

F4/80 Monoclonal Antibody (BM8), PE

Catalog NumberMF48004

Product data sheet

Details		Species Reactivity	
Size	500 µL	Published species	Mouse, Not Applicable
Host/Isotope	Rat / IgG2a	Tested Applications	
Class	Monoclonal	Flow Cytometry (Flow)	Dilution * Assay-dependent
Type	Antibody	Published Applications	
Clone	BM8	Flow Cytometry (Flow)	See 19 publications below
Immunogen	mouse F4/80 which is a macrophage-restricted cell surface glycoprotein.	Immunohistochemistry (IHC)	See 2 publications below
		Immunocytochemistry (ICC/IF)	See 1 publications below
Conjugate	PE	Immunohistochemistry (Paraffin) (IHC (P))	See 2 publications below
Form	Liquid	Miscellaneous PubMed (Misc)	See 3 publications below
Concentration	0.2 mg/mL	Western Blot (WB)	See 1 publications below
Storage Conditions	4° C	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	

Background/Target Information

F4/80 antigen is a 160 kDa cell surface glycoprotein that is a member of the EGF TM7 family of proteins and shares 68% overall amino acid identity with human EGF module containing mucin like hormone receptor 1 (EMR1). Expression of F4/80 is heterogeneous and is reported to vary during macrophage maturation and activation. The F4/80 antigen is expressed on a wide range of mature tissue macrophages including Kupffer cells, Langerhans, microglia, macrophages located in the gut lamina propria, peritoneal cavity, lung, thymus, bone marrow stroma and macrophages in the red pulp of the spleen. F4/80 expression has also been reported on a subpopulation of dendritic cells but is absent from macrophages located in T cell areas of the spleen and lymph node. The ligands and biological functions of the F4/80 antigen have not yet been determined but recent studies suggest a role for F4/80 in the generation of efferent CD8+ve regulatory T cells.

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PubMed References For F4/80 Monoclonal Antibody (BM8), PE

19 Flow Cytometry References

Species / Dilution	Summary
	MF48004-3 was used in Flow cytometry/Cell sorting to demonstrate pharmacological effects of XELH against viral pneumonia: it inhibits pro-inflammatory cytokines, viral replication and load.
Mouse / Not Cited	Pharmaceutical biology (2022; 60: 2355) "XiaoEr LianHuaQinqGan alleviates viral pneumonia in mice infected by influenza A and respiratory syncytial viruses." Author(s):Li W,Li T,Zhao C,Song T,Mi Y,Chuangfeng Z,Hou Y,Jia Z PubMed Article URL: http://dx.doi.org/10.1080/13880209.2022.2147961
	MF48004 was used in flow cytometry to test if macrophages contribute to the effect of daratumumab treatment.
Mouse / Not Cited	mAbs (2015; 7: 311) "Antibody-mediated phagocytosis contributes to the anti-tumor activity of the therapeutic antibody daratumumab in lymphoma and multiple myeloma." Author(s):Overdijk MB,Verploegen S,Bögels M,van Egmond M,Lammerts van Bueren JJ,Mutis T,Groen RW,Breij E, Martens AC,Bleeker WK,Parren PW PubMed Article URL: http://dx.doi.org/10.1080/19420862.2015.1007813
	MF48004 was used in Flow cytometry/Cell sorting to indicate that acute MNV4 infection is immunomodulatory and alters disease progression in a mouse model of inflammatory bowel disease.
Mouse / Not Cited	Comparative medicine (2008; 58: 522) "Murine norovirus: an intercurrent variable in a mouse model of bacteria-induced inflammatory bowel disease." Author(s):Lencioni KC,Seamons A,Treuting PM,Maggio-Price L,Brabb T PubMed Article URL: http://www.ncbi.nlm.nih.gov/pubmed/19149409
	MF48004 was used in flow cytometry to investigate how lymphocytes traffic between the peritoneal cavity and omentum
Not Applicable / Not Cited	Journal of immunology (Baltimore, Md. : 1950) (2009; 183: 1155) "Lymphocytes in the peritoneum home to the omentum and are activated by resident dendritic cells." Author(s):Carlow DA,Gold MR,Ziltener HJ PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.0900409
	MF48004 was used in Flow cytometry/Cell sorting to investigate the mechanisms involved in crosstalk between immune cells and the epithelium in mucosal barrier repair.
Mouse / Not Cited	The Journal of clinical investigation (2017; 127: 3510) "Macrophage-derived IL-10 mediates mucosal repair by epithelial WISP-1 signaling." Author(s):Quiros M,Nishio H,Neumann PA,Siuda D,Brazil JC,Azcutia V,Hilgarth R,O'Leary MN,Garcia-Hernandez V,Leoni G,Feng M,Bernal G,Williams H,Dedhia PH,Gerner-Smidt C,Spence J,Parkos CA,Denning TL,Nusrat A PubMed Article URL: http://dx.doi.org/10.1172/JCI90229
	MF48004 was used in Flow cytometry/Cell sorting to demonstrate that radiation-induced senescent glioblastoma cells exhibit a senescence-associated secretory phenotype that functions through NFB signalling to influence changes in the tumour microenvironment.
Mouse / 1:200	Cell death and differentiation (2019; 26: 2139) "Ly6G⁺ inflammatory cells enable the conversion of cancer cells to cancer stem cells in an irradiated glioblastoma model." Author(s):Jeon HY,Ham SW,Kim JK,Jin X,Lee SY,Shin YJ,Choi CY,Sa JK,Kim SH,Chun T,Jin X,Nam DH,Kim H PubMed Article URL: http://dx.doi.org/10.1038/s41418-019-0282-0
	MF48004 was used in flow cytometry to measure the number of splenic myeloid progenitors and their progeny after burn injury
Not Applicable / Not Cited	Shock (Augusta, Ga.) (2005; 23: 115) "Effect of thermal injury on splenic myelopoiesis." Author(s):Noel JG,Guo X,Wells-Byrum D,Schwemberger S,Caldwell CC,Ogle CK PubMed Article URL: http://dx.doi.org/10.1097/01.shk.0000154239.00887.18
	MF48004 was used in flow cytometry to elucidate how Schistosoma mansoni suppresses T cell activation
Not Applicable / Not Cited	Journal of immunology (Baltimore, Md. : 1950) (2004; 173: 1240) "Schistosoma mansoni worms induce anergy of T cells via selective up-regulation of programmed death ligand 1 on macrophages." Author(s):Smith P,Walsh CM,Mangan NE,Fallon RE,Sayers JR,McKenzie AN,Fallon PG PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.173.2.1240

