koehm S, *et al.* 2007. *J. Allergy Clin. Immunol.* 120:570. (IHC)
7. Rankin AL, *et al.* 2010. *J. Immunol.* 184:1526. (IHC)
8. Sasi SP, *et al.* 2014. *J Biol Chem.* 289:14178. [PubMed](#)
9. Thakus VS, *et al.* 2014. *Toxicol Lett.* 230:322. [PubMed](#)
10. Watson NB, *et al.* 2015. *J Immunol.* 194:2796. [PubMed](#)
11. Hirakawa H, *et al.* 2015. *PLoS One.* 10:119360. [PubMed](#)
12. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci U S A.* 117:33455-65. (SB) [PubMed](#)
13. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

Product Citations

1. Rødahl I, *et al.* 2021. *STAR Protoc.* 2:100842. [PubMed](#)
2. Golomb SM, *et al.* 2020. *Cell Rep.* 33:108438. [PubMed](#)
3. Guldner IH, *et al.* 2020. *Cell.* 183(5):1234-1248.e25. [PubMed](#)
4. Wirka RC, *et al.* 2019. *Nat Med.* 25:1280. [PubMed](#)
5. Guldner IH, *et al.* 2021. *STAR Protocols.* 2(2):100537. [PubMed](#)
6. Pisu D, *et al.* 2021. *J Exp Med.* 218:. [PubMed](#)

RRID

AB_2749986 (BioLegend Cat. No. 123153)

Antigen Details

Structure	EGF-TM7 family member, 160 kD glycoprotein
Distribution	Majority of tissue macrophages including peritoneal macrophages, macrophages in lung, gut, thymus and red pulp of spleen, Kuffer cells, Langerhans cells, bone marrow stromal cells, and a subset of dendritic cells
Function	Induction of immunological tolerance
Cell Type	Dendritic cells, Langerhans cells, Macrophages, Tregs
Biology Area	Cell Biology, Immunology, Innate Immunity, Neuroinflammation, Neuroscience
Antigen References	<ol style="list-style-type: none">1. Austy JM and Gordon S. 1981. <i>Eur. J. Immunol.</i> 11:805.2. Hume DA, <i>et al.</i> 1983. <i>J. Exp. Med.</i> 158:1522.3. Ruedl C, <i>et al.</i> 1996. <i>Eur. J. Immunol.</i> 26:1801.4. McKnight AJ, <i>et al.</i> 1996. <i>J. Biol. Chem.</i> 271:486.5. Lin HH, <i>et al.</i> 2005. <i>J. Exp. Med.</i> 201:1615.
Gene ID	13733

Related Protocols

[TotalSeq™-A Antibodies and Cell Hashing with 10x Single Cell 3' Reagent Kit v3 3.1 Protocol](#)

Other Formats

Brilliant Violet 605™ anti-mouse F4/80, Purified anti-mouse F4/80, Biotin anti-mouse F4/80, FITC anti-mouse F4/80, PE anti-mouse F4/80, PE/Cyanine5 anti-mouse F4/80, PE/Cyanine7 anti-mouse F4/80, APC anti-mouse F4/80, APC/Cyanine7 anti-mouse F4/80, Alexa Fluor® 488 anti-mouse F4/80, Alexa Fluor® 647 anti-mouse F4/80, Pacific Blue™ anti-mouse F4/80, PerCP anti-mouse F4/80, PerCP/Cyanine5.5 anti-mouse F4/80, Alexa Fluor® 700 anti-mouse F4/80, Brilliant Violet 421™ anti-mouse F4/80, Brilliant Violet 510™ anti-mouse F4/80, Alexa Fluor® 594 anti-mouse F4/80, Brilliant Violet 785™ anti-mouse F4/80, Purified anti-mouse F4/80 (Maxpar® Ready), PE/Dazzle™ 594 anti-mouse F4/80, Brilliant Violet 650™ anti-mouse F4/80, Brilliant Violet 711™ anti-

mouse F4/80, APC/Fire™ 750 anti-mouse F4/80, TotalSeq™-A0114 anti-mouse F4/80, TotalSeq™-B0114 anti-mouse F4/80, TotalSeq™-C0114 anti-mouse F4/80, Spark YG™ 570 anti-mouse F4/80, KIRAVIA Blue 520™ anti-mouse F4/80, Ultra-LEAF™ Purified anti-mouse F4/80, APC/Fire™ 810 anti-mouse F4/80, Spark NIR™ 685 anti-mouse F4/80

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