

Brilliant Violet 650™ anti-mouse F4/80 Antibody

Catalog# / Size	123149 / 50 µg
Clone	BM8
Regulatory Status	RUO
Other Names	EMR1, Ly71
Isotype	Rat IgG2a, κ

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 BSA (origin USA).
Preparation	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 650™ under optimal conditions.
Concentration	0.2 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	<p>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.</p> <p>Brilliant Violet 650™ excites at 405 nm and emits at 645 nm. The bandpass filter 660/20 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel. Refer to your instrument manual or manufacturer for support. Brilliant Violet 650™ is a trademark of Sirigen Group Ltd.</p> <p>Learn more about Brilliant Violet™.</p> <p>This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.</p>
Excitation Laser	Violet Laser (405 nm)
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}.

Application References

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. Poeckel 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. Trittel S, *et al.* 2019. *Sci Rep.* 9:16362. [PubMed](#)
2. Maisonneuve C, *et al.* 2021. *Cell Reports.* 34(4):108677. [PubMed](#)
3. Godbersen-Palmer C, *et al.* 2020. *J Immunol.* 204:2973. [PubMed](#)
4. Pham THM, *et al.* 2020. *Cell Host & Microbe.* 27(1):54-67.e5. [PubMed](#)
5. Go DM, *et al.* 2021. *Cell Mol Gastroenterol Hepatol.* 12:715. [PubMed](#)
6. Wang C, *et al.* 2021. *Cell Stem Cell.* [PubMed](#)
7. Francian A, *et al.* 2021. *J Drug Target.* 29:754. [PubMed](#)
8. Law HL, *et al.* 2020. *Front Pharmacol.* 11:274. [PubMed](#)
9. Fulham MA, *et al.* 2019. *Am J Physiol Cell Physiol.* 317:C687. [PubMed](#)
10. Hegde S, *et al.* 2020. *Cancer Cell.* 37(3):289-307. [PubMed](#)
11. Guérin MV, *et al.* 2019. *Nat Commun.* 10:4131. [PubMed](#)
12. Rhys HI, *et al.* 2018. *EBioMedicine.* 29:60. [PubMed](#)
13. Gamrekelashvili J, *et al.* 2021. *Bio Protoc.* 11:e4007. [PubMed](#)
14. Han Y, *et al.* 2022. *Int J Biol Sci.* 18:5653. [PubMed](#)
15. Campesato LF, *et al.* 2020. *Nat Commun.* 3.24375. [PubMed](#)
16. Tang S, *et al.* 2022. *Virology.* 19:32. [PubMed](#)
17. Mohrin M, *et al.* 2021. *Aging Cell.* 20:e13313. [PubMed](#)
18. Zhang L, *et al.* 2020. *Cell.* 442:181. [PubMed](#)
19. Budhu S, *et al.* 2021. *Cell Reports.* 34(2):108620. [PubMed](#)
20. Chen KE, *et al.* 2021. *J Immunol.* 206:141. [PubMed](#)
21. Chen KE, *et al.* 2021. *J Neuroinflammation.* 18:140. [PubMed](#)
22. Scheyltjens I, *et al.* 2022. *Nat Protoc.* 17:2354. [PubMed](#)
23. Samuelson DR, *et al.* 2021. *Commun Biol.* 4:997. [PubMed](#)
24. Davis FM, *et al.* 2021. *J Exp Med.* 218. [PubMed](#)

RRID

AB_2564589 (BioLegend Cat. No. 123149)

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

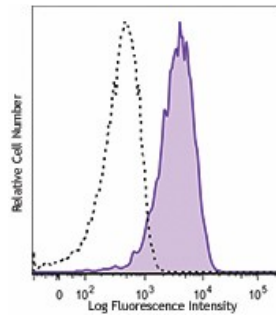
Related Protocols

[Cell Surface Flow Cytometry Staining 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

Product Data



Thioglycolate-elicited Balb/c mouse peritoneal macrophages were stained with F4/80 (clone BM8) Brilliant Violet 650™ (filled histogram) or rat IgG2a, κ Brilliant Violet 650™ isotype control (open histogram).

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

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