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	MF48004 was used in flow cytometry to assess surface expression of C-type lectin-like receptor 2 on hematopoietic cells from peripheral blood and secondary lymphoid organs
Mouse / Not Cited	European journal of immunology (2015; 45: 2484) "The expression of mouse CLEC-2 on leucocyte subsets varies according to their anatomical location and inflammatory state." Author(s):Lowe KL,Navarro-Núñez L,Bénézech C,Nayar S,Kingston BL,Nieswandt B,Barone F,Watson SP,Buckley CD,Desanti GE PubMed Article URL: http://dx.doi.org/10.1002/eji.201445314
Not Applicable / Not Cited	MF48004 was used in flow cytometry to assess changes in the estrogen receptor alpha protein in macrophages during the preimplantation period Reproductive biology (2009; 9: 225) "The influence of mating on estrogen receptor alpha protein level in spleen and uterine macrophages in female mice." Author(s):Piesta A,Maj T,Chemoska-Soyta A PubMed Article URL: http://dx.doi.org/10.1016/s1642-431x(12)60028-x
Mouse / Not Cited	MF48004-3 was used in Flow Cytometry to suggest DJ-1 as a potential therapeutic and/or prophylactic target of APAP-induced acute liver injury. Aging (2021; 13: 18879) "Myeloid DJ-1 deficiency protects acetaminophen-induced acute liver injury through decreasing inflammatory response." Author(s):Wang B,Li J,Jiao J,Xu M,Luo Y,Wang F,Xia Q,Gao Y,Feng Y,Kong X,Sun X PubMed Article URL: http://dx.doi.org/10.18632/aging.203340
Mouse / Not Cited	MF48004 was used in Flow cytometry/Cell sorting to uncover a role of TTP as a suppressor of feedback inhibitors of inflammation and highlight the importance of TTP activity-regulation by MK2 to control the pro-inflammatory response. Nucleic acids research (2016; 44: 7418) "The RNA-binding protein TTP is a global post-transcriptional regulator of feedback control in inflammation." Author(s):Tiedje C,Diaz-Muñoz MD,Trulley P,Ahlfors H,Laaß K,Blackshear PJ,Turner M,Gaestel M PubMed Article URL: http://dx.doi.org/10.1093/nar/gkw474
Not Applicable / Not Cited	MF48004 was used in flow cytometry to elucidate the mechanisms that regulate the inverse relationship between helminth infections and allergies Journal of immunology (Baltimore, Md. : 1950) (2006; 176: 138) "Helminth-modified pulmonary immune response protects mice from allergen-induced airway hyperresponsiveness." Author(s):Mangan NE, van Rooijen N, McKenzie AN, Fallon PG PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.176.1.138
Mouse / 1:400	MF48004 was used in flow cytometry to explore how bacterial infections alter the mitochondrial electron-transport chain in macrophages Nature immunology (2016; 17: 1037) "Mitochondrial respiratory-chain adaptations in macrophages contribute to antibacterial host defense." Author(s):Garaude J,Acín-Pérez R,Martínez-Cano S,Enamorado M,Ugolini M,Nistal-Villán E,Hervás-Stubbs S,Pelegrín P,Sander LE,Enríquez JA,Sancho D PubMed Article URL: http://dx.doi.org/10.1038/ni.3509
Not Applicable / Not Cited	MF48004 was used in flow cytometry to study the regulation of CTLA-4+ and CD25+ T cells in schistosome infection Parasite immunology (2007; 29: 293) "Role for CTLA-4 but not CD25+ T cells during Schistosoma mansoni infection of mice." Author(s):Walsh CM,Smith P,Fallon PG PubMed Article URL: http://dx.doi.org/10.1111/j.1365-3024.2007.00947.x
Mouse / Not Cited	MF48004 was used in flow cytometry to investigate the role of Y-box protein during early hematopoietic differentiation and leukemia. Immunogenetics (2011; 63: 337) "YBX1 expression and function in early hematopoiesis and leukemic cells." Author(s):Bhullar J,Sollars VE PubMed Article URL: http://dx.doi.org/10.1007/s00251-011-0517-9

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	MF48004 was used in Flow cytometry/Cell sorting to determine the role of PHc2 in controlling the mobilisation of hematopoietic stem and progenitor cells.
Mouse / 1:100	<p>Nature communications (2019; 10:) "Phc2 controls hematopoietic stem and progenitor cell mobilization from bone marrow by repressing Vcam1 expression." Author(s):Bae J,Choi SP,Isono K,Lee JY,Park SW,Choi CY,Han J,Kim SH,Lee HH,Park K,Jin HY,Lee SJ,Park CG,Koseki H,Lee YS,Chun T PubMed Article URL:http://dx.doi.org/10.1038/s41467-019-11386-4</p>
	Published figure using F4/80 monoclonal antibody (Product # MF48004) in Flow Cytometry
Not Applicable / Not Cited	<p>Nature communications (2019; 10:) "Inflammation induced by incomplete radiofrequency ablation accelerates tumor progression and hinders PD-1 immunotherapy." Author(s):Shi L,Wang J,Ding N,Zhang Y,Zhu Y,Dong S,Wang X,Peng C,Zhou C,Zhou L,Li X,Shi H,Wu W,Long X,Wu C, Liao W PubMed Article URL:http://dx.doi.org/10.1038/s41467-019-13204-3</p>
	MF48004 was used in Flow cytometry/Cell sorting to investigate the impact of BMPR2 mutations on SMAD signalling.
Mouse / Not Cited	<p>PloS one (2015; 9:) "BMP pathway regulation of and by macrophages." Author(s):Talati M,West J,Zaynagetdinov R,Hong CC,Han W,Blackwell T,Robinson L,Blackwell TS,Lane K PubMed Article URL:http://dx.doi.org/10.1371/journal.pone.0094119</p>

2 Immunohistochemistry References

Species / Dilution	Summary
	MF48004 was used in Immunohistochemistry-immunofluorescence to study the therapeutic potential of stem cells in Wilson's disease.
Mouse / 1:100	<p>Gene expression (2018; 19: 15) "In <i>Atp7b</i> Mice Modeling Wilson's Disease Liver Repopulation With Bone Marrow-Derived Myofibroblasts or Inflammatory Cells and Not Hepatocytes Is Deleterious." Author(s):Sharma Y,Liu J,Kristian KE,Follenzi A,Gupta S PubMed Article URL:http://dx.doi.org/10.3727/105221618X15320123457380</p>
	MF48004-3 was used in immunohistochemistry to investigate the role of ShcA PTB domain in phosphotyrosine signaling during breast cancer progression
Mouse / 1:250	<p>Cancer research (2013; 73: 4521) "The ShcA PTB domain functions as a biological sensor of phosphotyrosine signaling during breast cancer progression." Author(s):Ahn R,Sabourin V,Ha JR,Cory S,Maric G,Im YK,Hardy WR,Zhao H,Park M,Hallett M,Siegel PM,Pawson T, Ursini-Siegel J PubMed Article URL:http://dx.doi.org/10.1158/0008-5472.CAN-12-4178</p>

1 Immunocytochemistry References

Species / Dilution	Summary
	MF48004 was used in Flow cytometry/Cell sorting to investigate the mechanisms involved in crosstalk between immune cells and the epithelium in mucosal barrier repair.
Mouse / Not Cited	<p>The Journal of clinical investigation (2017; 127: 3510) "Macrophage-derived IL-10 mediates mucosal repair by epithelial WISP-1 signaling." Author(s):Quiros M,Nishio H,Neumann PA,Siuda D,Brazil JC,Azcutia V,Hilgarth R,O'Leary MN,Garcia-Hernandez V,Leoni G,Feng M,Bernal G,Williams H,Dedhia PH,Gerner-Smidt C,Spence J,Parkos CA,Denning TL,Nusrat A PubMed Article URL:http://dx.doi.org/10.1172/JCI90229</p>

2 Immunohistochemistry (Paraffin) References

Species / Dilution	Summary
	MF48004 was used in immunohistochemistry - paraffin section to assess the role of individual TAM family proteins during autophagy induction and hepatic inflammation
Mouse / Not Cited	<p>Autophagy (2016; 12: 2326) "Autophagy induced by AXL receptor tyrosine kinase alleviates acute liver injury via inhibition of NLRP3 inflammasome activation in mice." Author(s):Han J,Bae J,Choi CY,Choi SP,Kang HS,Jo EK,Park J,Lee YS,Moon HS,Park CG,Lee MS,Chun T PubMed Article URL:http://dx.doi.org/10.1080/15548627.2016.1235124</p>

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	MF48004 was used in immunohistochemistry - paraffin section to learn how promotion of lung metastasis occurs by E2f3 in tumor macrophages
Not Applicable / Not Cited	Oncogene (2016; 35: 3636) "E2f3 in tumor macrophages promotes lung metastasis." Author(s):Trikha P,Sharma N,Pena C,Reyes A,Pécot T,Khurshid S,Rawahneh M,Moffitt J,Stephens JA,Fernandez SA, Ostrowski MC,Leone G PubMed Article URL: http://dx.doi.org/10.1038/onc.2015.429
3 Miscellaneous PubMed References	
Species / Dilution	Summary
	MF48004 was used in flow cytometry to report that Shp1 regulates DC functions and prevents autoimmunity.
Mouse / Not Cited	Journal of immunology (Baltimore, Md. : 1950) (2012; 188: 5397) "Dendritic cell-specific ablation of the protein tyrosine phosphatase Shp1 promotes Th1 cell differentiation and induces autoimmunity." Author(s):Kaneko T,Saito Y,Kotani T,Okazawa H,Iwamura H,Sato-Hashimoto M,Kanazawa Y,Takahashi S,Hiomura K, Kusakari S,Kaneko Y,Murata Y,Ohnishi H,Nojima Y,Takagishi K,Matozaki T PubMed Article URL: http://dx.doi.org/10.4049/jimmunol.1103210
Mouse / Not Cited	MF48004 was used in flow cytometry to investigate the effects of high n-3 FA diets on early stages of myelopoiesis
	Lipids (2011; 46: 47) "A high omega-3 fatty acid diet has different effects on early and late stage myeloid progenitors." Author(s):Varney ME,Buchanan JT,Dementieva Y,Hardman WE,Sollars VE PubMed Article URL: http://dx.doi.org/10.1007/s11745-010-3491-3
Mouse / Not Cited	MF48004 was used in flow cytometry to report that beta-CN peptide enhances antimicrobial activity of macrophages without proinflammatory effects.
	The Journal of nutrition (2001; 131: 2936) "A peptide derived from bovine beta-casein modulates functional properties of bone marrow-derived macrophages from germfree and human flora-associated mice." Author(s):Sandré C,Gleizes A,Forestier F,Gorges-Kergot R,Chilmonczyk S,Léonil J,Moreau MC,Labarre C PubMed Article URL: http://dx.doi.org/10.1093/jn/131.11.2936
1 Western Blot References	
Species / Dilution	Summary
	MF48004 was used in Western Blotting to demonstrate that the mouse miR-143/145 cluster, is required for vascular smooth muscle cell acquisition of the contractile phenotype.
Mouse / Not Cited	The Journal of clinical investigation (2009; 119: 2634) "Acquisition of the contractile phenotype by murine arterial smooth muscle cells depends on the Mir143/145 gene cluster." Author(s):Boettger T,Beetz N,Kostin S,Schneider J,Krüger M,Hein L,Braun T PubMed Article URL: http://dx.doi.org/10.1172/JCI38864

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